

**RESIDENT / HUMANITARIAN COORDINATOR
REPORT ON THE USE OF CERF FUNDS
LAO PEOPLE'S DEMOCRATIC REPUBLIC
RAPID RESPONSE
LOCUST INFESTATION 2016**

RESIDENT/HUMANITARIAN COORDINATOR

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REPORTING PROCESS AND CONSULTATION SUMMARY

- a. Please indicate when the After Action Review (AAR) was conducted and who participated.

An AAR was undertaken by FAO in partnership with the Ministry of Agriculture, in October 2016 under the leadership of the Department of Agriculture and particularly including experts from the Plant Protection Centre. These entities contributed the knowledge and experiences gained from direct collaboration with the Provinces and Districts that were affected by the outbreak, which had led the control activities against the locust outbreak points. The level and nature participation was agreed in advance of the AAR, and the timing was agreed to take advantage of the latest data on losses and damage caused by the outbreak.

- b. Please confirm that the Resident Coordinator and/or Humanitarian Coordinator (RC/HC) Report was discussed in the Humanitarian and/or UN Country Team and by cluster/sector coordinators as outlined in the guidelines.

YES NO

- c. Was the final version of the RC/HC Report shared for review with in-country stakeholders as recommended in the guidelines (i.e. the CERF recipient agencies and their implementing partners, cluster/sector coordinators and members and relevant government counterparts)?

YES NO

The Report has been shared with the Ministry of Agriculture, and particularly the Department of Agriculture which was the principle Government counterpart in the actions undertaken. The report was also shared with the Food Security Cluster under the UN-HCT.

I. HUMANITARIAN CONTEXT

TABLE 1: EMERGENCY ALLOCATION OVERVIEW (US\$)		
Total amount required for the humanitarian response: US\$ 2,230,000		
Breakdown of total response funding received by source	Source	Amount
	CERF	328,811
	COUNTRY-BASED POOL FUND (if applicable)	
	OTHER (bilateral/multilateral) Govt of China (in-kind)	1,100,000
	TOTAL	1,428,811

TABLE 2: CERF EMERGENCY FUNDING BY ALLOCATION AND PROJECT (US\$)			
Allocation 1 – date of official submission: 23-Feb-16			
Agency	Project code	Cluster/Sector	Amount
FAO	16-RR-FAO-006	Agriculture	328,811
TOTAL			328,811

TABLE 3: BREAKDOWN OF CERF FUNDS BY TYPE OF IMPLEMENTATION MODALITY (US\$)	
Type of implementation modality	Amount
Direct UN agencies/IOM implementation	228,811
Funds forwarded to NGOs and Red Cross / Red Crescent for implementation	-
Funds forwarded to government partners	100,000
TOTAL	328,811

HUMANITARIAN NEEDS

In 2015 the north-east of Lao PDR was affected by an unprecedented outbreak of the Yellow Spined Bamboo Locust, *Ceracris Kiangsu*. The affected area included two districts of Luangprabang province (Viengkham and Phonthong) and four districts of Huaphan province (Xon, Hiem, Xam Neua and Hua Meuang). People from minority ethnic groups (Khmou, Hmong, Black and Red Thai, Akha and Singsily) constitute the populations living in the remote areas that were affected by the locusts and they are particularly vulnerable to livelihood impacts given the ongoing levels of poverty and malnutrition. The dominant livelihood pattern in the affected areas is subsistence “slash and burn” farming and gathering of non-timber forest products for consumption and sale.

The losses caused by the locusts were assessed in June/July 2015 by a joint surveillance mission conducted by the Government's Plant Protection Centre (PPC), FAO and WFP. Additional information came from the District Agriculture and Forestry Offices (DAFO) in direct contact with the authorities in the affected villages. It was determined that widespread infestations of the juvenile stage of the locust (nymphs or "hoppers" in dense groups composed of millions of insects referred to as "bands") had caused serious damage to approximately 4,300 ha of food and cash crops (upland rice, maize and Job's Tears) leading to food insecurity and loss of livelihoods affecting about 20,500 people in 3,400 households throughout the six districts. No support was provided by the Government to these affected communities so many households resorted to coping strategies which included seeking work outside the area.

