

REPORT

**Rome,
Italy,
12-16 October
1992**

**FAO Desert Locust
Control Committee
Thirty-second session**



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

Meeting Report

**REPORT OF
THE THIRTY SECOND SESSION OF THE FAO DESERT LOCUST
CONTROL COMMITTEE**

**held in
Rome, Italy
12-16 October 1992**

**Plant Production and Protection Division
Food and Agriculture Organization of the United Nations**

Rome 1993

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CONTENTS

	Page
INTRODUCTION	1
Officers of the Session	2
Drafting Committee	2
Acknowledgements	2
Congratulatory	2
AGENDA	3
SUMMARY OF DISCUSSIONS	4
The Locust Situation October 1990 - October 1992 and Outlook to the end of 1992	4
The Desert Locust	4
General	4
The main features	4
Outlook to end of 1992	6
Other Species	6
African Migratory Locust	6
Red Locust	7
Brown Locust	7
Moroccan Locust	7
Tree Locusts	7
Grasshoppers	7
Recommendations	8
Control Measures undertaken by countries and regional organizations	8
Review of Control Potential	8
Assistance provided to countries and regional organisations	8
The Desert Locust Preventive Control Project in West and North-West Africa	8
Report of Desert Locust Technical Group	9
Report of the Scientific Advisory Committee (SAC) on Desert Locust Research	9
Desert Locust Research	10
Environmental Matters	11
Obsolete and Surplus Pesticides	11
Training	12
International Trust Fund 9161: Contributions and Expenditures	13
Status of the Locust Control Regional Organizations and Commissions	13
Other Business	14
Date and Place of Next Meeting	14
Adoption of Report	14

APPENDICES

- I. LIST OF INVITED COUNTRIES AND ORGANIZATIONS
- II. PARTICIPANTS IN THE SESSION
- III. CONTROL MEASURES UNDERTAKEN AGAINST DESERT LOCUST: SEPTEMBER 1990-OCTOBER 1992
- IV. CONTROL MEASURES UNDERTAKEN AGAINST GRASSHOPPERS: JANUARY 1990-SEPTEMBER 1992
- V. EXISTING CONTROL POTENTIAL
- VI. ASSISTANCE PROVIDED TO COUNTRIES AND REGIONAL ORGANIZATIONS
- VII. PROJECT FOR DESERT LOCUST PREVENTIVE CONTROL IN WEST AND NORTH-WEST AFRICA
- VIII. REPORT OF DESERT LOCUST TECHNICAL GROUP
- IX. INTERNATIONAL TRUST FUND 9161: CONTRIBUTIONS AND EXPENDITURES
- X. STATUS OF REGIONAL COMMISSIONS AND ORGANIZATIONS

INTRODUCTION

At its thirty-first session, held in Rome from 24-28 September 1990 the FAO Desert Locust Control Committee had decided that the thirty-second session of the Committee would be held in Rome at a date to be determined by the Director-General of FAO.

In view of the steady support provided by the international community, it was again considered appropriate to invite both DLCC member countries and donor countries to this session.

The Director-General of FAO therefore invited the Governments listed in Appendix I to be represented at this thirty-second session which was held in Rome from 12-16 October 1992.

Representatives of the following organizations were also invited to participate as observers: Desert Locust Control Organization for Eastern Africa (DLCO-EA), Organisation Commune de Lutte Antiacridienne et de Lutte Antiaviare (OCLALAV), International Red Locust Control Organisation for Central and Southern Africa (IRLCO-CSA), United Nations Development Programme (UNDP), World Meteorological Organization (WMO), International Fund for Agricultural Development (IFAD), European Economic Communities (EEC), African Development Bank (ADB), Islamic Development Bank (IDB), Economic Commission for Africa (ECA), and the Inter-African Phytosanitary Council (IPC) of the Organization for African Unity (OAU).

The session was opened by Mr de Haen, Assistant Director-General of the Department of Agriculture, who welcomed participants. While expressing satisfaction that the Desert Locust recession had persisted Mr de Haen nonetheless pointed out the difficulty in predicting when the next important upsurge will develop given that the well proven strategy of plague prevention based on organochlorine compounds is no longer available and that notwithstanding research undertaken under the UNDP/FAO (SAC) programme, alternatives which are environmentally acceptable, economic and effective are not yet available or adequately tested.

He emphasised that locust control is not simply a question of the application of the right techniques, but also a question of organization which of course has financial implications. Mr de Haen went on to say that it is a matter of considerable regret that long established regional organizations have been seriously weakened and it has not been possible to find adequate support to reinvigorate them or to strengthen national plant protection sources which in some cases have come to replace them.

The International Trust Fund 9161 which is contributed to solely by Desert Locust affected countries is not in a position to meet all the necessary expenses. Mr De Haen asked whether donors might consider the creation of a parallel Trust Fund to match contributions from the locust affected countries.

He finally wished every success for the present session.

Officers of the Session

Chairman: Mr Thami Benhalima (Morocco)
Vice-Chairman: Mr Zafer Al-Yafi (Syria)

Drafting Committee

The Drafting Committee was made up of delegates from Algeria, Niger, Pakistan, Syria and Tanzania, as well as FAO Regional and Headquarters locust control officers. Mr A. Hafraoui acted as the technical secretary.

Acknowledgements

The Chairman thanked the Director-General of FAO, Mr Papolomontos, and the FAO staff for the arrangements which had been made for the meeting, which had facilitated the work of the session. He also expressed satisfaction with the close collaboration which had developed between affected countries and the international donor community, and which had continued after the decline of the plague.

Congratulations

The Committee congratulated Mr A. Hafraoui who had been appointed Senior Officer, Locust, Other Migratory Pests and Emergency Operations Group.

AGENDA

1. Opening of the Session
2. Election of Chairman and Vice-Chairman
3. Adoption of the Agenda
4. Election of the Drafting Committee
5. The Locust Situation, October 1990-October 1992
 - (a) Desert Locust
 - (b) Other species
6. Control measures undertaken
7. Review of Existing Control Potential
8. Assistance provided to countries and Regional Organizations
9. Desert Locust Preventive Control Project in West and North-West Africa
10. Report of Desert Locust Technical Group
11. Report of UNDP/FAO Scientific Advisory Committee on Desert Locust control
 - (a) Possible new Desert Locust control strategies
12. Desert Locust Research
13. Environmental Aspects
14. Disposal of Obsolete and Surplus Pesticide Stocks
15. Training
16. International Trust Fund 9161: Contributions and Expenditure
17. Status of Regional Locust Commissions and Organizations
 - (a) Near East Commission
 - (b) North-West Africa Commission
 - (c) South-West Asia Commission
 - (d) DLCO-EA
 - (e) OCLALAV
 - (f) IRLCO-CSAand follow-up of recommendations made at their annual meetings
18. Any other business
19. Date and Place of next Session
20. Adoption of the Report.

SUMMARY OF DISCUSSIONS

THE LOCUST SITUATION, OCTOBER 1990 - OCTOBER 1992 AND OUTLOOK TO THE END OF 1992

1. DESERT LOCUST

General

1. The overall situation in the period under consideration has been one of recession. However, the following facts were noted:

- relatively significant breeding in the Indo-Pakistan zones in 1990;
- a small upsurge (1600 ha. approximately) of *transiens congregans* in southern Algeria in the late summer of 1991;
- widespread breeding in northern Mauritania from December 1991 to May 1992;
- gregarious breeding (1000 ha. approximately) in southern Algeria in the spring of 1992;
- Infestation of *transiens congregans* (8000 ha.) in the Brakna area of Mauritania in September 1992.

The main features

2. In West Africa, small scale breeding occurred in August 1990 in southern Mauritania, south-eastern Mali, in the western Air of Niger and in Tibesti of northern Chad. Breeding continued during October in Mauritania and Mali, and in the northern Tamesna of Niger there was an unconfirmed report of high densities of adults and gregarious hoppers.

3. In 1991, the situation in the Region was generally calm. Low numbers of adults overwintering in the traditional summer breeding areas matured with the advance of the Inter-Tropical Convergence Zone (ITCZ) in July and laid with the onset of the rains. As a result, isolated hoppers were seen during August and September in central and southern Mauritania and northern Mali. In Niger, high densities of hoppers were reported in northern Air in August and again in October where above average rains had fallen, and low density breeding occurred in southern Tibesti of Chad during October.

4. Widespread breeding occurred in north-central Mauritania in October and November 1991. By mid-November, late instar hoppers were observed near Aleg. In early December, unusually heavy rain fell in northern Mauritania and adjacent areas of southern Morocco. Light rains also fell in these areas in January and February 1992 allowing overwintering adults to slowly mature. Surveys carried out in April and May revealed that hatchings from these laying adults occurred in early March and continued to late April. When vegetation began drying up young adults moved into the remaining green patches and showed signs of gregarious behaviour. Some immature adults also started to move south towards summer breeding areas. Control operations commenced in May against groups of hoppers and maturing adults, treating 875 ha up to July. In June, a swarm was reported, by nomads, flying south towards summer breeding areas.

5. In Mauritania during surveys carried out from the end of August to 10 September 1992 in the two Hodhs, Assaba and Brakna immature adults were seen in the green vegetation. By mid-September adults had matured and some were copulating. On 23 September solitary populations and *transiens congregans* were observed in the Tourine area (18°23N 12°51W) in the region of Brakna over an area of 8000 ha at densities of 1250/ha.

6. In North-West Africa, high density breeding occurred in the Nefzaoua region of southern Tunisia in October 1990. Control operations were undertaken during November and early December against gregarious hoppers and mixed populations of adult locusts and grasshoppers within an area of 13,000 ha; however, small residual populations persisted until March 1991.

7. In late May and early June, unusually heavy rain fell in the central Sahara of Algeria. As a result, small scale high density breeding occurred near Adrar where control operations were carried out on

45 ha in June. Conditions remained favourable throughout July in the wadis of the western Hoggar Mountains. A moderate upsurge developed near Tamenrasset as a result of breeding which started in July. Although control operations were immediately undertaken high densities of hoppers and adults continued to persist until early October. By mid-October, control teams had treated a total of 1,620 ha and only low densities of immature adults and hoppers remained in a few locations. Further south, low densities of hoppers and adults were present near the Mali border in early August and by mid-September, mature adults were seen.

8. In December, there was one report of an isolated immature adult in north-eastern Oued Draa of Morocco.

9. In 1992, the situation in the Region has been very calm. A few overwintering adults were seen in southern Tunisia in January and April, and in western Libya and south-western Algeria in March. Surveys carried out in April in Southern Morocco (Layoune, Dakhla) reported hoppers at different stages and some isolated immature adults. At the beginning of May significant breeding was located in Algeria at Oued Boutha and Oued Abadegha (100 km south east In Salah) and control operations treated 1,005 ha. (10 to 50 ind./ha.). In September, a few isolated adults were present in Bir Guendouz near Dakhla in southern Morocco.

