



Progress report on the implementation of the Global Action 1 January – 30 June 2020

Executive Summary

Fall armyworm (*Spodoptera frugiperda*, FAW) was first detected in Africa in 2016 and in Asia in 2018. The Food and Agriculture Organization of the United Nations (FAO) has been at the forefront of the FAW response globally. The Global Action for FAW Control was launched in December 2019 to provide a platform for global, regional and national collaboration in monitoring, early warning and integrated pest management (IPM) technologies for sustainable FAW management that will lead to reduced yield losses and lowered risk of the pest's further spread. The Global Action (GA) targets 65 priority countries in Asia and Africa and will benefit all countries affected by FAW.

To date the GA has convened a Global Steering Committee meeting, a Global Technical Committee meeting and a Regional Steering Committee meeting for Asia and the Pacific. Strategic collaboration with members of the Global Steering Committee is ongoing: examples include activities related to the FAW International Research for Development (R4D) Consortium, led by CYMMIT (International Maize and Wheat Improvement Center); the development of new outreach materials with *icipe* (International Centre of Insect Physiology and Ecology); and related activities by other key partners.

Seven technical working groups (TWGs) were activated under the Global Technical Committee to assess IPM technologies and monitoring and early warning options based on their efficacy, safety, accessibility, sustainability and scalability. In collaboration with TWG members and other partners, FAO has developed knowledge products such as guidance notes, videos, routine training and webinars to help implement the GA at country level. The knowledge products are hosted under the FAO fall armyworm website that receives 3 500–4 000 visits monthly.

National task forces and national focal points have been appointed in 58 of the target countries. Using a funding gap analysis, it is estimated that USD 428.6 million have been mobilized by national governments for FAW response in their respective countries. FAO has further mobilized USD 14.1 million through the Technical Cooperation Programme, South-South Cooperation Programme and donor countries.

Between January 2020 and mid-June 2020, 3 652 fields were scouted and 3 390 traps were checked and reported through the Fall Armyworm Monitoring and Early Warning System (FAMEWS). The data are hosted on the FAMEWS global platform, where they can be accessed by visitors and used to develop further early warning systems.

Current global challenges include the COVID-19 pandemic and desert locust emergency. At the national level, challenges are related to capacity for locally validating IPM options, development of strong monitoring and early warning systems, and funding mobilization in the face of multiple global challenges.

Next steps include strengthening global and regional coordination, including developing a communication channel among countries on FAW monitoring and GA implementation; redoubling efforts to mobilize funds; strengthening national capacities; and developing knowledge products that directly serve the needs of the target countries.



1. Introduction

The Global Action (GA) for fall armyworm control was launched in December 2019 by the Director-General of the Food and Agriculture Organization of the United Nations (FAO) with three main objectives:

1. Establish global and regional collaboration on monitoring, early warning, and integrated pest Management (IPM) of FAW.
2. Reduce crop yield losses caused by FAW.
3. Lower the risk of further spread of FAW to new areas.

The GA is coordinated by its Secretariat, situated in the Plant Production and Protection Division of FAO, which has been working with key stakeholders towards the implementation of the GA's objectives since it was launched.

This progress report presents the activities implemented between 1 January and 30 June 2020.

2. Global coordination on the sustainable management of FAW

The [Global Action framework](#) and its [implementation plan](#) for 2020–2022 have been finalized.

Global and Regional Steering Committees

The first virtual meeting of the Global Steering Committee (SC), chaired by the Director-General of FAO, was held on 27 February 2020, with 30 participants. The meeting report is available [here](#). Key outputs of the meeting include: endorsement of the Global Action for FAW Control and the terms of reference of the Steering and the Technical Committees; suggestions for collaboration to ensure solution scalability; the necessity of involving the private sector alongside the public sector; addressing bottlenecks for registration of microbial-based bio-pesticides and seeds; and inputs on Technical Committee (TC) membership.

The first virtual meeting of the Regional Steering Committee for Asia and the Pacific was held on 17 June 2020 with 32 participants. Key outputs include: endorsement of the terms of reference of the Regional SC, identification of regional and national challenges (see Gaps and Challenges below), and agreement on the need to develop a forum for experience and knowledge exchange.