The Ministry of Agriculture and Forestry (MAF) and the Department of Agriculture (DOA) had no prior experience of locust management, so the Lao Government sought external assistance from PR China (*C. kiangsu* is an endemic pest of agriculture in Yunnan province) and FAO. China responded with limited stocks of pesticide, portable spraying equipment, protective clothing and some training on ground application techniques. FAO assisted with an Emergency TCP (TCP/LAO/3504 – "Capacity building for improved national locust management in Lao PDR", August 2015 – March 2016) which provided training for PPC and DAFO staff on locust biology, surveillance methodology, improved communication and field data recording systems, safe handling and application of pesticides as well as operational planning for long term management of locust outbreaks in Lao PDR. PPC surveillance teams were established, equipped with transportation and operating funds and despatched to locust affected districts to operate with local DAFO. An extensive public awareness programme was also implemented to educate farming communities in the north-east region about the life-cycle of the locust, the importance of reporting sightings to local DAFO and how DOA spray teams would apply pesticides safely to protect crops (to allay any concerns about negative impacts of spraying on human health and contamination of livestock and water).

Minimal control of locust populations occurred during mid 2015 as assistance from China and FAO arrived too late to adequately train and equip the number of spray teams required to effectively treat infestations during the short period of the hopper banding phase (April-June) and control of adult swarms required highly specialised aerial control technologies which were not available in Lao PDR. The PPC and DAFO surveillance teams concentrated on monitoring the movement of adult swarms during August-November and recorded locations where swarms laid eggs (referred to as "eggbeds"). The zone affected by the adult swarms at the end of 2015 was approximately double the size of the area in which hopper bands were seen in April-June of that year and surveillance teams recorded about 140 eggbed sites (an underestimate of the true number as not all swarms were observed or reported due to the difficulty of access to remote areas and the terrain) spread widely across seven districts (Mai, Ngoy, Viengkham, Phonthong Pakxeng, Xon and Hiem). These districts were considered at high risk of crop damage (11,622 ha of upland rice, maize and Job's Tears) from the next generation of hoppers with significantly increased populations expected to hatch during late March 2016. The agricultural population in these districts was approximately 78,823 people in 15,000 households (population ages: < 5 yrs. female – 7,563, male – 7,413; > 5 yrs. female – 32,243, male – 39,017). Swarms were also recorded in four additional districts (Khua, Phonxai, Hua Muang and Xam Neua) and while no egg laying in these areas was observed it was highly likely that laying did occur and a proportion of these areas were also at risk from damage by hoppers. In these lower risk districts the human population was about 180,000 in 26,000 agricultural households, with approximately 10,350 ha of the vulnerable crops.

A detailed Locust Management Plan was developed by MAF and DOA, in consultation with local Provincial Agriculture and Forestry Office (PAFO) and DAFO staff, with technical input from FAO, for a control response to occur during the hopper phase in April-June 2016 to protect crops in the high-risk districts, save livelihoods, stave off hunger and contain the disaster. The timing of the response was critical in order to reduce the locust population in the 2-3 months while at its most vulnerable stage (hoppers on ground rather than highly mobile, flying adult swarms). Rapid response CERF funds were requested and approved to complement commitments to the program from the Government of Lao PDR (provided all personnel for the control and surveillance teams, and around US\$200,000 in funds for the operational costs of the teams), the Government of PR China (provided considerable in-kind support in the form of pesticides, mist blower spray units and personal safety equipment for the control teams with a value of US\$800,000) and FAO (provided technical assistance for capacity development of the control teams using its own TCP resources – US\$100,000).

Specifically the CERF funding contributed to the costs of the Government locust control teams located in the seven high risk districts by;

- Providing transport for the control teams through procurement and leasing of 24 four wheel drive vehicles including the costs of drivers and fuel; and
- Technical advice and support for the surveillance and control teams.

II. FOCUS AREAS AND PRIORITIZATION

The HCT Food Security Cluster co-chaired by FAO and WFP addressed this emergency from June 2015 onwards. FAO and WFP kept in close contact with each other and other development partners involved in the Cluster once the outbreak was first brought to the attention of Cluster in June 2015. The two agencies supported a joint assessment with the Government of the outbreak in late June, and the agencies' capacities were considered in determining the nature and scope of the response by the Cluster.