10. In Eastern Africa, isolated mature adults appeared on the Red Sea coast in Tokar Delta in late November 1990 where they matured and laid the following month. In early February, low numbers of late instar hoppers were reported in the Tokar Delta which, after fledging, moved towards summer breeding areas in the interior.

11. During the summer of 1991, the situation in the Region was calm with no locusts being reported.

12. In mid-October, low numbers of adults were reported on the Red Sea coast in the Tokar Delta where breeding occurred from mid-November onwards. Control operations were carried out against low densities of hoppers and adults in late January 1992 and against higher densities of adults mixed with *Locusta* in February and March, treating a total of 500 ha.

13. Despite average rainfall, no locusts were reported from the summer breeding areas of Sudan in 1992 except for low densities of immature adults in Northern Darfur in early June. In early October, small scale breeding was in progress in the Eastern Region near Durdeb.

14. In the Near East, scattered adults were present on the southern Tihama of Saudi Arabia and in the interior of Yemen during September and early October 1990. On 20 October, small groups of mature adults were seen on the eastern coast of Yemen near Mukalla and in mid-November, scattered adults were present on the Batinah coast of Oman. These populations most likely came from the Indo-Pakistan summer breeding area.

15. In May 1991, small scale breeding occurred on the central Red Sea coast of Egypt and isolated adults were seen in Wadi Hadhramut of Yemen. During June, immature adults were present on the southern Tihama of Saudi Arabia and in adjacent areas of the northern Tihama of Yemen; isolated adults were also reported in the interior near Marib. In late July and in August, a few adults were seen on the coastal plains west of Aden.

16. During February 1992, scattered locusts were reported on the southern Red Sea coast of Egypt. On the 27th, a swarm was reported near Jizan on the southern Tihama of Saudi Arabia and two days later a small mature swarm was reported approximately 100 km to the south on the northern Tihama of Yemen; however, survey teams were unable to confirm this as Desert Locust (it may have been Tree Locust). During April, small scale breeding occurred near Al-Qunfudah on the southern Tihama of Saudi Arabia and isolated adults were present along the coastal plains west of Aden. In June, high density breeding occurred on the Tihama north of Jeddah and control operations were undertaken over 600 ha against groups of adults and hoppers.

17. In South-West Asia, high density breeding occurred during September 1990 following unusually heavy rainfall in Tharparkar Desert of Pakistan and adjacent areas of Rajasthan in India, and resulted in the formation of groups of hoppers and immature adults during the next two months. Despite control operations, some adults moved towards the west and two immature swarms were reported in the Khipro Desert and Rajasthan in late October and early November, respectively. By early December, only scattered adults remained in Bikaner and Gujarat of Rajasthan where they persisted during the winter.

18. Scattered adults were found in Sistan and Baluchistan of Iran during the winter-spring of 1991 and low density adults were present in Turbat and Panjgur areas of the Makran in Pakistan in late March. Small scale breeding followed above average rainfall in Baluchistan with hoppers first appearing in early April in Gwadar district where ground control operations were undertaken the following month.

19. In May, adults began to move east towards the Indo-Pakistan summer breeding areas where scattered adults appeared in Rajasthan by early June. Small scale breeding occurred the following month after the monsoon rains had set in and continued through September. Isolated adults appeared in adjacent areas of Tharparkar Desert in Pakistan during the first half of September and spread to Khipro, Nara, Cholistan and Lasbela during October. Meanwhile, isolated adults persisted in a few locations of Rajasthan during the winter and following spring.

20. Low densities of adults were reported in coastal areas of the Mekran and Lasbela in March 1992 and probably bred on a small scale in favourable areas during April. Adult infestations extended into the interior of Baluchistan in April and continued to persist there and on the Mekran until the end of May.

21. Isolated adults first appeared in the summer breeding areas of Tharparkar and Cholistan Deserts of Pakistan during the second half of June and extended to Jaisalmer and Bikaner Districts of India by mid July. Widespread heavy rains associated with the seasonal monsoon occurred during the second half of July and first half of August and, as a result, small scale laying occurred from late July onwards. Subsequently, scattered hoppers and adults were reported throughout the summer breeding areas of Pakistan and India in August and September where unusually heavy rains occurred again in early September. In early October, high densities of hoppers and adults were present near Bikaner where control operations were in progress.

Outlook to the end of 1992

22. As a result of unusually heavy and widespread rains in the summer breeding area of India and Pakistan, it is highly probable that two generations of breeding will have occurred during the season. Adults are likely to have already started moving west towards Baluchistan of Pakistan and perhaps south-eastern Iran and will continue until about mid November. A few adults may reach the eastern Arabian Peninsula and appear on the coasts of Oman and the United Arab Emirates.

23. Adult locusts are likely to appear on the southern Red Sea coast of Sudan, mainly near Tokar Delta, from October onwards and start to breed in areas that receive rain.

24. In West Africa, small scale breeding will continue during October in southern and central areas of Mauritania, and probably in the southern Adrar des Iforas in Mali and parts of Tamesna in Niger and will diminish as the vegetation becomes dry with some scattered adults remaining during the winter. However, since the rainfall which was below average in most summer breeding areas ended prematurely, it is unlikely that any significant populations will be produced or that any major control operations will be required over large widespread areas.

II OTHER SPECIES

African Migratory Locust

25. In 1991, small populations mixed with Red Locust were present in Chobe District of Botswana in June.

26. Limited control was carried out against hoppers and adults, mixed with Desert Locust, in the Tokar Delta on the Red Sea coast of Sudan from January to March 1992, and near Gedaref in the Eastern region during the summer. In March, an outbreak occurred in Chobe District of Botswana where 88 ha were treated.

27. In 1992, a major upsurge occurred in south-west Madagascar during the first half of the year as a result of three successive months of optimal rainfall and very successful breeding and gregarisation in the transitory multiplication areas. By mid February, high density hoppers were reported and by June

there were an estimated 50 swarms covering some 25,000 ha. Most of these have dispersed over a wide area in southern and western parts of the island. Aerial and ground control operations treated 67,000 ha from February to April.

Red Locust

28. In 1991, high concentrations of hoppers and adults, the highest since 1967, were present in northern Zambia at Ngansa Plains in Mweru-wa-Ntipa and in the Kafue Flats area of the south from March to May; however, they did not warrant control and had dispersed by September. In April, there was an outbreak in Chobe District of Botswana where control was carried out on 800 ha. Scattered adults were present on the Wembere Plains of Tanzania where they persisted until the end of the year, and also in Mozambique, Swaziland, and Malawi.

29. In 1992, widespread infestations of high densities of fledglings and adults were present, mainly on wild sorghum, in Mweru-wa-Ntipa in northern Zambia and Kafue Flats of southern Zambia from early April onwards; however, these did not warrant control. In May, there was an unusual outbreak, outside the traditional outbreak area, in Tanzania of large numbers of adults at the Kapunga Rice Scheme in Mbeya; aerial control operations were carried out on 610 ha.

Brown Locust

30. In late 1990, there was an outbreak in the Karoo plateau of South Africa. From December 1990 to April 1991, a total of 1,134 hopper bands and 340 swarms were treated. By the end of April, the situation was reported as calm.

Moroccan Locust

31. A moderate scale infestation of hopper bands and high density adults occurred in the northern provinces of Afghanistan in 1991. Small scale control operations were undertaken. In the middle Atlas Mountains of eastern Morocco, control operations treated 10,000 ha in 1991 and 20,000 during 1992. In north-west Algeria 3000 ha had been controlled in 1992.

Tree Locusts

32. In 1991, substantial hopper and adult infestations were reported from the western, central and eastern regions of Sudan from August to November where aerial and ground control operations were carried out and had treated nearly 367,000 ha.

33. In 1992, infestations of hoppers and adults were present in the western, central and eastern regions of Sudan from July through September. Control operations commenced after hatching in July and have treated a total of 430,000 ha up to early October.

Grasshoppers

34. After relatively high infestations in 1990, there were widespread grasshopper infestations in West Africa and Sudan in 1991. The heaviest infestations were concentrated in an area comprising northern Senegal, southern Mauritania and western Mali. However, infestations were at a lower level when compared to 1990. The dominant species continued to be *Oedaleus senegalensis*, but a number of other species were at high enough levels to cause crop damage, such as *Cataloipus* sp., *Kraussaria angulifera*, *Aiolopus simulatrix*, *Zonocerus variegatus*, *Diabolocatantops axillaris* and *Hieroglyphus daganensis*. Control operations were undertaken in Benin, Burkina Faso, Chad, Mali, Mauritania, Niger, Senegal and Sudan, treating a total of 679,000 ha.

35. In Brazil, grasshopper infestations occurred in the State of Rio Grande do Sul in late 1990 and continued into the spring of 1991. The dominant species was *Rhammotocerus conspersus*.

36. In 1992, grasshopper infestations were reported in West Africa from August onwards in southern Mauritania, western Mali, southern Niger, central and northern Burkina Faso, Benin and Senegal. Over 300,000 ha had been treated during August and September.

37. In Morocco approximately 10,000 ha of grasshoppers, mainly comprising *Calliptamus wattenwylanus* and *Oedaleus decorus*, were controlled in 1991 and again in 1992,

Recommendations

38. After having reviewed the Desert Locust situation during the period from October 1990 to October 1992 in its recession area, the Committee:

- given the disturbing situation in the Brakna region of Mauritania where 8,000 ha. are infested by mature adults beginning to swarm (1250 individuals/ha), recommended continued survey and control until the end of November 1992;
- also recommended survey in the regions of Ouaddai and Biltine in Chad;
- is concerned by the lack of survey in several regions known for their potential to produce gregarious populations in particular, the north of Mali and Niger and certain zones of Sudan, Ethiopia and Somalia and recommended that all means necessary be taken to ensure survey in these areas.

CONTROL MEASURES UNDERTAKEN BY COUNTRIES AND REGIONAL ORGANIZATIONS

39. The control measures undertaken between September 1990 and October 1992 against the Desert Locust are given in Appendix III. These data are based on the information furnished by the countries and the regional organizations in their regular reports, complemented by information furnished by participants during the meeting.

40. Grasshopper infestations treated from June 1990 to mid-September 1992 are given in Appendix IV.

REVIEW OF EXISTING CONTROL POTENTIAL

41. The FAO Secretariat asked the countries to submit information on the existing control potential so that a current inventory would be available. The data submitted are given in Appendix V.

ASSISTANCE PROVIDED TO COUNTRIES AND REGIONAL ORGANIZATIONS

42. The data on bilateral and multilateral aid provided by donors for the 1991 and 1992 campaigns are summarised in Appendix V I.