Technical Committee

The first TC virtual meeting was chaired by Dr Robert Bertram (Chief Scientist of USAID) on 18 May 2020, with 52 participants. The TC made a number of recommendations for the SC: keep up the GA's momentum and visibility; prioritize actions on country-specific capacity enhancement; offer direct support to individuals, farmers' groups, extension personnel and institutions in the face of COVID19; address the difficulty of competing for funds in the face of other global challenges, such as desert locust and COVID-19; develop systemic approaches through demonstrated impact assessments; leverage South–South and Triangular Cooperation as a mechanism for exchanging experience and scaling up activities.

Resource mobilization

It is estimated that USD 428.6 million has been mobilized by national governments for FAW response in their respective countries. FAO has mobilized USD 7.2 million through the Technical Cooperation Programme and USD 1.5 million through South–South Cooperation (SSC). A total of USD 5.4 million has also been mobilized through donor members (e.g. European Union, NORAD).



3. Capacity development on FAW management to reduce yield losses

Baseline study and national action plans

A baseline survey questionnaire was circulated and, so far, 25 countries have submitted their data: Algeria, Bangladesh, Bhutan, Botswana, Cambodia, Eritrea, India, Kenya, Madagascar, Mali, Mauritania, Morocco, Mozambique, Myanmar, Namibia, Nepal, Papua New Guinea, Philippines, Rwanda, South Sudan, Tunisia, Uganda, United Republic of Tanzania, Viet Nam and Zambia. Almost all of these countries (96 percent) reported that they had a national task force (NTF) on FAW that meets on a regular basis, mostly once every three months. Seventy-nine percent of countries have developed terms of references for their NTF, while 70 percent of the countries have developed a national action plan. Information on challenges faced by countries is summarized in the 'Gaps and Challenges' section below.

Fall armyworm monitoring and early warning

FAMEWS has several hundred registered users. Between January 2020 and mid-June 2020, 3 652 fields were scouted and 3 390 traps were checked. Overall, 44 countries have adopted FAMEWS as the official reporting tool, with the highest number of these countries located in Sub-Saharan Africa region.

FAMEWS is currently available on the Google Play store, and capacity building trainings are being organized for national focal points from different countries to increase its adoption. FAMEWS provides the opportunity to monitor FAW on a regular basis and to make decisions on sustainable management of the pest based on data collected through the app. Besides FAMEWS, some countries are developing national monitoring and early warning systems tailored to their local situation and national needs; for example, China has developed a national system which could monitor both the migration and field infestation of FAW.

Developing IPM technology for FAW control

Under the coordination of the GA Secretariat, key GA partners, especially in the technical working groups (TWGs; Annex 1), are presently engaged in developing and preparing reports on different technologies for FAW management for their efficacy, safety, scalability (availability, affordability), and sustainability. Proposals are being developed for multi-location demonstration trials and a scaling-up campaign in priority countries for phase 2 and 3. Multiple knowledge products, including three guidance notes, and four videos covering different aspects of FAW control have been produced (Annex 2; a full list of FAO knowledge products on FAW control consists of nine guidance notes, most in multiple languages, and 13 other documents can be found here: <http://www.fao.org/3/ca9395en/ca9395en.pdf>).

Assessing the socio-economic impact of FAW

FAO and the Ministry of Agriculture of the United Republic of Tanzania collaborated to assess the socio-economic impact of FAW infestation. This impact assessment was conducted with a new methodology developed by FAO. The study estimated an average yield loss due to FAW of 10.8 percent, lower than earlier estimates. At the same time, some farmers experienced very high losses due to FAW on top of pre-existing food insecurity. There were also indications from some respondents of the start of a vicious circle in which FAW-related yield losses in one season were eroding farmers' capacities to cope with future yield losses due to FAW and other stressors. Further work is necessary to confirm these partial but relevant findings and to expand the scope to further investigate issues uncovered by this study.

Key partners' engagement

Seven TWGs are operating under the Technical Committee (Annex 1) on the main aspects of fall armyworm sustainable management. Key Global Action partners are members of the TWGs.



Additionally, discussion on the FAW R4D International Consortium, led by CYMMIT, is ongoing to finalize the signature of the Charter by FAO. Meanwhile, *icipe* is actively developing training materials for mass rearing of natural enemies and production of biopesticide in collaboration with the FAO Regional Office for the Near East and North Africa. CABI (Centre for Agriculture and Bioscience International) is developing a scientific collaborative portal on fall armyworm that will allow collaborative exchanges on FAW research. CABI is also leading an initiative titled “Global Burden of Crop Loss”, which is developing methods to make global assessments of the losses due to pests and diseases, including FAW yield losses. EMBRAPA (Brazilian Agricultural Research Corporation) continues its partnership with FAO on SSC for FAW control, following up its country level support in Mozambique. USAID (United States Agency for International Development) has continued its efforts to develop and disseminate IPM technologies for FAW control in collaboration with research and development partners. ICBA (International Center for Biosaline Agriculture), CAAS (Chinese Academy of Agricultural Sciences), PAN (Pesticide Action Network) and CLI (CropLife International) as well as other partners are likewise actively engaged in the FAW control.