The methodology for the analysis and preparation of this project is encompassed under the Food Security Cluster's Response Plan, and the supported activities in the grant request address the Plan's goal: "To support the Government of Lao PDR to meet the humanitarian food needs, protect livelihoods of the disaster affected people and initiate early recovery activities to enable these populations rebuild their livelihoods in a timely, effective, and accountable manner".

The cluster/sector response was analysed according to the nature of the potential damage caused in this particular emergency. The main threats identified were to food supplies and agriculturally-related livelihoods. The Government request for a rapid response in this emergency has been for assistance in reducing possible losses of food and livelihoods through the control of the outbreak in 2016. The HCT met on 22 January 2016 to discuss the approach made to this emergency, and agreed that FAO should proceed on behalf of the Food Security Cluster.

The targeting of the interventions funded through the CERF grant did not differ from the proposal submitted.

III. CERF PROCESS

FAO and WFP as co-Chairs of the Food Security Cluster collaborated during the second half of 2015 to monitor and review the situation regarding the locust outbreak and the impact on food security and livelihoods. The agencies collaborated with the Government to conduct a joint assessment of the locust outbreak in late June 2015, during which the team worked with local authorities and community representatives in the affected areas to quantify the numbers of people affected, the crop losses sustained, and the potential food and economic losses. FAO and WFP attended the two meetings of the special Locust Committee established by the Government that were held in 2015. The two agencies provided periodic updates to the regular informal meetings of the Development Partners, which included the international Non-Governmental Agencies.

In 2015, although significant food losses had been incurred by the populations affected by the locust outbreak, the Government decided that no request would be made for food aid for those areas. Following an official request from MAF in December 2015, FAO reached out to several donors on behalf of the Government to secure financial and/or in-kind support for the Locust Management Plan for 2016. Contact was opened with OCHA to discuss the possibility of a CERF request.

The UN Humanitarian Coordinator convened an HCT meeting on 22 January 2016 to discuss the request for support from the Government for assistance in managing the locust outbreak and the possible response from the UN side. The Humanitarian Country Team assigned a high priority to the locust response, given the large number of people whose livelihoods and food security are seriously under threat, if no rapid action is taken; and that the crisis will further escalate if no rapid action is taken due to the biological nature of the disaster.

FAO was noted to be the only agency with expertise relevant to the Government's particular request for support in of controlling the locust and protecting the food security of the populations in the affected area. It was agreed that no other Clusters needed to be activated. INGO members in the HCT reviewed their programmes but established that they would not be able to provide any support to the rapid response.

The operational constraints in the emergency were related to ensuring that the surveillance and control teams could reach the areas where the hopper bands were located in order to monitor and control them effectively. The main risks were that (a) motor transport would not have been available to allow the teams to get close to the locations of the locust bands, and (b) the teams would not have been able to reach the affected areas on foot effectively to conduct the control operations. The mitigating measures related firstly to the provision of adequate motor transport through the funding supplied by the Government and this CERF grant, and secondly to the arrangement of locally-based human resources to assist the team with mobilizing and carrying of equipment.

No country-based humanitarian pooled fund exists in Lao PDR.

IV. CERF RESULTS AND ADDED VALUE

TABLE 4: AFFECTED INDIVIDUALS AND REACHED DIRECT BENEFICIARIES BY SECTOR ¹									
Total number of individuals affected by the crisis: 78,823									
Cluster/Sector	Female			Male			Total		
	Girls (< 18)	Women (≥ 18)	Total	Boys (< 18)	Men (≥ 18)	Total	Children (< 18)	Adults (≥ 18)	Total
Agriculture	11,740	51,660	63,400	12,200	50,400	102,060	23,940	102,060	126,000

¹ Best estimate of the number of individuals (girls, women, boys, and men) directly supported through CERF funding by cluster/sector.

BENEFICIARY ESTIMATION

TABLE 5: TOTAL DIRECT BENEFICIARIES REACHED THROUGH CERF FUNDING ²			
	Children (< 18)	Adults (≥ 18)	Total
Female	11,740	51,660	63,400
Male	12,200	50,400	62,600
Total individuals (Female and male)	23,940	102,060	126,000

² Best estimate of the total number of individuals (girls, women, boys, and men) directly supported through CERF funding This should, as best possible, exclude significant overlaps and double counting between the sectors.