43. Total assistance amounted to approximately US\$2 million in 1991, and US\$ 650,000 from January to mid-September 1992. It covered a wide variety of equipment and supplies, including pesticides, vehicles, protective clothing, aircraft flying time, overhead and technical assistance.

44. While appreciating the assistance provided by the international community, the Committee noted the significant reduction in the amount of assistance in comparison to that of previous years and expressed regret for this trend. It was recommended that an appeal be launched for assistance to be maintained at sufficient levels,

THE DESERT LOCUST PREVENTIVE CONTROL PROJECT IN WEST AND NORTH-WEST AFRICA

45. The Secretariat informed the Committee about developments in the planning of the project and submitted a summary of the final version of the project prepared in September 1992 by an ad hoc group comprising representatives of the region and FAO (Appendix VII).

46. Considering the financial difficulties the project encountered in its original form - in which the strictly operational aspects were combined with complementary features that would have been most valuable in carrying out a long-term strategy capable of solving the Desert Locust problem (research training, weather, remote sensing, and so forth) the ad hoc group thought it wise to limit the projects 's objective to strengthening the operational component of preventive action.

47. Accordingly, the amount of external funding has been reduced in the final version of the project to around US\$ 9.7 million.

48. The Committee approved the programme and asked FAO to forward copies as soon as possible to the countries concerned and to donors. In addition, the Committee issued an urgent appeal to donors for funding.

49. The Committee emphasised that in view of the complementarity of gregarizing areas, implementation of this project would facilitate the realisation of similar projects in the central and eastern regions.

50. Funding for the other components of the project will be sought in the framework of other specific projects.

51. With regard to meteorological information which is essential for effective early control of locusts and the existing collaborative interests of institutions and organizations in this area the committee requested FAO and the World Meteorological Organization (WMO) to co-ordinate efforts to identify funding for a project to install a network of automatic weather stations in high frequency gregarizing areas.

REPORT OF THE DESERT LOCUST TECHNICAL GROUP

52. After consideration, the Committee approved the report of the Technical Group which met in Rome from February 18 to 20, 1992 (Appendix VI II) and decided that the group should continue to meet with the frequency determined during the 31st Session.

53. In addition, the Committee extended the term of group members for another two years. The members are:

S.S Bamofleh (Saudi Arabia)
T. Benhalima (Morocco)
A.M. Karrar (DLCO-EA)
M. Shafi (Pakistan)
L. Soumare (OCLALAV)

REPORT OF THE SCIENTIFIC ADVISORY COMMITTEE (SAC) ON LOCUST RESEARCH

54. The Chairman of the Scientific Advisory Committee informed the DLCC that 7 research projects had been approved out of a total of 88 proposed, mainly by institutions based in the developed countries; 5 of the 7 have already obtained funding. He requested that locust specimens from the various parts of the recession area be sent to the genetic diversity project. In addition, he asked to support the idea of convening a Desert Locust Workshop in Morocco during 1993.

55. He also hoped that the SAC's terms would be extended for another three years so that research in progress can be completed.

56. In light of the information provided by the SAC Chairman, the Committee noted that the SAC operates in virtual isolation, and that most of the research is carried out in laboratories located in the developed countries.

57. The Committee also observed that the relationship between the SAC and the DLCC is not clearly defined and decided to set up a working group which would meet during this session, so as to identify the relationship that should exist between the two structures and recommend an appropriate framework for co-ordinating their activities.

58. The Committee recalled that the mandate of the DLCC was "to promote the co-ordination of national and international policies and preventive measures in Desert Locust control and research". This mandate was confirmed by the 30th Session of DLCC.

59. It also considered the report of the 36th Session of the Governing Council of UNDP which, in relation to the SAC stated that:

- (a) "FAO will be a co-sponsor of this programme,"
- (b) "...consideration be given to the need for involvement by Desert Locust affected countries based scientists and institutions, at least as partners in the research".
- (c) "Progress reports on the activities undertaken through the project GLO/89/002 be submitted to the Scientific Panel (SAC) and the FAO Desert Locust Control Committee for consideration and advice",
- (d) "the Scientific Committee will advise on programme research priorities",
- (e) "The Scientific Advisory Committee will also advise on the development of an international collaborative research network on Desert Locust that will foster co-operation between scientists in both developed and developing countries and provide field research opportunities in locust-affected countries",
- (f) "Members of the Scientific Advisory Committee will serve in their personal capacity for three years, with a possibility of re-appointment for another three year term, and will be selected from among distinguished senior scientists according to qualifications, experience and geographic location"

60. The Committee recommended that FAO should ensure that a comprehensive report on the research programmes recommended by the Scientific Advisory Committee be presented to the Desert Locust Technical Group for study and submission to the DLCC.

61. In the future, the programmes should emphasise the action or proposed involvement of institutions in Desert Locust affected countries.

62. The Committee also recommended a full participation of the SAC, as an observer, in the next sessions of the DLCC.

63. The Committee asked FAO to bring these recommendations to the attention of UNDP as the co-sponsor of SAC.

DESERT LOCUST RESEARCH

64. The Secretariat submitted a document outlining completed research, research in progress, and topics that ought to be research priorities in order to improve control methods and alternative strategies, and asked member countries for their remarks and comments on the document (AG/DLCC/92/6(a)).

65. Numerous speakers reported to the meeting on research conducted by several institutions on a wide range of topics involving locust control. Among them:

- FAO work on remote sensing;
- GTZ work on alternative control methods, remote sensing, physiology, loss estimation, economic aspects and training;
- the GIS (Geographical Information System) project under way in Edinburgh, U.K.;
- USAID research on alternative control, integrated control, the destruction of obsolete pesticides and damage estimation;
- research in Nigeria on the effects of vegetable extracts (Neem) on acridids.

66. While recognising the interest several institutions have shown in Desert Locust research, the Committee noted a lack of co-ordination at different levels, inadequate involvement of institutions in plague-affected countries, and a lack of data on research development and findings.

67. To improve this situation, the Committee recommended:

- better co-ordination of research activities; FAO, donors and the countries concerned should take steps to prepare the most appropriate system to achieve his goal;
- greater involvement of the countries concerned in the choice of topics for study;
- strengthening institutions in affected countries, to enable them to take an active part in research, and to continue field work which is essential for understudying the complex aspects of the locust problem;
- adequate dissemination of research findings. To this end, although they may be published in specialised journals or at scientific meetings, the Committee suggests that FAO collate all the findings in an appropriate publication.

68. That further efforts should be undertaken in view of the development and research of alternative methodologies, such as remote sensing, in gathering information relative to locust forecasting;

ENVIRONMENTAL MATTERS

69. The Committee was informed of activities carried out under the Locustox project (FAO/ECLO/SEN/003/NET) based in Senegal, the first phase of which will end in December 1993. The objectives of this project are:

- to develop recommendations on the choice of appropriate pesticides for specific African ecosystems, and the equipment and supplies for their utilisation;
- to develop non-polluting control methods least harmful to people and the environment;
- to train technical staff in research and evaluation of the undesirable effects of pesticides;
- to establish an eco-toxological data base with global access by scientists.

OBSOLETE AND SURPLUS PESTICIDES

70. In accordance with the recommendation of the 31st Session concerning obsolete pesticides, a temporary post was established at FAO Headquarters to:

- draw up a detailed inventory of existing obsolete and undesirable pesticide stocks;
- formulate a programme proposal to prevent further accumulation and eventual disposal of these products.

71. This proposal was prepared and submitted to an already identified donor for financing. Its objectives are:

- to review methods for disposing of obsolete pesticides and to evaluate the financial, ecological and logistical implications of these methods;
- to establish technical guidelines for the management of stocks;
- to conduct pilot trials on pesticide destruction;
- to establish a broad-scale multi-donor programme for the repackaging and elimination of all obsolete stocks.

72. USAID and GTZ reported on their experience in this field, particularly in eliminating DielMrin in Niger (USAID/GTZ) and in Pakistan (USAID), and ongoing projects in Mauritania and Madagascar .

73. The Committee underscored the importance of these actions, and in view of the gravity of the problem, asked that the planned studies be undertaken with all due haste so that disposal operations could be undertaken immediately.

74. The Committee also underscored the urgent need to seek means to:

- ensure better management of usable pesticide stocks (repackaging, construction of appropriate storage,...),
- apply the triangular principle so that surplus quantities of usable pesticides could be utilised in areas of deficit

75. The Committee drew the attention of the international community to the fact that large stocks of insecticides still usable today would also soon become obsolete, unless these last two measures were implemented.

76. The Committee thanked donors who had already helped solve the problem of obsolete pesticides, and noted their willingness to carry on with such efforts. It hoped that other donors would participate in this effort, and that an overall solution might be found to such pesticide problems and reduce the environmental hazard.

TRAINING

77. Following the recommendation of the 31st session on training the Secretariat commenced a study on the training needs of the member states. This study is not yet complete and the Secretariat emphasised the need to receive realistic proposals.

78. After some discussion the committee reiterated its view that priority should be accorded to high level training and recommended that funding for this be sought from the international trust fund 9161. With regard to the number of fellowships and the choice of beneficiary countries the Desert Locust Technical Group was mandated to consider these issues.

79. In addition the committee insisted that research projects to be funded in the future should include a high level training component.

"Strengthening of an Early Warning System for Desert Locust Control" GCP/INT/517/BEL

80. In 1990 the Government of Belgium funded a three year project on the strengthening of an early warning system. Major components of the project include training of Locust Information Officers from affected countries and four regional workshops.

81. Individual training of Locust Information Officers comprised two weeks of intensive study in FAO Headquarters in Rome with FAO technical staff in aspects such as survey, mapping, analysis, remote sensing and forecasting. To date Officers from Sudan, Pakistan, Oman, Algeria, Morocco, Yemen, Saudi Arabia, Mali, Mauritania, Niger and Chad have been trained.

82. Through the project regional workshops on " Survey and ULV control of Desert Locust" have been undertaken in South-West Asia (Jodhpur, India , December 1993) and in the Near East (Oman, February 1992). Two further workshops are to be held in West Africa (Niamey, Niger, November 1992) and in North-West Africa (Mauritania, April 1993). Each workshop involves the active involvement of 16 participants, organised into four groups with each group having its own instructor. The workshops comprise practical field sessions, class room sessions and practical survey and control demonstrations.

83. Expenditure by the project was \$US 13,000 in 1990, \$US 242,000 in 1991 and approximately \$US 337,000 in 1992. The project will end in 1993.

66. While recognising the interest several institutions have shown in Desert Locust research, the Committee noted a lack of co-ordination at different levels, inadequate involvement of institutions in plague-affected countries, and a lack of data on research development and findings.