Communication and visibility

As of the end of May 2020, the fall armyworm website (www.fao/fall-armyworm/en) had registered a total of 60 000 users, at an average of about 3 500 – 4 000 users per month. Of these, 86 percent of users are “new visitors”. A new digital communication strategy was crafted to guide the ongoing revamping of the website to increase usability and traffic, especially with regard to encouraging return visits. Information of the website is updated regularly and a number of knowledge products and technical webinars have been published/conducted online (Annex 2).

3. Reducing risk of FAW introduction and spread to new areas

The International Plant Protection Convention (IPPC) Secretariat has taken the initiative to exchange information and formulate ideas on phytosanitary measures being undertaken to prevent FAW introduction to new areas. Meetings were specifically held to discuss phytosanitary measures with the National Plant Protection Organization of Italy and with the European Food Safety Authority (EFSA) Plant Health team. Baseline data were gathered on maize production in countries where the pest is absent or of limited distribution – i.e. countries from the Near East and North Africa, the Pacific and Southern Europe – to inform selection of pilot countries for prevention activities.

Coordination was greatly strengthened between the IPPC Secretariat and the FAO FAW team, and the FAO/IPPC Technical Working Group on “Quarantine and phytosanitary in relation to trade” was established and its terms of references drafted. The IPPC Secretariat is also setting up an IPPC Steering Group to allow better coordination with Regional and National Plant Protection Organizations in the Near East and North Africa, the Pacific and Southern Europe.

On 14 May, a training session on FAW biology and monitoring and early warning systems (including FAMEWS) was held via Zoom for national focal points from Maghreb countries – Algeria, Mauritania, Morocco and Tunisia – supported by the GA Secretariat. Of these countries, only Mauritania has so far reported the presence of FAW. Due to the capacity of the pest to spread quickly, it was recommended to strengthen monitoring and early warning systems in the other three countries to help mitigate negative impact of potential FAW introduction.

4. Gaps and challenges

COVID-19

COVID-19 has led to delays in field activities – including monitoring, scouting, demonstrating, training, and farmer field school (FFS) activities – as well as delays in supply of tools and materials, due to movement



restrictions and reallocation of funding. Many face-to-face meetings have been moved to virtual mode, though this is not always possible for all stakeholders.

Funding

There is strong competition for mobilizing funds with other ongoing global and regional challenges such as COVID-19 and desert locust infestations.

Monitoring and early warning systems

Most countries in Asia and the Near East where FAW is a new pest have inadequate monitoring and early warning systems for FAW and lack a mechanism for information sharing and cooperation among countries. Challenges for upscaling the use of FAMEWS include poor internet connection to send data, a lack of systematic sampling plans, and a lack of incentives for users. There is a need to develop capacity in the FAMEWS platform to transform monitoring data into early warnings. Countries where FAW has not been detected or confirmed say that there is a need to shore up preparedness through training and technological exchange, especially in FAW surveillance and monitoring.

Integrated pest management

According to feedback from multiple national focal points, capacities to locally validate IPM options for fall armyworm are limited, especially in newly infested areas. Capacity to locally produce the least risky options, such as biopesticides, is also limited. There is also a need to exchange knowledge on tools and techniques for FAW surveillance and monitoring regionally and globally. Future capacity building efforts will need to concentrate on these topics, either through knowledge exchange fora (e.g. webinars, virtual training) or targeted training.

5. Next steps

Organize High-level Conference on Fall Armyworm: The conference will aim to raise political awareness on the GA and support funding mobilization for fall armyworm response. It was initially planned for 21 April 2020 but, due to COVID-19, had to be postponed. The conference will now be held virtually, in autumn 2020.

Enhance global coordination: Coordination between the GA Secretariat, regional steering groups and national task forces will be strengthened to form a global network to exchange information and technology and provide trainings regularly. The 2nd TC meeting will take place on July 27 2020. Communication linkages will be strengthened among the Technical Committee members, TWGs and key partners. Resource mobilization will be continued.