CERF RESULTS

Project objective: to safeguard the food security and livelihoods of 75,000 people in rural communities in the areas of Lao PDR affected by the outbreak of the Yellow-Spined Bamboo Locust.

This project addressed one of the CERF-related priorities for the agricultural sector in Emergencies, in the sense of early action and time-critical interventions to avert a food crop loss disaster and protect livelihoods, with initial inputs for country-contained crop pest plague control (in this case locusts). In this instance the CERF allocation of funding assistance allowed a response to a sudden onset humanitarian crisis where the Government of Lao PDR did not have the capacity to provide a comprehensive response. The major output of the project was that food crop losses in the main locust affected districts of north-eastern Lao PDR would be effectively reduced through control operations against the locusts while they were in dense hopper bands.

These operations formed the basis of the rapid response and consisted of two major human components: (a) locally-based DAFO and PPC surveillance teams that communicated with village authorities in their area of operation and investigated reports of hatching/emerging nymphs (hoppers) and tracked the movement of bands. They also made assessments on the success of hopper treatments and monitored effects on the environment; (b) small ground-based DOA Locust Management teams (3-5 person spray teams equipped with backpack spray units) that travelled around the affected zone, liaised with the surveillance team on the location of bands in their zone and delivered highly targeted spray treatments onto hopper bands. Priority was given to protecting food crops at risk. The Management teams used four-wheel-drive pickup vehicles to drive to the closest point by road to target areas and then moved to these sites for spraying on foot. Water (to mix with the pesticide) and other supplies were carried to the control sites by villagers (8-10 people were required to support each team) recruited from the nearest village. The remote locations of many target sites meant that teams and their support crew often had to walk up to 10 km through tough terrain to reach a spray site. Weather conditions (heat, rain) meant that spraying could only be effectively carried out from 06:00-10:00 daily. As a consequence of these factors work rates (ha treated per hr) during the program were low.

The DOA Locust Management Plan developed in late 2015 used the location and number of eggbeds in districts as an indicator of where hoppers would probably hatch in substantial numbers and pose a direct threat to food crops. Districts with eggbeds were considered high risk areas while districts where adult swarms had been reported but where no egg laying was observed by the surveillance teams or local farmers were considered to be at a lower risk of hopper activity (refer Table 5a). The plan originally called for 4 control teams (each team equipped with one 4WD pickup vehicle) to be located in each of the 6 high risk districts with an understanding between district authorities that teams could be moved between districts if the hopper situation become too severe in any given location. Following discussions between DOA, FAO and district authorities in March 2016, this plan was modified so that at least one control team was located in most districts (refer Table 5a). It was also left to district authorities to decide the number and make-up of teams (having more teams than vehicles allowed rotation of teams to reduce fatigue). There were ample numbers of DOA staff available in the districts for these teams as 83 PAFO and DAFO officers from all locust districts had received basic training in locust biology, survey and control during FAO training sessions run during February 2016 ("Train the Trainers" capacity building component of the FAO TCP project). These officers had in turn organized short training programs for local staff in their own districts.

Using the CERF allocation, FAO undertook the local procurement (leasing) of 24 four-wheel drive vehicles with drivers to transport control teams in the locust affected districts. This procurement was completed in mid-April 2016 allowing the vehicles to be in their allocated districts by the end of that month to join their respective control teams.

Table 5a. Summary of locust Control activity in NE Lao PDR during May-June 2016

Province	District	2015	2016						
		No. of Eggbeds located	Spraying carried out May-June					Crop area (ha)	Crop Area Damaged by Locusts (ha)
			No. of villages affected	No. of hopper infestations treated	No. of Control Teams	No. of Field vehicles	Area treated (ha)		
Luangprabang	Viengkham	32	32	27	4	4	97	5,996	25
	Pak Xeng	20	19	126	4	2	277	1,848	
	Phonthong	22	17	117	6	3	226	1,708	
	Ngoy	31	35	91	4	3	309	2,668	
	Phonxay	0	10	35	2	2	154	2,073	
	Nam Bak	0	5	8	1	*	38	9,483	
	Pak Ou	0	3	4	3	1	33	666	
Huaphan	Xon	11	12	18	4	2	43	2,283	730
	Hiem	2	6	24	1	1	91	1,869	
	Hua Meuang	0	5	13	1	1	31	1,524	
	Xam Neua	0	18	59	1	1*	150	3,699	
	Et	0	9	43	1	*	159	9,875	
Phongsaly	Mai	23	33	73	4	4	129	1,555	52
Total		140	204	638	36	24	1,737	45,247	807
		Total area in high-risk districts					1,172	17,927	-
		Total area in lower-risk districts					565	27,320	-