67. To improve this situation, the Committee recommended:

- better co-ordination of research activities; FAO, donors and the countries concerned should take steps to prepare the most appropriate system to achieve his goal;
- greater involvement of the countries concerned in the choice of topics for study;
- strengthening institutions in affected countries, to enable them to take an active part in research, and to continue field work which is essential for understudying the complex aspects of the locust problem;
- adequate dissemination of research findings. To this end, although they may be published in specialised journals or at scientific meetings, the Committee suggests that FAO collate all the findings in an appropriate publication.

68. That further efforts should be undertaken in view of the development and research of alternative methodologies, such as remote sensing, in gathering information relative to locust forecasting;

ENVIRONMENTAL MATTERS

69. The Committee was informed of activities carried out under the Locustox project (FAO/ECLO/SEN/003/NET) based in Senegal, the first phase of which will end in December 1993. The objectives of this project are:

- to develop recommendations on the choice of appropriate pesticides for specific African ecosystems, and the equipment and supplies for their utilisation;
- to develop non-polluting control methods least harmful to people and the environment;
- to train technical staff in research and evaluation of the undesirable effects of pesticides;
- to establish an eco-toxological data base with global access by scientists.

OBSOLETE AND SURPLUS PESTICIDES

70. In accordance with the recommendation of the 31st Session concerning obsolete pesticides, a temporary post was established at FAO Headquarters to:

- draw up a detailed inventory of existing obsolete and undesirable pesticide stocks;
- formulate a programme proposal to prevent further accumulation and eventual disposal of these products.

71. This proposal was prepared and submitted to an already identified donor for financing. Its objectives are:

- to review methods for disposing of obsolete pesticides and to evaluate the financial, ecological and logistical implications of these methods;
- to establish technical guidelines for the management of stocks;
- to conduct pilot trials on pesticide destruction;
- to establish a broad-scale multi-donor programme for the repackaging and elimination of all obsolete stocks.

72. USAID and GTZ reported on their experience in this field, particularly in eliminating DielMrin in Niger (USAID/GTZ) and in Pakistan (USAID), and ongoing projects in Mauritania and Madagascar .

73. The Committee underscored the importance of these actions, and in view of the gravity of the problem, asked that the planned studies be undertaken with all due haste so that disposal operations could be undertaken immediately.

74. The Committee also underscored the urgent need to seek means to:

- ensure better management of usable pesticide stocks (repackaging, construction of appropriate storage,...),
- apply the triangular principle so that surplus quantities of usable pesticides could be utilised in areas of deficit

75. The Committee drew the attention of the international community to the fact that large stocks of insecticides still usable today would also soon become obsolete, unless these last two measures were implemented.

76. The Committee thanked donors who had already helped solve the problem of obsolete pesticides, and noted their willingness to carry on with such efforts. It hoped that other donors would participate in this effort, and that an overall solution might be found to such pesticide problems and reduce the environmental hazard.

TRAINING

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83. Expenditure by the project was \$US 13,000 in 1990, \$US 242,000 in 1991 and approximately \$US 337,000 in 1992. The project will end in 1993.

INTERNATIONAL TRUST FUND 9161: CONTRIBUTIONS AND EXPENDITURES

84. The Secretariat presented a statement on the annual budget and accounts for the period 1990-92 (Appendix IX).

85. The total expenditure in 1990 amounted to US\$ 42,159 which represents only 20% of the yearly budget approved by the Commission. This low expenditure is mainly due to the fact that Desert Locust activities were funded to a large extent by other locust projects. In particular, unspent funds of projects approved during the locust emergency campaign, which phased out at the end of 1990, were used for these activities.

86. For 1991 the total expenditure amounted to US\$ 110,806 covering mainly costs of various meetings and Desert Locust survey activities.

87. Taking into account the cash balance available at the end of 1991 of US\$ 386,464, the contributions received up to the end of August 1992 and related interests, the funds presently available in the trust fund amount to US\$ 471,404. The 1992 financial commitments are estimated at US\$ 104,851 leaving a cash balance of US\$ 366,553.

88. The Committee approved the above budget and accounts.

89. A detailed workplan and related budget should be worked out by the FAO Secretariat and the Technical Group. This bi-annual budget of US\$ 400,000 will be defined in detail at the next meeting of the Technical Group planned for early 1993.

90. In line with the recommendations of the thirty-first session held in September 1990 (paragraph 60 of the 31st meeting report) the Committee reiterated the necessity to allocate funds for one or two long-term fellowships to be granted for the next biennium. This activity will be included in the above-mentioned workplan.

91. Furthermore, the Committee was informed of the status of outstanding contributions to the Trust Fund 9161 and contributions received up to the end of August 1992. In this respect the delegates of the below-mentioned countries announced the following:

Pakistan: the outstanding contribution for the financial year 1992/93 was transferred to FAO on 12 October 1992;

Syria and Iran: the payment of the outstanding contribution referring to various financial years is under process.

92. On the other hand, the Committee considered Mr de Haen's proposition to create a parallel trust fund to that of the Desert Locust a useful one and requested the Secretariat to study this proposal with donors and FAO.

93. The committee, aware that only locust affected countries contribute to the international locust trust funds requested the Secretariat together with the Desert Locust Technical Group to study the rationale and mechanisms for the level of individual contributions.

STATUS OF THE LOCUST CONTROL REGIONAL ORGANIZATIONS AND COMMISSIONS

94. In noting the activities of the regional organizations and commissions (Appendix X) since October 1990, the Committee:

- appreciated the importance of the role played by these commissions and organizations in coordinating locust control activities in each region (joint surveys - training - strengthening the control potential of countries - gathering and disseminating information etc..)
- underscored FAO's efforts to revitalise the Near East Commission. Took note of the transfer of the Commission's seat from Jeddah to Cairo, and of the temporary designation of the

officer in charge of plant protection at the FAO regional office in Cairo to head this Commission.

- regretted, despite the above mentioned effort, the suppression of this post and recommended it be re-established;
- reiterated the recommendation of the 31st Session that the post of regional locust control officer for South West Asia be established at the earliest possible date.

95. To that end, the Committee requested that countries in the two regions involved express their support of these recommendations to FAO.

OTHER BUSINESS

96. The Committee requested the Secretariat:

- to present at each session of the DLCC a report with the recommendations adopted and the status of their implementation;
- to send working documents in advance to member states and participants;
- to put at the disposal of the participants at each session the statutory documents of the DLCC, of the regional commissions and other subsidiary organizations.

DATE AND PLACE OF THE NEXT SESSION

97. The Committee agreed that the next session of the DLCC would be held at FAO headquarters in Rome at a date to be determined by the Director-General of FAO.

ADOPTION

98. Following discussions, the report of the 32nd session was adopted by the session.

APPENDIX I

INVITED COUNTRIES

Afghanistan	Lebanon
Algeria	Libya
Australia	Luxembourg
Bahrain	Mali
Belgium	Mauritania
Benin	Morocco
Bulgaria	Netherlands
Burkina Faso	Niger
Cameroon	Nigeria
Canada	Norway
Cape Verde	Oman
Central African Republic	Pakistan
Chad	Portugal
Côte d'Ivoire	Qatar
Djibouti	Saudi Arabia, Kingdom of
Egypt	Senegal
Ethiopia	Sierra Leone
Finland	Somalia
France	Spain
Gambia	Sudan
Germany	Sweden
Ghana	Switzerland
Greece	Syria
Guinea	Tanzania
India	Togo
Iran, Islamic Republic of	Tunisia
Iraq	Turkey
Israel	Uganda
Italy	United Arab Emirates
Japan	United Kingdom
Jordan	United States of America
Kenya	Yemen Republic
Kuwait	

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APPENDIX III

CONTROL MEASURES UNDERTAKEN AGAINST DESERT LOCUSTS, SEPTEMBER 1990 - OCTOBER 1992
 MESURES DE LUTTE ENTREPRISES CONTRE LE CRIQUET PELERIN, SEPTEMBRE 1990 - OCTOBRE 1992

COUNTRY	PERIOD	INFESTATION	PESTICIDE			METHOD	NOTES
			AREA (ha)	QUANTITY	TYPE		
ALGERIA	Jun-91	hoppers & adults	45	n/a	ULV	ground	
	Jul-Oct-91	hopper groups & adults	1,620	n/a	ULV	ground	
	May-92	adult groups	1,500	n/a	n/a	ground	
INDIA	Sep-Oct-90	hoppers & adults	480	12,000	dust (kg)	ground	
	Nov-90	swarm	220	5,500	dust (kg)	ground	
	Oct-92	hoppers & adults	n/a	n/a	n/a	ground	
MAURITANIA	May-Jul-92	adult & hopper groups	875	438	ULV (l)	ground	
	Sep-92	adults	200			ground	
PAKISTAN	Sep-Oct-90	hopper groups	4,700	300	dust (kg)	ground	estimated area
	Sep-Oct-90	adults	600	60	dust (kg)	ground	
	May-91	hoppers & adults	200	20	dust (kg)	ground	
SAUDI ARABIA	Jun-92	hopper & adult groups	600	n/a	n/a	ground	
SUDAN	Jan-Mar-92	hoppers & adults	347	300	ULV (l)	ground	
	Jan-Mar-92	hoppers & adults	140	n/a	dust (kg)	ground	
TUNISIA	Nov-Dec-90	hoppers & adults	13,000	n/a	n/a	ground	within this area
TOTAL AREA TREATED			24,527				

Note:
 (l) = litres
 (t) = tonnes
 n/a = not available

CONTROL MEASURES UNDERTAKEN AGAINST GRASSHOPPERS, JANUARY 1990 - SEPTEMBER 1992
 MESURES DE LUTTE ENTREPRISES CONTRE LES SAUTERIAUX, JANVIER 1990 - SEPTEMBRE 1992

COUNTRY	1990		1991		1992		NOTES
	AREA (ha)	METHOD	AREA (ha)	METHOD	AREA (ha)	METHOD	
BENIN	n/a	n/a	3,316	ground	4,260	ground	up to 30.9.92
BURKINA FASO	90,000	ground	32,026	ground	32,000	ground	up to 30.9.92
CHAD	97,322	ground	45,944	ground	n/a	n/a	
MALI	459,171	ground / air	138,406	ground	52,000	ground	up to 30.9.92
MAURITANIA	150,213	ground / air	143,500	ground / air	12,500	ground	up to 30.9.92
MOROCCO	n/a	n/a	n/a	n/a	33,000	n/a	up to 30.9.92
NIGER	567,165	ground / air	12,500	ground	130,000	ground / air	up to 30.9.92
SENEGAL	252,207	ground / air	275,665	ground	120,000	ground	up to 30.9.92
SUDAN	n/a	n/a	27,618	ground	n/a	n/a	up to 30.9.92
TOTAL	1,616,078		678,975		383,760		