Support capacity building on FAW management: The GA Secretariat will support national inception workshops to prepare or update national action plans for FAW management. The workshops will cover national budget availability and focus on accomplishing key activities of the GA work plan for 2020, including conducting the baseline study, promoting FAMEWS as a monitoring tool, developing ecosystem-based IPM and planning for demonstration trials and scaling up campaigns in collaboration with international partners, Regional Offices and national focal points. The GA Secretariat will enhance strategic partnerships with academia and the public and private sectors to develop and disseminate IPM for FAW.

Improve communication and visibility: The FAO fall armyworm website will be revamped by the end of 2020 and aims to become the definitive website for FAW-related information. Knowledge products will be produced in collaboration with TWGs so that they directly address the needs of countries. Further, FAMEWS trainings are planned to reach 65 countries so that capacity is enhanced for regular monitoring of maize areas in those countries.



Annex 1. Technical Working Groups under the Global Action Technical Committee

1. *Host plant resistance and transgenic resistance* – Chair: Prasanna Bodupalli (CYMMIT)
2. *Innovative agroecosystem-based sustainable FAW management (Agroecology)* – Chair: Rhett Harrison (ICRAF)
3. *Biological control* – Chair: Georg Goergen (IITA)
4. *Biopesticides and synthetic pesticides* – Co-chairs: Kenneth Wilson (Lancaster University) and Paul Jepson (Oregon State University)
5. *Monitoring and early warning (FAMEWS) and impact assessment* – Chair: David Hughes (Pennsylvania State University)
6. *Farmer education - Farmer Field Schools and communication* – Chair: Julien Godwin (CABI)
7. *Quarantine and phytosanitary in relation to trade* – Co-chairs: Chris Dale (Australian Department of Agriculture, Water and the Environment) and Sarah Brunel (IPPC)



Annex 2. Knowledge products, videos, technical webinars and virtual trainings developed or facilitated by FAO Secretariat for the Global Action for Fall Armyworm Control between January and June 2020

Fall armyworm knowledge products

- **Guidance note 7:** *Addressing the impact of COVID-19 on the Global Action for Fall armyworm control*
- **Guidance note 8:** *Global Action for Fall Armyworm Control*
- **Guidance note 9:** *Technical guidelines for sustainable management of fall armyworm in its year-round breeding areas*
- The [Global Action for Fall Armyworm Control Framework](#) document
- The [Global Action for Fall Armyworm Control implementation plan](#)

Videos

- Four videos translated to Tetum language (Timor-Leste), two of which were funded by FAO ([link](#)).

Technical Webinars

- 12 May 2020: “Success stories from the Global Action for Fall Armyworm Control in the era of COVID-19”, with 160 participants connected. Recording available [here](#).
- 11 June 2020: “Pesticide and biopesticide in fall armyworm control: Protecting health of plants, people and the planet”, with 189 participants connected. Recording available [here](#).

Training events

- February 2020, remote training on FAMEWS use for Bangladesh
- February 2020, remote training on FAMEWS data validation for Guinea
- March 2020, remote training on FAMEWS use for Timor-Leste
- April 2020, remote training on FAMEWS use for Central African Republic
- April 2020, remote training on FAMEWS data validation for Egypt
- April 2020, remote training on FAMEWS use for Nepal
- May 2020, remote training on overview of FAMEWS to Maghreb countries (Algeria, Mauritania, Morocco and Tunisia)



Annex 3. Abbreviation list

CAAS	Chinese Academy of Agricultural Sciences
CLI	CropLife International
CYMMIT	International Maize and Wheat Improvement Center
EFSA	European Food Safety Authority
EMBRAPA	Brazilian Agricultural Research Corporation
FAMEWS	Fall Armyworm Monitoring and Early Warning System
FAO	Food and Agriculture Organization of the United Nations
FAW	Fall Armyworm
FAW R4D Consortium	Fall armyworm International Research for Development Consortium
FFS	Farmer Field School
GA	Global Action for Fall armyworm control
ICBA	International Center for Biosaline Agriculture
<i>icipe</i>	International Centre of Insect Physiology and Ecology
IPM	Integrated Pest Management
IPPC	International Plant Protection Convention
NORAD	Norwegian Agency for Development Cooperation
NTF	National Task Force
PAN	Pesticide Action Network
SC	Steering Committee
SSC	South–South Cooperation
TC	Technical Committee
TWG	Technical working group
USAID	United States Agency for International Development