* additional resources (vehicles & spray equipment) provided by Provincial Government to these districts

Soon after hoppers began to hatch in late April and early May, it became apparent that there were considerably more eggbeds than had been observed in 2015 and over a wider area. This was not unexpected and the control teams adapted to the situation. Initially the hopper bands remained close to their hatching sites in bamboo forests on hillsides. Many of these sites were also very close to watercourses and these difficulties hampered control activities. As the hoppers matured and became mobile, the marching bands became easier to detect as they moved into more open country and farmers readily reported their whereabouts to the surveillance teams especially when they approached crops of emerging upland rice and maize. Most of the effective spraying occurred at this stage when bands were located close to or around the boundaries of crops. Mortality of hoppers within treated areas was reported to range from 70-100%. In some districts where the control teams faced problems coping with treating several sites simultaneously in different areas, in these instances individual DAFO officers provided farmers with “on-the-spot” training in safe spraying techniques, issued spray units and pesticide and supervised farmers treating their own crops. This method certainly helped ease the workload on the control teams and strengthened the relationship between the DOA teams and rural communities.

In the districts of Nam Bak, Xam Neua and Et, much larger infestations of hoppers appeared than expected. These districts were thought to be “low risk” and received smaller levels of support under the DOA Management plan and control efforts received additional support from respective Provincial Governments in the form of financial assistance, spraying units procured locally, transportation and staff from local PAFO/DAFO.

During late May and /early June, many populations of hoppers were in their final growth stage prior to developing into adult locusts. At this point, large numbers of bands emerged from forests in several districts and invaded some cropping areas causing partial damage to fields of crops and pasture. It proved very difficult to accurately quantify the level of actual crop damage as loss data is still be calculated based on harvest returns for the 2016 season however, initial observations from farmers interviewed by the surveillance teams report that losses for upland rice, maize and Job’s Tears appeared to be lower than had occurred during the previous cropping season in 2015.

The total area under the major crops vulnerable to the locust (upland rice, maize and Job's Tears) in the 13 locust affected districts during 2016 was estimated at 45,247 ha and the area "damaged" by locusts was estimated by the Government at 807 ha (2.3%).

A total of the fifteen Government control teams (62% of the CERF teams) were provided with vehicles through the CERF project in Luangprabang province, which was the judged to be the most endangered province, with a further 9 teams mobilized by the local Government. A total of 1134 ha of crops were treated by the teams across the seven affected districts in the province, and damage to crops was restricted to 25 ha (0.1%) out of a total land area under vulnerable crops of more than 24,400 ha.

On the other hand, Huaphan Province received 5 vehicles provided by the CERF project and 3 teams mobilized by the provincial government. The provincial authorities recorded 730 ha (3.8%) of crops damaged out of 19,250 ha of potentially vulnerable crops.

Phongsaly province received 4 vehicles provided by the CERF project and the provincial government did not mobilize any teams itself. The provincial authorities recorded 52 ha (3.3%) of crops damaged out of 1,555 ha of potentially vulnerable crops.

The large majority of crop losses (90%) were recorded in Huaphan Province, which demonstrated that the control programme had not been developed at the appropriate level in that area. This outcome was attributed to the lack of good surveillance information from Huaphan Province in 2015, with only 13 eggbeds recorded over the whole Province, which lead to a targeting of only a small proportion of the CERF resources to that Province. The authorities were not able to adjust the programme to send more teams to Huaphan because they were fully occupied in their originally allocated stations.

The effective control of in Luangprabang province effectively safeguarded the food security of more than 75,000 people in the target districts. The low but more significant crop losses in Huaphan and less so Phongsaly have been evaluated by the local authorities as not critically affecting the food security of the population in those Provinces.