LOCUST AND GRASSHOPPER CONTROL POTENTIAL AS OF SEPTEMBER 1992

REGION	COUNTRY	DATE	ULV (l)	EC (l)	TOTAL (l)	DUST (kg)	VEHICLES	RADIOS	SPRAYERS	A/C	HELICOP	STAFF
NW AFRICA	Morocco	Jan-90	1,575,205	1,454,732	3,029,937		180	100	1,750	10	*	300
	Tunisia	Mar-89			0					8	*	
	Libya	Sep-90	87,625	35,652	123,277	0	235	55	427			52
	Algeria	Jun-89	1,500,000	500,000	2,000,000	1,500,000	100	38	1,800	8	*	
WEST AFRICA	Mauritania	Dec-89	315,137	35,595	350,732	423,000	50	62	4,260			
	Senegal	Dec-89	59,000	19,464	78,464	1,301,550	42	58	1,909			
	Gambia	Dec-88	5,000	520	5,520	200,000	15	34	1,262			209
	Ghana	Sep-90	66,100		66,100		8		126			
	Guinea Bissau	Dec-88	8,000	15,000	23,000	8,000	3		146			30
	Mali **	Dec-89	204,389	12,860	217,249	24,734	78	48	1,228	3		
	Niger	Jan-90	28,098	2,200	30,298	122,314	39	32	15,670	3		
	Chad	Oct-89	165,115	4,210	169,325	10,700	49	33	183	2	1	48
	Burkina Faso	Dec-89	66,855	0	66,855	43,010	53	18	18,565			
	Cameroon		15,000	15,000	30,000	10,000	68	9	1,360			
	Nigeria	Jun-89								2		
	E AFRICA	Sudan	Jun-92	132,217	47,929	180,146	492,196	193	71	2,149	0	
Ethiopia		Sep-90	170,369	29,682	200,051	130,205	17	7	7,704			
DLCO-EA		Oct-89	137,050		137,050		58			8		
Somalia		Dec-90	42,000		42,000		18	47	33			24
Saudi Arabia		Sep-90	357,806		357,806		200		220	5	5	
Syria		Dec-88	79,560	22,500	102,060				350	8		
NEAR EAST	Yemen PDR	Dec-88	8,500		8,500	2,000	12	4				22
	Yemen AR	Mar-89	79,650		79,650	45,625	20	10	230			31
	Jordan	Sep-90	15,500		15,500		19	40	170	1	5	
	Kuwait	Jun-89	60,000		60,000		40			2		
	Qatar	Jun-89	30,000		30,000		30					
	UAE	Jun-89	50,000		50,000		50					
	Oman	Jun-89	40,000		40,000		20		26	2	2	
	Bahrain	Jun-89	10,000		10,000		10					
	Egypt	Jun-89	15,000	25,000	40,000		50	7				
	Turkey	Jun-89								5		

APPENDIX VI

ASSISTANCE PROVIDED TO COUNTRIES AND REGIONAL ORGANIZATIONS

1991 AND 1992

After the collapse of the Desert Locust plague in 1989, the international donor community continued to provide assistance to affected countries to ensure that locust activities were maintained during the recession and to assist the seasonal campaigns against grasshoppers. The following assistance has been reported to FAO which comprises of about US\$2 million in 1991 and about US\$650,000 so far in 1992:

Algeria

in 1991: Provided 10,000 litres of pesticide to Mauritania.

Canada/CIDA

in 1991: US\$300,000 for pesticides for Mali.

EEC

in 1991: Provided four vehicles and US\$65,000 for aircraft hours and per diem for Mauritania.

Germany/GTZ

in 1991: US\$300,000 to Chad, Mali, and Mauritania for sprayers, aircraft hours, protective clothing, and literature.

in 1992: US\$200,000 to OCLALAV countries for training. Pesticide was provided to Madagascar.

Japan

in 1991: Provided pesticide, vehicles, and sprayers to Mauritania.

Luxemburg:

in 1991: US\$430,000 for aircraft in the Sahel, including Mauritania and Mali.

in 1992: US\$260,000 for aircraft in Mauritania and Niger.

Norway

in 1991: US\$52,000 for pesticide and vehicle fuel for Mali.

UNDP

in 1991: US\$150,000 for pesticide and campaign costs for Mauritania and Mali.

USAID

in 1991: US\$150,000 for vehicle spare parts and fuel to Mali.

APPENDIX VII

DESERT LOCUST PREVENTIVE CONTROL PROJECT FOR WEST AND NORTH-WEST AFRICA

I. Project Background

- Since the end of the major Desert Locust plague of 1953-62 the responsibility for locust monitoring and control has been the responsibility of OCLALAV in West Africa (Mali, Mauritania, Niger and Chad) and in North-West Africa such activities have been undertaken by the concerned countries (Morocco, Algeria and Libya) with co-ordination through the FAO Regional Commission for the Control of Desert Locust in North-West Africa.

- The member States of OCLALAV faced with increasing economic difficulties did not make regular annual contributions to the organization. OCLALAV therefore experienced increasing budgetary difficulties which became critical in the 1980's. Since 1980 external assistance has been required to enable OCLALAV to undertake field activities and aerial operations.

- To attempt to overcome some of these difficulties the responsibility for migratory bird control was transferred to member states in 1985 and for grasshoppers in 1986 allowing OCLALAV to concentrate its resources on Desert Locust.

- Despite a number of resolutions of the OCLALAV Council (Bamako, February 1987; Rome, November 1987) urging member States to maintain their contributions to OCLALAV the organization continued to experience financial difficulties. In March 1988 the Governing Council of OCLALAV decided to devolve responsibility for Desert Locust to member States and redefined the mandate of OCLALAV as information collation, training, co-ordination and research.

- The period 1970-86 was characterised as one of drought with generally unfavourable conditions for any significant upsurge of the Desert Locust. However, the Desert Locust invasions of 1986-89 demonstrated the unpreparedness of OCLALAV and national locust units recently created in west Africa (Mali, Mauritania, Niger and Chad).

- In the period of the last plague (1987-89) the affected countries received substantial assistance both in terms of materials and funds from both bilateral and multilateral sources.

- In 1988 France and Canada funded, with other donors, the construction of the Anti-Locust Centre at Agadez (Niger). Sweden, Denmark, Netherlands, USAID, the IDB and FAO contributed to improved infrastructure developments and refurbishing of existing facilities in the Sahelian countries. In addition donors, including Morocco, Algeria, Libya, Tunisia; Germany, United Kingdom, Japan IDB, UNDP, EEC, and IFAD contributed substantial quantities of pesticides, vehicles and associated equipment specifically directed to assist with preventive and emergency Desert Locust control.

- Despite measures taken by (affected) countries with the assistance of donors in general national services were not in a position to fully undertake preventive control measures. For this reason a specific technical workshop was held in Nouakchott (Mauritania) in June 1988 attended by both Sahelian and Maghrebine countries together with a number of donor representatives. This workshop discussed a 5 year proposal for preventive control. The project budget was estimated at US\$5.2 million for eight countries in West and North-West Africa although the majority of external assistance was directed to the Sahelian countries (Mali, Mauritania, Niger and Chad). The workshop recommended that the proposal be re-formulated to take greater account of the needs of the affected countries in West and North-West Africa.

- The project proposal was re-formulated by a working group in Rome in August 1988. The revised proposal, estimated at US\$22 million of which US\$14.5 million was to be provided by external assistance. The revised proposal also included a project co-ordinator who would be field based. Following review of the document by the countries concerned three of the Sahelian countries and OCLALAV indicated certain reservations over some components of the project proposal.

- The Governing Council of OCLALAV at its meeting in N'Djamena in December 1988 affirmed the need to have separate co-ordination for the Sahelian sub-region through OCLALAV and that the scope of the project be extended to include all 10 member countries of OCLALAV.

- With the agreement of FAO, IFAD re-formulated a third version of the project proposal which attempted to take account of previous comments and reservations from the locust affected countries and also comments made by a number of donors (the need for full participation of the beneficiary countries, sound financial accountability, the use of resources in the early stages of the project of resources previously supplied through emergency funds).

- The FAO Investment Centre, funded by IFAD, visited the potential beneficiary countries in 1989 and discussed the requirements which would need to be in place and the modalities of the execution of the proposal. The report of this mission "Report of Preparation Mission for a Regional Program for Preventive Control of Desert Locust" was distributed to the countries in late 1989.

- IFAD prepared a project appraisal in 1990 whilst at the same time FAO finalised a further revised (fourth) version of the proposal which was distributed to the following countries in April 1991: Algeria, Chad, Libya, Mali, Morocco, Mauritania, Niger, and Tunisia (countries involved in the earlier project proposals) together with Benin, Burkina Faso, Cameroon, Ivory Coast, Gambia and Senegal (following the recommendations of the OCLALAV Council for all member countries to be associated with the project.)

- In the course of the preceding action the plague had ended and Desert Locust again entered a recession period and the previous interest shown by donors waned.

II. Current Status of Project

FAO has maintained its efforts and liaison with the concerned countries and relevant donors in accordance with various recommendations of the DLCC.

- In an attempt to take a more rationale and realistic approach to implement the project the various components of the former versions have been revised and the overall budget reduced to present a more acceptable proposal to donors.

- This revision required a number of previous components to be omitted with the project now concentrating on survey, training, the refurbishment of a reduced number of bases and operational costs.

- It was therefore judged appropriate that the components previously included in the project in particular, the construction of new central and subsidiary bases, field research, expansion of the meteorological network and high level training be omitted from the project. Separate funding for these components could be sought on a bilateral or multilateral basis by the countries concerned as separate project activities.

- In view of these recent developments FAO organised an ad hoc Technical Group to review the latest version of the proposal in Rome in September 1992. This Group re-formulated a revised document which will be submitted to donors for consideration.

III. Summary Outline of latest Version of the project

Project Title: Preventive control of Desert Locust in West and North-West Africa.

Beneficiary Countries: Algeria, Chad, Libya, Mali, Mauritania, Morocco, Niger

Funding Requirement: The estimated cost of external funding is US\$9,704,500. National (country) contributions are estimated at approximately US\$13 million.

Duration: 5 years

Objectives: The project will assist the countries of West Africa and North-West Africa in the establishment of a sustainable system for the preventive control of Desert Locust and for the control

of Desert Locust invasions. The project would:

- create National Desert Locust units in the 7 countries of the region (Algeria, Chad, Libya, Mali, Mauritania, Morocco and Niger) with the capability to undertake preventive control;
- strengthen Desert Locust control potential in Gambia, Senegal, Tunisia and Burkina Faso: countries which are threatened during major periods of locust invasion;
- Strengthen the co-ordination structures in the two sub-regions (OCLALAV and the Regional Commission for North-West Africa);
- Training of field survey and control staff;
- Provide technical support to the countries and organizations of the sub-regions;
- Provide improved access to new technologies for improved preventive control;
- Develop contingency plans for resource mobilisation in the event of emergency situations.

