Project Name	ENVIROMENTAL AND HEALTH IMPACT ASSESSMENT OF PESTICIDE APPLIED FOR DESERT LOCUST CONTROL IN ETHIOPIA
Ref	OSRO/GLO/013 LETTER OF AGREEMENT No. 001/2022 PO NUMBER: 3605580
Duration	JANUARY– DECEMBER, 2022
Project area	Ethiopia
Funded by	FAO-ET

Project Brief

A Letter of Agreement **(FAO/ETH/LOA-365580**) on Environmental and Health Impact Assessment of Pesticides applied for Desert Locust in Ethiopia June 2019 – December 2021 was signed between the Food and Agriculture Organization (**FAO**) and the Desert Locust Control Organization for Eastern Africa (**DLCO-EA**) on January 20, 2022.

The project covers areas where the pest had invaded, that is, **Soma**li, **SNNP**, **Oromia**, **Afar**, **Amhara, Tigray** and **Harar**i Administrative Regions and **Dire Dawa** Administration Council of Ethiopia

Project Objective

a) To assess Environment and Health Impacts of procurement procedures of pesticides, safety, spray and survey equipment assessed

b) To assess Capacity Development on Environment and Health monitoring during and post-campaign in Afar, Amhara, Dire Dawa, Oromia, Somali, SNNPR, and Tigray

c) To assess the Environment and Health Impact of; temporary and long-term storage of pesticides, empty containers, equipment and transportation and cleaning of empty containers and contaminated sites during and after DL campaign in Afar, Amhara, Dire Dawa, Oromia, Somali, SNNPR and Tigray

d) To assess the eco-toxicological, health, safety and ecological impacts of the applied pesticides in the control operation areas.

Key Project Outputs

Assessment of Preparedness for DL Campaign

i. Environment and Health Impacts of procurement procedures of pesticides, safety, spray and survey equipment assessed

ii. Capacity development on Environment and Health monitoring during and post-campaign in Afar, Amhara, Dire Dawa, Oromia, Somali, SNNPR, and Tigray assessed.

Assessment of the Conduct of DL Campaign

iii. Environment and Health Impact of; temporary and long-term storage of pesticides, empty containers, equipment and transportation and cleaning of empty containers and contaminated sites during and after DL campaign in Afar, Amhara, Dire Dawa, Oromia assessed.

iv. Environment and Health Impact of control operations and efficacy trials of chemical pesticides, bio-pesticide and IGR in Afar, Amhara, Dire Dawa, Oromia, Somali, SNNPR and Tigray recorded and analysed.

v. Eco-toxicological, health, safety and ecological impacts of the applied pesticides in the control operation areas assessed.

Lessons learnt

I. Element of success

a) Understanding the behavior of the Desert Locust: Many people did not know the behavior of the locust before the recent invasion. Knowing the behavior of the Locust such as feeding, reproduction, time at which the swarm settle or fly, etc helps to take the appropriate decision at the right time.

b) Prior capacity building and readiness of the government to control Locusts and reduce their impacts by the government at different level is very important.

c) The training given for the agricultural experts on the FAO Standard Operational Procedure has increased the knowledge of the experts on how to respond to the various developmental stages of the Locusts.

d) The use of appropriate PPE to reduce the health risks of pesticide has been improved.

e) The understanding of giving due consideration to the environmental sensitivity before pesticide spraying has been enhanced.

f) The coordination of all stakeholders on the control operation of the Desert Locusts control has paramount importance for effective and efficient control operation.

g) The establishment of information centre at the MoA, has helped in harmonizing information on the DL situation in all parts of the country for action.

II. Impediments/constraints

a) Lack of capacity, mainly logistic and budget constraints
b) The heaviness of the infestation of the swarm was one challenge,
c) Some areas were not accessible and difficult for ground control; the number of air craft was inadequate to reach all areas.
d) The topography and weather condition was challenging to the aircrafts. As a result the planes were not arriving on time at the control operation sites.
e) Lack of awareness among the community about the risk of pesticides to their health and their livestock.
f) The provision of equipment and pesticides were not done on time
g) The need for training on the FAO operational standards for pilots before they engaged is fundamental.
h) Pesticides transportation and storage did not follow the standard procedures

Recommendations

a) There is a need for a permanent system of well-organized capacity building in DL prone areas to enhance capacities (human resource and logistics), build experiences of survey and control teams to be able to treat hoppers and adults efficiently in an environmentally safe and cost-effective manner. It is important to note that even during locust recession periods, capacity building system should not be allowed to deteriorate.
b) Awareness creation activities for DL scouts, communities and the experts specifically need to be conducted on the Standard Operation Procedures (FAO SOP).
c) Early planning (contingency planning) should be put in place for the worst scenario
d) Establish Desert Locust monitoring bases at centres of invasion/breeding areas
e) Periodical health examination for the personnel involved in insecticides handling has to be carried out.
f) Health testing kits have to be replaced and placed at conducive environmental conditions and close to the operation area. Train additional staff from Plant Health Clinics to conduct the tests
g) Avoiding exposure to insecticides by using PPE and by paying attention to personal hygiene by washing exposed parts of the body. Personal protective equipment must be selected in accordance with the label recommendation. It must be comfortable to wear/use and be made of the appropriate material, which will prevent penetration of the pesticide.
h) Those personnel who have been poisoned by the pesticide and become sick have to get proper treatment based on the timely incident report.

i) Organize and train independent monitoring team separate from the control team in accordance with EHS requirements

j) Build standard permanent stores (FAO standard) at DL frontline regions at the bases and temporary stores at sub bases

k) The collection of all unused pesticides and empty containers from all regions and Districts to the central store has to be completed.

l) The crushing, recycling or proper disposal of the empty drums has to be strengthened

m) Proper inventory, collection and disposal of the obsolete pesticides should be implemented to secure our environment and the health of the community.

n) Bioremediation of the contaminated areas has to be continued and completed

o) The integration of other environmentally friendly DL control options such as bio pesticides and other effective traditional measures should be in place

p) Establish the Pesticide Stock Management System (PSMS)

Acknowledgement

1. FAO-ET for funding this project and providing technical support with experts from FAO HQ.
2. Ministry of Agriculture, Ethiopia for the implementation of this project.