While the total area treated of approximately 1,737 ha might appear low when compared with other major locust control programmes undertaken elsewhere in the world, the relatively low crop damage data would indicate a highly effective targeting of the control measures against the nymph bands.

With regard to the overall programme and the inaccuracy of surveillance information from Huaphan Province in particular, this was a new experience for the rural authorities and population in this part of Lao PDR as well as the national agencies. This was the first time that MAF and DOA had planned and mounted a full-scale locust control campaign. Considering the terrain, lack of road infrastructure and challenging operating conditions, DOA ran an effective control campaign under very difficult conditions as demonstrated by the humanitarian outcome. All parties involved learned from the exercise and gained valuable experience that has improved the capacity of DOA to continue to manage the current locust outbreak and outbreaks in the future.

CERF's ADDED VALUE

a) Did CERF funds lead to a fast delivery of assistance to beneficiaries?

YES PARTIALLY NO

The CERF funding provided the DOA Government locust campaign teams at the critical time allowing them to move rapidly into the roles of detection and management at the right time to begin operations as the nymph bands were identified throughout the target area.

b) Did CERF funds help respond to time critical needs¹?

YES PARTIALLY NO

¹ Time-critical response refers to necessary, rapid and time-limited actions and resources required to minimize additional loss of lives and damage to social and economic assets (e.g. emergency vaccination campaigns, locust control, etc.).

The CERF funds allowed the mobilization of the surveillance and control teams with funds for subsistence while operating in the field as well as the procurement of four-wheel drive vehicles (with experienced drivers and fuel costs) to transport the DOA control teams in the locust affected districts. Mobility in the field for the spray teams was critical to the overall success of the control operation given the time-critical window of opportunity available to the teams to locate and target the locusts while infestations were in the hopper stage. On-time delivery of the vehicles to the respective districts prior to commencement of the expected hatching period for hoppers meant that the control teams could begin spraying operations soon after the first hatchings were reported.

c) Did CERF funds help improve resource mobilization from other sources?

YES PARTIALLY NO

With the Control teams operational in the field by the beginning of May, the Lao Government was prompted to follow up with the operating funds it had committed to the project (c. \$200,000) to support field activities (subsistence allowance for Government staff, daily payments for villagers assisting the control teams as carriers). These funds were released to PAFO and distributed to DAFO in each district during the first week of May.

d) Did CERF improve coordination amongst the humanitarian community?

YES PARTIALLY NO

The emergency only involved one sector, namely agriculture, and one agency, namely FAO. Coordination between sectors and agencies was not required, but the Government did convene a specially-formed multi-sectoral Locust Committee periodically to review the status of the outbreak, and the HCT was kept informed periodically during the campaign.

e) If applicable, please highlight other ways in which CERF has added value to the humanitarian response

It became apparent early in the control response when the hoppers began hatching that a much wider area would be directly affected by the locusts (13 districts rather than the 7 in the original CERF request). Rather than restrict the control effort to these 7 districts a decision was made to move control teams (operating with the vehicles provided through the CERF funds) so that all districts could be covered. In this way a much wider part of the agricultural population of the north-eastern part of the country benefitted from CERF support.

V. LESSONS LEARNED

TABLE 6: OBSERVATIONS FOR THE CERF SECRETARIAT

Lessons learned	Suggestion for follow-up/improvement	Responsible entity
In locust control campaigns, it is important to ensure that there is extremely close collaboration between the Government and the supporting agency/ies in the organization and provision of support.	Careful preparation of the locust management plan for the organization the campaign to ensure that Government agencies and the Food Security Cluster are working in close partnership, with effective communication between the parties.	HCT
Technical assistance should be provided to the Government to provide advice on technical aspects of locust control and particularly if chemical pesticides are being used.	Locust management expert(s) with appropriately experience should be included in programmed responses, and especially to advise on appropriate application of pesticides with regard to operators and the environment.	HCT