IV. Structure and Co-ordination

FAO headquarters (AGP Division) will execute the project in with the National Services and the two sub-regional co-ordinating organizations. It is envisaged that:

- An inter-regional technical committee be formed comprising of:
 - . one representative from each of the seven countries;
 - . one representative from OCLALAV;
 - . one representative from the Regional Commission for North-West Africa;
 - . FAO;

The committee would meet on an annual basis and would be responsible for reviewing activities completed and recommend work plans and budgets for activities in the following year.

The reports, work plans and budgets would then be forwarded to a Co-ordinating Committee for approval.

The Co-ordinating Committee would comprise similar membership as indicated above for the Technical Committee with additional representatives from Burkina Faso, Gambia, Senegal and Tunisia together with donor representatives.

The Co-ordinating Committee would also meet annually immediately following the Technical Committee meeting and would be responsible for:

- ensuring project activities are undertaken satisfactorily;
- approval of the programme of work;
- estimate the financial requirements to ensure that the approved work plan can be implemented and adjustments to the provisional budgets as required.

OCLALAV and the Regional Commission for North-West Africa will be strengthened to enable improved co-ordination between respective member countries.

V. Obligations and Preliminary Conditions

(a) Obligations (Refer project document for full details)

- the participating countries and their respective organizations will give their agreement to participate in achieving the activities planned under the project.

- Each Government of the seven participating countries directly concerned with preventive control of Desert Locust will establish a National Unit for this purpose including personnel, operational budget and all necessary equipment.

- The participating countries will assist their respective regional organisations and the associated co-ordination and co-operation implications. thereof.

(b) Conditions (Refer project document for full details)

- Each beneficiary country will grant, through a Ministerial directive, autonomy to the National Unit for preventive control of Desert locust and ensure that the resources to be provided under the project are used for this sole activity.

- The Governments will obtain from staff trained through the project a commitment to serve with the National unit for a suitable period after their training.

**REPORT OF THE MEETING OF THE DESERT LOCUST
TECHNICAL GROUP**

FAO, Rome 18-20 February 1992

INTRODUCTION

The Thirty-first Session of the DLCC held in Rome from 24 to 28 September 1990 recommended the establishment of a Desert Locust Technical Group to:

1. study and report to the FAO Desert Locust Control Committee on all technical and scientific matters pertaining to the control of the Desert Locust;
2. report and advise on specific issues referred to the Technical Group by the DLCC;
3. oversee and follow-up recommendations of the DLCC;
4. advise the Secretariat on the agenda for future meetings of the DLCC.

The first meeting of this Technical Group was held in Rome from 18 to 20 February 1992.

PARTICIPANTS

The following participated:

Members: S.S. Bamofleh (Saudi Arabia)
 T. Ben Halima (Morocco)
 A.M. Karrar (DLCO-EA)
 M. Shafi (Pakistan)
 L. Soumare (OCLALAV)

FAO staff: J. Roffey
 A. Hafraoui
 N. Mahjoub
 H. Niggemann

AGENDA

The following agenda was adopted:

- Opening of the Meeting
- Election of the Chairman and Vice-Chairman
- Nomination of the Rapporteur
- Adoption of the agenda
- Follow-up of the recommendations of the Thirty-first Session of the DLCC
- Status of Desert Locust management strategies
- Desert Locust research
- Training
- Agenda for Thirty-second Session of the DLCC
- Presentation of the conclusions of the Technical Group meeting to the Director of AGP.
- Any other business
- Date and venue of the next meeting

ELECTION OF THE CHAIRMAN AND VICE-CHAIRMAN

Chairman of the Meeting: T. Ben Halima

Vice-Chairman: M. Shafi

Rapporteur: L. Soumare

SUMMARY OF DISCUSSIONS

Discussion of the agenda items led to the following conclusions:

1. Follow-up of the recommendations of the Thirty-first Session of the DLCC

1.1 Creation of a Desert Locust Technical Group

This meeting represents the implementation of this recommendation. However, for administrative and procedural reasons, the Technical Group has so far only met once instead of twice a year as recommended.

The Technical Group proposes meeting once a year to ease the financial burden of International Trust Fund 9161.

1.2 Closer association of scientists and institutions of countries affected by the Desert Locust in the activities of the UNDP/FAO Scientific Advisory Committee (SAC)

Though FAO has taken steps to implement this recommendation, the Technical Group requests that it urge the SAC to increase its linkage with research staff and institutions in countries affected by the Desert Locust. This would make Desert Locust research more appropriate to the situation in the field.

The Technical Group deplored the lack of information, at the country and regional organization level, on SAC-supported projects and requested that FAO take the necessary steps to remedy this situation.

The Technical Group suggested that the SAC Chairman be associated with its activities. The Group also noted that relations between the DLCC and the SAC were not clearly defined and hoped that this would be rectified at the next DLCC meeting.

1.3 Management of insecticide stocks and destruction of obsolete pesticides

FAO has prepared a project for the implementation of this recommendation. Its first phase, lasting two years, will centre on stock inventories and management on the one hand, and on pilot trials for the destruction of obsolete pesticides on the other.

The Technical Group considers that the first stage is too long given the information already available and the work accomplished in this connection. However, the Technical Group requests that the FAO Secretariat prepare a detailed paper on this matter for submission to the next session of the DLCC.

1.4 The inclusion of environmental aspects on the DLCC agenda

As requested by the DLCC, this item features on the agenda of the Thirty-second Session of the DLCC.

As the present terminology is vague, the Technical Group proposes the following phraseology: The Environmental Impact of Insecticides used for Desert Locust Control. The Technical Group suggests that the DLCC put forward a general recommendation calling for environmental impact to be considered in all Desert Locust control activities.

1.5 Training

This recommendation requested an examination of the training needs of the DLCC Member States and a short- and long-term training programme, to be partly financed by international TF 9161. Given the difficulties experienced by FAO in implementing this recommendation and the priority attached to high-level training, the Technical Group requests that FAO submit a training programme in acridology for high-level staff at the next

DLCC Session planned for June 1992. Part of this programme will be financed by TF 9161 from 1993 and the remaining costs can be met with FAO Commission and other funds.

1.6 Meteorology and remote sensing

Though these two areas did not feature as a DLCC recommendation, their importance in Desert Locust control led the Technical Group to examine them and to draw the following conclusions:

- There is an urgent need to establish a sufficient number of automatic meteorological stations in the gregarisation areas.
- The "greenness" vegetation maps do not always reflect the real situation in the field and arrive late in the recipient countries, undermining their usefulness. The Technical Group therefore proposes that remote sensing research be continued with the involvement of the countries and organizations concerned so that this technology can be put to better use.

1.7 FAO Regional Commissions in South-West Asia and the Near East.

The often-repeated recommendation regarding the re-establishment of the post of Regional Locust Officer in the FAO South-West Asia Commission has not been acted upon. In the meantime the post of Regional Locust Officer for the FAO Near East Commission has been abolished.

The Technical Group deplores this situation which is detrimental to FAO's coordinating role in Desert Locust control in these two regions, and requests that FAO do all it can to re-establish these posts and to ensure that these Commissions operate in a satisfactory manner.

1.8 Joint Indo-Pakistan border surveys

There were no joint surveys between these two countries during the 1991 season as recommended by the DLCC.

The Technical Group recognized the importance of these joint surveys and requested that the conditions be established for their regular occurrence.

2. Position on Desert Locust control strategies to be undertaken during periods of recession and upsurge

There are in principle two control strategies:

- Preventive control
- Plague elimination

The first is based on the assumption that all gregarizing populations can lead to an upsurge and that the prevention of these upsurges will prevent a plague. This strategy, which has been adopted since the 1960s, requires close monitoring of all Desert Locust activity and of environmental conditions in recession periods as well as the treatment of all gregarious and aggregating populations. The disadvantage of this strategy is that pesticides are applied against many populations which present no threat to crops.

The second strategy, upsurge elimination, is based on the practice whereby, as Desert Locust population levels rise, an increasing proportion of the population occurs as discrete targets (hopper bands and swarms). The risks inherent in this strategy are that swarms may form in inaccessible regions and then migrate to cultivated areas.

With the withdrawal of dieldrin, which permitted rapid and effective action against late-instar hopper bands over large areas, the two above strategies need to be carefully reconsidered.

Different interpretations of these two strategies and problems of terminology emerged during the

Technical Group discussions. However, the Group opted for a preventive strategy because of:

- lower costs
- less environmental pollution .
- fewer resources needed.

Nevertheless, the Technical Group requested that FAO present a detailed information note on the two strategies at the next DLCC session.

3. Desert Locust research

The Technical Group noted that:

- most Desert Locust research is conducted in the developed countries, outside the affected countries;
- the affected countries receive no or little assistance for the development of their research institutions and activities;
- the affected countries do not generally participate in the selection of research topics;
- the above observations have always been made by the DLCC, and that no channel has so far been found to solve these problems and to spur cooperation between research institutions in developed and developing countries to improve Desert Locust control.

4. Agenda of the Thirty-second Session of the DLCC

FAO submitted a draft agenda which was examined and amended as follows:

1. Opening of the Session
2. Election of the Chairman and Vice-Chairman
3. Adoption of the Agenda
4. Election of the Drafting Committee
5. The Locust situation October 1990 to October 1992
 - (a) Desert Locust
 - (b) Other species
6. Control measures undertaken
7. Implementation of the recommendations of the Thirty-first Session of the DLCC
8. Report of the Desert Locust Technical Group
9. Review of existing control potential
10. Assistance provided to countries and regional organizations
11. Project for Preventive Control of Desert Locust in West and North-West Africa
12. Report of the UNDP/FAO Scientific Advisory Committee on Desert Locust Research
13. Desert Locust research
14. Training
15. Obsolete and expired pesticides. Insecticide stocks and destruction of obsolete pesticides
16. Environmental aspects
17. International Trust Fund 9161: Contributions and Expenditures
18. Status of Regional Locust Commissions and Organizations
 - (a) Near East Commission
 - (b) North-West Africa Commission
 - (c) South-West Asia Commission
 - (d) DLCO-EA
 - (e) OCLALAV
 - (f) IRLCO-CSA and follow-up of recommendations made at their annual meetings
19. Any other business
20. Date and venue of next Session
21. Adoption of the report

5. PRESENTATION OF THE CONCLUSIONS OF THE MEETING TO THE DIRECTOR OF AGP

Mr Papisolomontos, Director of AGP Division met the members of the Desert Locust Technical

Group, after the agenda items had been discussed, to learn what conclusions had been reached.

The Chairman of the Meeting thanked Mr Papasolomontos for his interest in the locust problem and outlined the conclusions reached, emphasizing in particular the following points:

- **High-level training:** the essential role to be played by this type of training in improving all aspects of locust control was strongly emphasized. It was also pointed out that without this training any action would be a palliative with no long-term impact on locust control.
- **Research:** the affected countries should be involved in the identification and implementation of research if this is to be successful and permanent. An urgent appeal was launched to donors financing and/or participating in locust research to foster genuine collaboration leading to successful research.
- **Cooperation at the regional level:** locust control can only be conducted rationally if the responsibilities at its various administrative levels are fully met. The enormous difficulties that currently exist at both the national and regional levels only delay a solution to the locust problem. These difficulties result from the loose implementation of the strategy adopted by FAO and the affected countries for more than half a century. Remedial action and a new conceptual approach are urgently needed. Otherwise FAO, which has always assured locust control coordination at the international level, might find its role increasingly diminished and might in the short or medium term unfortunately lose this responsibility altogether.

Mr Papasolomontos followed the Chairman's report with interest and made a brief statement addressing the points raised.

He emphasized the importance of high-level training and promised that FAO would do all it could to ensure that this was provided.

With regard to Desert Locust research, Mr Papasolomontos noted the need for more active participation of the affected countries at the level of the SAC and in the field.

As for the difficulties being experienced by the Regional Commissions, Mr Papasolomontos confirmed the important role they played but specified that the current financial problems of the Organization prevented it from providing the support requested in the immediate future.

6. MISCELLANEOUS

Project for Preventive Control of Desert Locust in West and North-West Africa.

This 5-year project has been reformulated by FAO and was examined by the affected countries and the funding agencies in May 1991.

FAO conducted a further reformulation on the basis of the observations of the beneficiary countries.

The Technical Group requested that this new reformulation be submitted to the affected countries for their consideration before being presented to the funding agencies, and remarked that the report of the meeting of May 1991 did not entirely reflect the points of view of the participants.

FAO has also formulated a short-term programme for the monitoring of gregarization areas in Sahelian countries for the 1992 agricultural season. Given the urgency of this programme, the Technical Group requested that FAO take the necessary steps to secure its timely funding.

7. Date and venue of the next meeting

The Technical Group suggests that its next meeting be held in Rome on a date to be determined by FAO.

APPENDIX IX

SCALE OF GOVERNMENT CONTRIBUTIONS TO THE
INTERNATIONAL DESERT LOCUST TRUST FUND
No. 9161 (MTF/INT/008/MUL)

<u>COUNTRY</u>	<u>SCALE (US\$)</u>
Afghanistan	3,480.00
Algeria	7,700.00
Bahrain	920.00
Cameroon	2,780.00
Chad	3,520.00
Djibouti	1,120.00
Egypt	5,740.00
Ethiopia	4,320.00
Gambia	2,420.00
Ghana	3,280.00
India	20,000.00
Iran	20,000.00
Iraq	7,440.00
Jordan	3,420.00
Kenya	3,580.00
Lebanon	3,060.00
Libya	10,640.00
Mali	3,600.00
Mauritania	2,900.00
Morocco	5,360.00
Niger	3,760.00
Nigeria	8,940.00
Oman	2,100.00
Pakistan	6,520.00
Qatar	1,760.00
Saudi Arabia	20,000.00
Senegal	3,520.00
Somalia	3,500.00
Sudan	3,980.00
Syria	4,520.00
Tunisia	4,460.00
Turkey	14,480.00
Uganda	3,380.00
United Arab Emirates	4,600.00
Yemen	6,500.00
TOTAL	207,300.00 =====

TRUST FUND No.9161.00 - MTF/INT/008/MUL -

- Inter - Regional - Desert Locust Control Project

Status of Contribution as at 31 August 1992
(expressed in US\$)

Member Governments	Outstanding 31/12/1991	Contribution due for 1991 - 1992	Received up to 31/8/1992	Outstanding 31/8/1992
AFGHANISTAN	6,960.00	3,480.00	6,960.00	3,480.00
ALGERIA	7,700.00	7,700.00	7,700.00	7,700.00
BAHRAIN	1,840.00	920.00		2,760.00
CAMEROON	19,907.00	2,780.00		22,687.00
CHAD	44,280.00	3,520.00		47,800.00
EGYPT	0.00	5,740.00		5,740.00
ETHIOPIA	40,100.94	4,320.00		44,420.94
FRANCE				
(DJIBOUTI)	12,180.00	1,120.00		13,300.00
GAMBIA	21,780.00	2,420.00		24,200.00
GHANA	6,575.00	3,280.00		9,855.00
INDIA	70,000.00	20,000.00	20,000.00	70,000.00
IRAN	181,800.00	20,000.00		201,800.00
IRAQ	66,960.00	7,440.00		74,400.00
JORDAN	6,997.00	3,420.00		10,417.00
KENYA	33,294.41	3,580.00		36,874.41
LEBANON	10,444.79	3,060.00		13,504.79
LIBYA	56,840.00	10,640.00		67,480.00
MALI	15,613.00	3,600.00		19,213.00
MAURITANIA	37,725.09	2,900.00		40,625.09
MOROCCO	5,360.00	5,360.00		10,720.00
NIGER	35,640.00	3,760.00		39,400.00
NIGERIA	40,549.61	8,940.00		49,489.61
OMAN	2,100.00	2,100.00		4,200.00
PAKISTAN	6,520.00	6,520.00	6,520.00	6,520.00
QATAR	14,910.00	1,760.00	1,760.00	14,910.00
SAUDI ARABIA	20,000.00	20,000.00	20,000.00	20,000.00
SENEGAL	34,246.42	3,520.00		37,766.42
SOMALIA	30,774.77	3,500.00		34,274.77
SUDAN	9,265.70	3,980.00		13,245.70
SYRIAN ARAB REPUBLIC	46,710.00	4,520.00		51,230.00
TUNISIA	26,316.44	4,460.00		30,776.44
TURKEY	14,480.00	14,480.00	14,480.00	14,480.00
UGANDA	23,660.00	3,380.00		27,040.00
UNITED ARAB EMIRATES	23.80	4,600.00		4,623.80
YEMEN	(5,764.53)	3,580.00		(2,184.53)
YEMEN	23,960.00	2,920.00		26,880.00
TOTALS	975,513.97	207,300.00	77,420.00	1,101,813.97

INTERNATIONAL TRUST FUND 9161

Budget and Statement of Accounts (in US\$)

Receipts	Approved Annual Budget	Expenditures 1990	Expenditures 1991
Balance brought forward from previous year		200,053	303,760
Contributions from member countries(incl.interest)	207,300	145,866	193,510
TOTAL	207,300	345,919	497,270
<u>Expenditures</u>			
1100 Intern. Exp & Consul.	35,000	1,733	1,913
1300 Administ. Assistance	5,000	3,347	-2
1700 National Consultants	-	-	4,976
2000 Duty Travel	23,000	24,143	32,835
3000 Contracts	20,000	-	-
4000 Gen. Op. Expenses	5,000	9,095	28,515
5000 Expendable Equipment	10,000	197	684
6000 Non-exp. Equipment	35,000	-	1,450
8000 Fellowships, Training	50,000	-	27,689
9100 Project Servicing Costs (13%)	23,790	3,644	12,746
TOTAL Expenditure	206,790	42,159	110,806
Unallocated balance	510	303,760	386,464

INTERNATIONAL TRUST FUND 9161

Breakdown of 1990 and 1991 expenditures (final)

	Expenditures 1990	Expenditures 1991
<u>1100 International Experts & Consultants</u>		
Consultant (pesticide trial programme) balance 1989	1,733	
Locust Consultant (Rome, Sept 91)		1,913
Sub-Total	1,733	1,913
<u>1300 Administrative Support Personnel</u>		
Overtime (DLCC Meeting, June 90)	149	
Interpreters (DLCC Meeting, June 90)	2,902	-2
Messengers "	296	
Sub-Total	3,347	-2
<u>1700 National Consultants</u>		
One-month National Team (DL survey in Mali)		4,976
Sub-Total		4,976
<u>2000 Duty Travel</u>		
Visit of Regional Officer for North-West Africa to FAO HQ Rome (March 90)	873	
Meeting of the Technical Advisory Committee of the DL Control Committee Rome, June 1990	4,268	
Travel to UK for computer repairs	200	
DLCC Meeting, Rome, September 1990	21,970	
Meeting on DL Control Alternative Strategies, UK, December 89 (FAO HQ staff)	491	
recovery travel costs	-3,659	
Technical OCLALAV Expert Meeting January 91 (FAO HQ Staff)		3,784
Donor Meeting on DLCO-EA, January 91 (FAO HQ Staff)		4,408
Technical Visit Minagri (UAE) and Regional Sub-Office Jeddah (FAO HQ Staff)		4,984
Reformulation DL Preventive Control Project (technical discussions with AFB Côte d'Ivoire, Niger)		4,199

Meeting Pesticide Referee Panel		3,628
Recovery travel costs		-3,060
Miscellaneous		358
Workshop on Plant Protection Services Montpellier, June 91 (FAO HQ Staff)		620
DLCO Council, Nairobi, 7/91 and Workshop on Locust Control Lusaka (FAO HQ Staff)		5,551
Reformulation DL Preventive Control Project (technical discussions with 4 front-line countries), September 91 (FAO HQ Staff)		6,783
Meeting Scientific Advisory Committee, New York and CGLR, Washington, October 91		3,894
Recovery travel costs		-2,314
Sub-Total	----- 24,143	----- 32,835
<u>4000 General Operating Expenses</u>		
Computer repairs	569	
Publication Report DLCC Meeting	8,405	
Hospitality (DLCC Meeting)	62	
Miscellaneous	59	85
Locust Survey and Control Operations in Mauritania		7,979
Mission cost Locust Consultant (Mali)		1,217
DL and grasshopper survey and control operations (Chad)		17,686
Shipping costs (documents)		18
Registration fees (Ethiopia) training course, Nairobi (November 91)		700
Vehicle charges (1989)		58
Banking charges (Trust Fund)		772
Sub-Total	----- 9,095	----- 28,515
<u>5000 Non-expendable equipment</u>		
Office supplies (printer)	197	
Purchase of 5 batteries for Uganda		473
Purchase 10 copies of Bulletin no 5 on Sahelian Grasshoppers (FAO HQ)		211
Sub-Total	----- 197	----- 684

		.../continues
6000 <u>Expendable equipment</u>		
Purchase of transceivers for Tunisia	-----	1,450
	-	-----
		1,450
8000 <u>Fellowships & Training</u>		
Fellow North-West Africa Commission ¹		5,939
Intervention of the Maghreb Task Force in Niger (Algerian Team), Aug-Oct 91		21,750
Sub-Total	-----	-----
	-	27,689
9100 <u>Project Servicing Costs (13%)</u>	3,644	12,746
	-----	-----
GRAND TOTAL	42,159	110,806

¹ Erroneously charged to TF 9161 (DLCC). Transfer to TF 9161 (North-West Africa Commission requested. It will be reflected on 1992 accounts.