TABLE 7: OBSERVATIONS FOR COUNTRY TEAMS

Lessons learned	Suggestion for follow-up/improvement	Responsible entity
A better understanding of general biology of the locust by farmers, especially identifying the different hopper stages, would have helped with more accurate reports to the surveillance & control teams, especially the identification of the eggbeds in the September-November period.	A simple hopper stage identification chart should be developed by PPC using photographs taken this season. This should be distributed to all DOA staff working with locusts and also to all villages in locust affected provinces.	PPC
The Pesticide supplied by PR China was supplied with a label that could not be read in the field.	The deltamethrin pesticide used to treat the hoppers was supplied with a Chinese label. It is important that this label be translated into Lao or English and a data sheet developed in consultation with the Chinese manufacturer or Chinese MOA covering registered dose rates for the YSB Locust, animal grazing withholding periods and crop restrictions. This information will assist DOA staff with answering questions from farmers on these subjects.	DOA
Throughout the 2016 campaign Senior PAFO & DAFO in a few districts actively recruited farmers to join the spraying teams to increase the areas being treated. They were provided with basic orientation and supervised by a Government officer. This system appeared to work well, but there were risks associated with pesticide contamination of the operators, waterways etc.	If consideration is being given to increased recruitment of farmers into the spraying teams during 2017, they must be given taught basic spraying skills and provided with a knowledge of safe use of pesticides. This training could be provided by DAFO staff who would require additional intensive training covering ground spraying and safe handling of pesticides.	PPC & DAFO
Storage of equipment and pesticides in the districts was poor. In most cases stocks were kept in offices or very basic shelters.	A full stocktake of remaining stocks of pesticide and spraying equipment (both working and broken) should be undertaken in each district. Provision must be made to store remaining stocks of pesticide in secure and weatherproof storage facilities so that it remains viable for use during 2017	DOA
Supplies of protective clothing for the control teams in ALL districts were very limited and were quickly used up after just a few weeks of spraying.	If a control campaign is undertaken in 2017, larger quantities of protective clothing should be procured given the possible upscaling of the outbreak (i.e. pesticide resistant suits, masks, gloves, hats, goggles & boots.)	MAF/DOA
Spraying in the bamboo forests proved extremely difficult with the backpack spraying equipment provided to the control teams	Targeting 2 nd instar & 4/5 th instar hoppers might be an option for future control operations (2 nd instars not as mobile as later instars, 4/5 th moving out of bamboo forests into open fields are easier to treat). PPC could develop a "Best methods for spraying" information sheet based on the collective experiences of the control teams.	PPC

<p>At the conclusion of the current operation control data and crop damage data proved difficult to access. A better system of collecting and recording this information is required for future operations.</p>	<p>At the conclusion of the control campaign, data on the control programme should be analysed by Govt of Lao PDR:</p> <ul style="list-style-type: none"> • locations of locust activity (nymphs and adults) • number and location of spray missions, and quantities of pesticide used • treated areas (hectares and locations) • area of crop damage caused and area of crops protected <p>These data should be used to produce map(s) of verified nymph locations and sites treated.</p>	<p>DOA, PPC, FAO</p>
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VI. PROJECT RESULTS

TABLE 8: PROJECT RESULTS						
CERF project information						
1. Agency:	FAO	5. CERF grant period:	07/03/2016 – 06/09/2016			
2. CERF project code:	16-RR-FAO-006	6. Status of CERF grant:	<input type="checkbox"/> Ongoing			
3. Cluster/Sector:	Agriculture		<input checked="" type="checkbox"/> Concluded			
4. Project title:	Locust control in Lao PDR					
7. Funding	a. Total funding requirements ² :	US\$ 2,230,000	d. CERF funds forwarded to implementing partners:			
	b. Total funding received ³ :	US\$ 1,428,811	<ul style="list-style-type: none"> ▪ NGO partners and Red Cross/Crescent: 			
	c. Amount received from CERF:	US\$ 328,811	<ul style="list-style-type: none"> ▪ Government Partners: US\$ \$100,000 			
Beneficiaries						
8a. Total number (planned and actually reached) of individuals (girls, boys, women and men) <u>directly</u> through CERF funding (provide a breakdown by sex and age).						
Direct Beneficiaries	Planned			Reached		
	Female	Male	Total	Female	Male	Total
Children (< 18)	7,563	7,413	14,976	11,740	12,200	23,940
Adults (≥ 18)	32,243	31,604	63,847	51,660	50,400	102,060
Total	39,806	39,017	78,823	63,400	62,600	126,000
8b. Beneficiary Profile						
Category	Number of people (Planned)			Number of people (Reached)		
Refugees						
IDPs						
Host population						
Other affected people	78,823			126,000		
Total (same as in 8a)	78,823			126,000		

² This refers to the funding requirements of the requesting agency (agencies in case of joint projects) in the prioritized sector for this specific emergency.