INTERNATIONAL TRUST FUND 9161

Breakdown of 1992 expenditures and commitments as at 31 August 1992

	Commitments/Expenditures as at 31.8.92
1100 <u>International Experts & Consultants</u>	
Locust Consultant (preparation of documents on Locust control) FAO HQ, Sept-Oct 92	4,244
Author's Contract (Mr Chara) for preparation of documents on Locust Situation in North-West Africa	6,000 -----
Sub-Total	10,244
1300 <u>Administrative Support Personnel</u>	
Overtime (Technical Group Meeting, February 92)	61
Interpreters (DLCC Meeting, October 92)	7,000
Messengers (Remote Sensing Meeting, May 92)	233
Messengers (DLCC Meeting, October 92)	331
Sub-Total	7,625 -----
2000 <u>Duty Travel</u>	
Pesticide Referee Panel (1991)	163
Travel Tunisian laboratory technician for training at Varian, Belgium	2,374
Working Group on DL, Rome, February 92	14,422
Visit Locust Expert (UK) to FAO HQ to finalise DL Habitat Atlas	8,128
DL Survey in Northern Mauritania, May 92	5,262
Meeting on Desert Locust Preventive Control Project, Rome, September 1992	11,264
Sub-Total	41,613 -----
3000 <u>Contracts</u>	
Letter of agreement with AGRHYMET, Niger for the provision of greenness maps	3,200
Letter of agreement with the Meteorological Office of Bracknell, UK, for a case study on DL invasion of Egypt and Sudan	1,950 -----
Sub-Total	5,150

4000 General Operating Expenses

General Operating Expenses	1,444
Interpreters (DLCC Meeting), Rome, October 1992	5,850
Publication of report on technical meeting on Desert Locust	1,500
Hospitality (Remote Sensing Meeting), Rome, May 92	100
Hospitality (Meeting of DL technical group), February 92	274
Costs for the transmission of OCLALAV Bulletin to the Sahelian countries	10,000
Purchase of tyres	2,798
Miscellaneous	80

Sub-Total 22,046

5000 Expendable equipment

Office supplies (HQ)	300
Sub-Total	300

6000 Non-expendable equipment

Purchase of NOAA satellite data for FAO HQ	7,000
Purchase of computer equipment (FAO HQ)	1,079
Shipping costs	86

Sub-Total 8,165

8000 Fellowships and Training

Training Fees for Tunisian technician trained at Varian, Belgium	2,800
Miscellaneous	90
Sub-Total	2,890

9100 Project Servicing Costs (13%) 6,132

Grand-Total (provisional) 104,165

Balance brought forward from previous year 282 299

Contributions from Member Countries (including interests) (as at 31.7.1992) 84 940

Unallocated balance 367 239

REPORT OF ACTIVITIES OF THE FAO REGIONAL COMMISSION FOR NORTH-WEST AFRICA FOR 1992.

The main activities undertaken by the Commission in 1992 concentrated on the following :

- Technical, administrative and financial management;
- Preparation of the meeting of the Executive Committee in Algiers from 24-29 April 1992 and the current session of the Commission;
- Follow up and implementation of recommendations arising from the 17th Session of the Commission and the Executive Committee.

REPORT FROM OCLALAV

I. ACTIVITIES IN 1991

Locust Situation: Overall the Desert Locust and grasshopper situation remained relatively calm throughout the region during 1991. There were a few localised outbreaks of grasshoppers in certain member States and residual populations of Desert Locust were present in the traditional summer breeding areas of the region.

Little information on the Desert Locust situation in Mali and Niger was available owing to the security situation in parts of these countries.

The Variegated grasshopper (*Zonocerus variegatus*) was reported to have caused significant crop loss in Cote d'Ivoire, Benin and Cameroon.

Birds: Severe problems with grain eating birds were reported from a number of areas in the region in particular the Senegal River Valley, Niger Delta and the Lake Chad Basin.

Rodents: These are becoming a more serious pest inflicting significant damage to crops.

Locust Information: locust information continued to be collected and analysed from member countries and published in Bulletin form for distribution to relevant institutions and organizations.

Training: Over the past decades OCLALAV has organised locust training courses for plant protection staff from member countries with donor assistance. Unfortunately in 1991, no training program was undertaken for financial reasons.

Research: Research has been limited to insecticide trials on grasshoppers . In 1991 trials were undertaken to assess five products supplied by manufacturers. The results of these trials have been distributed to member countries and the respective manufacturers.

Co-operation and donor assistance: OCLALAV is continuing to maintain a dialogue with donors and supports FAO efforts to implement the Preventive Control Project for West and North-West Africa.

II. 1992 PROGRAMME

The current 1992 program will depend largely on the availability of external funding since the contributions of the member countries of the organization cover only personnel and administrative costs.

The program consists of three components:

- information
- training
- research

ACTIVITIES OF DLCO-EA

1. Summary of operations against Quelea and Armyworm , 1991-August 1992.

Pest	Area treated (ha)	Pesticide (lts)	Flying Hours
Quelea	2,664	7,006	262.05
Armyworm	29,708	16,975	85.50
Total	32,372	23,981	347.55

Successful aerial control by DLCO-EA against quelea and armyworm was undertaken in Ethiopia, Tanzania and Kenya.

2. Restructuring of DLCO-EA (New Organigramme)

At the 37th Regular Session of the DLCO-EA Council of Ministers held in Addis Ababa from 27-28 July 1992 a revised organisational structure for the organization was presented. The Council approved the revised structure. A number of posts have been abolished whilst other vacant posts have been frozen. The Council unanimously confirmed Dr A.H.M. Karrar as Director of DLCO-EA with immediate effect. A total of 75 'local' and 10 'regional' posts have been disbanded and 8 staff have retired. This brings the total current staffing level to 157 as against 260 in previous years.

3. Budget Reduction

Due to the economic situation of the member countries the budget of DLCO-EA has continued to decline since 1990. The annual budgets for 1990-91 and 1991-92 were US\$ 4.277 million and US\$3.467 million respectively. The actual budget for 1992-93 is US\$2.804 million resulting in an actual decline of US\$1.5 over 2 years. The reduction results from action to restructure the organization and other cost saving measures instituted by the Director.

ACTIVITIES OF THE FAO REGIONAL COMMISSION FOR THE CONTROL OF THE DESERT LOCUST IN SOUTH-WEST ASIA

1. The Commission noted activities funded from its trust fund over the past two years. These activities included the provision of equipment to Pakistan and India, funds for special border surveys and study tours.

2. The Commission discussed in detail proposed activities to be funded by the trust fund (9123) and approved the following:

(a) **Research:** The Commission recommended that member countries develop and submit research project on the development of alternative control strategies for Desert Locust for possible funding by UNDP. Proposals could include studies on the effects of insect growth regulators as a potential replacement for dieldrin and other alternatives such as microbial and botanical agents. Once prepared the projects would be presented to FAO, Rome for consideration by the Scientific Advisory Committee (SAC) which is scheduled to meet in October 1991. The Commission has requested funding be provided from trust fund 9161 for the costs of one Indian and one Pakistan scientist to assist with insect growth regulator field trials in Mali-Niger in late 1991.

(b) **Training:** The Commission recommended intensified training for locust personnel in the region to ensure sufficient trained staff were available and trained in new technologies. In this context the following proposals were agreed:

(i) Radio repair and maintenance

It was recommended that two 15 day courses in radio repair and maintenance be held, one in India and one in Pakistan. The Pakistan course could be developed in the near future. However, the Indian course would have to await the delivery of new radio equipment from FAO. The Indian course could also accommodate three Afghan trainees. It was recommended that travel and subsistence costs for participants from outside the host country be charged to TF 9161 and for local trainees from TF 9123. To cover local expenses associated with these courses \$US 2000 would be allocated to India and Pakistan from Commission funds (TF 9123).

(ii) Remote Sensing

It was recommended that one candidate from each country be trained at the FAO remote sensing centre in Rome. FAO was requested to seek alternative funds, other than Commission funds, for this training.

(iii) Basic Training in Locust Control

The Commission recommended a basic locust training course for staff of the Afghanistan Plant Protection and Quarantine Service. It was envisaged that the course would train 15-20 staff in Afghanistan over a period of 4 weeks with two trainers to be provided by India. Travel and subsistence would be supported from Commission funds with the Government of Afghanistan responsible for local training costs.

(iv) Regional Workshop, India

The Commission approved FAO's proposal for a regional workshop on Desert Locust and in particular on ulv control to be held in India with participants from member countries of the Commission. It was envisaged that 15 trainees would attend (4 Indian, 4 Pakistani, 4 Iranian and 3 Afghans). In the event that the proposed allocation of trainees could not be realised any vacant trainee positions would be utilised by India and Pakistan. A payment of US\$1000 was authorised from TF9123 to cover ancillary local costs associated with the workshop.

(c) Remote Sensing

(i) Habitat Maps

The Secretary informed the meeting that FAO was in the process of preparing habitat maps of the Desert Locust and sufficient copies would be made available to countries once completed.

(ii) Remote Sensing Expert:

The Indian delegate requested the Commission to consider strengthening of the Remote Sensing Laboratory at Jodhpur. An expert scheduled to visit India would study the available capacity and capability at the Laboratory and would provide advice to Indian specialists on the use of remote sensing for survey and forecasting of Desert Locust.

(d) Joint Surveys and Special Border Surveys

The Commission recommended that US\$1,871 be allocated to India and US\$5,000 to Pakistan for special border surveys in 1991. In addition US\$6,000 was allocated for joint surveys of the Iran-Pakistan border area.

(e) Equipment

The Commission agreed to the provision of 4 vehicles and 20 HF radio kits (15AC and 5DC) to India. In addition two facsimile machines, one for Jodhpur and one for Faridabad, were also approved. The Commission also agreed for the provision of funds for equipment and training, to a maximum of US\$10,000, be allocated to the Locust Field Research Station at Bikaner together with an equivalent sum to Pakistan for the provision of a photocopier and computer and accessories including a printer. Total assistance for the purchase of the above was approved at US\$75,000 each for India and Pakistan. It was also recommended that US\$20,000 be allocated to Afghanistan for the provision of vehicles, camping and survey equipment: if these funds are insufficient to procure all the items requested it was recommended that FAO seek funding from other sources. The Government of Afghanistan will provide FAO with a complete list of required items.

(f) Pesticide

The Iranian delegate requested the provision of 15 MT of fenitrothion 96% to ensure a locust control reserve. It was recommended that this could be considered from the FAO Japanese trust fund.

(g) Study Tour

It was believed necessary that locust personnel from the region be given the opportunity to gain further field experience in different parts of the region. US\$7,000 was approved for these activities and proposals for study tours were to be sent to the Chairman of the Executive Committee for consideration via the Secretariat.