³ This should include both funding received from CERF and from other donors.

<i>In case of significant discrepancy between planned and reached beneficiaries, either the total numbers or the age, sex or category distribution, please describe reasons:</i>	
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CERF Result Framework			
9. Project objective	to safeguard the food security and livelihoods of 75,000 people in rural communities in the areas of Lao PDR affected by the outbreak of the Yellow-Spined Bamboo Locust		
10. Outcome statement	Food security and livelihoods of rural populations in Lao PDR protected from migratory pest outbreaks.		
11. Outputs			
Output 1	Food and crop losses to locusts are effectively reduced through control operations against the locust hopper bands		
Output 1 Indicators	Description	Target	Reached
Indicator 1.1	Hectares of staple crops and commodity crops protected from damage by locusts due to control operations	11,000	16,491
Indicator 1.2	Number of ground control teams operational in the seven Districts	36 teams	overall 36 teams in 13 districts
Indicator 1.3	Percentage mortality of treated locust nymphs	80%	70-100%
Output 1 Activities	Description	Implemented by (Planned)	Implemented by (Actual)
Activity 1.1	Supply/procurement of motorised transport for surveillance and rapid response control programmes, including vehicles	FAO	FAO
Activity 1.2	Surveillance monitoring of locust hatching locations to inform planning of control operations - priority to be given to protecting food crops at risk	FAO, Ministry of Agriculture and Forestry, Provincial and District Authorities	FAO, MAF, Provincial and District authorities
Activity 1.3	Control operations for spraying of nymphs/hoppers	FAO, Ministry of Agriculture and Forestry, and Provincial and District Authorities	FAO, MAF, Provincial and District authorities

12. Please provide here additional information on project's outcomes and in case of any significant discrepancy between planned and actual outcomes, outputs and activities, please describe reasons:	
<p>Greater numbers of locusts hatched over a wider area than expected which meant that the original Management Plan had to be modified, which is a normal situation with all locust control campaigns in which plans normally change rapidly as the situation develops. Locust nymph bands emerged in 13 districts, of which 6 had no eggbeds recorded in 2015, so the Government took a decision to reallocate some control teams to the new Districts thereby reducing the number of teams allocated to the initial 7 target districts.</p>	
13. Please describe how accountability to affected populations (AAP) has been ensured during project design, implementation and monitoring:	
<p>AAP was ensured in part through a public awareness programme organized by the local authorities to inform the population in the affected districts. The other tool used was an informal communication network maintained through contact by mobile telephone by which the District agricultural authorities kept in close contact with the village committees in order to (a) obtain reports/information from the local populations on sightings and status of locust nymph populations which could then be verified by the surveillance teams, and (b) to provide the affected villages with information from the District Government on the status of the campaign.</p>	
14. Evaluation: Has this project been evaluated or is an evaluation pending?	EVALUATION CARRIED OUT <input type="checkbox"/>
No evaluation was carried out or is pending because FAO does not undertake specific evaluations for projects of this size, but evaluates them on a programmatic basis as part of its reviews of country programmes.	EVALUATION PENDING <input type="checkbox"/>
	NO EVALUATION PLANNED <input checked="" type="checkbox"/>

ANNEX 1: CERF FUNDS DISBURSED TO IMPLEMENTING PARTNERS

CERF Project Code	Cluster/Sector	Agency	Partner Type	Total CERF Funds Transferred to Partner US\$
16-RR-FAO-006	Agriculture	FAO	GOV	\$100,000

ANNEX 2: ACRONYMS AND ABBREVIATIONS (Alphabetical)

DAFO	District Agriculture and Forestry Office
DOA	Department of Agriculture
FAO	Food and Agriculture Organization of the United Nations
HCT	Humanitarian Country Team
MAF	Ministry of Agriculture and Forestry
PAFO	Provincial Agriculture and Forestry Office
PPC	Plant Protection Centre
TCP	Technical Cooperation Programme (TCP)
WFP	World Food Programme