

Assessment of Damages and Recommendations for  
Compensating Two Farmers Affected by the Resettlement Case

Management and Protection of Key Biodiversity Areas Project

This document has been edited to omit all personal information.

A non-edited version may be furnished upon request.

*Revised 25<sup>th</sup> October 2017*

## **INCIDENT SUMMARY**

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In February of 2017, elements of the Belize security forces and the Forest Department carried out an operation targeting illegal activities, as part of Operation Thunderbird, including the cultivation of illegal crops in certain areas identified as “hotspots” within the Reserve in the Toledo District. Because of this particular security intervention within the Reserve, structures found to be used in the cultivation of legitimate agricultural crops (namely corn and rice) within the Reserve were destroyed by the authorities by setting them on fire.

The structures that were destroyed included storage and temporary shelter facilities belonging to two Mayan farmers. Unfortunately, the burning of these structures within the Reserve affected the two farmers and their families, not only because of the loss of the structures but because their stored food crops, and personal belongings within these structures were completely destroyed. Also, two horses which were found at the site by the security forces and the Forest Department belonging to one of the farmers were confiscated.

It is important to point out that the Reserve is included as a project site under the Management and Protection of Key Biodiversity Areas (KBAs) project being funded by the Global Environmental Facility (GEF) and implemented by the World Bank (Bank) and as such the Bank’s policy on Indigenous Peoples and Resettlement Policies apply in this instance. These policies stipulate specific guidelines and protocols that must be followed in order to ensure that no harm is done to indigenous peoples by projects being funded by the Bank. The Government of Belize has upon duly accepting the conditions and commitments required by the Bank undertaken to follow these policies and guidelines as it relates to those protected areas of the country earmarked for funding by the KBAs project.

## **METHODOLOGY**

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### **Meeting with Affected Persons**

The project consultants met with village leaders and with the affected farmers and their families on May 17, 2017 to discuss the incident within the Reserve. The meeting established the details of the incident and identified the farmers who were affected. It was agreed to conduct a site visit to the farms within the reserve on the following day. Present at the meeting were representatives of the Forest Department (FD), the KBAs project, the Maya Leader’s Alliance (MLA), and the Toledo Alcaldes Association (TAA).

The two (2) affected farmers and their families are further described below:

### Family A

Member	Age	
Father	40	
Mother	35	
Child 1	24	
Child 2	16	
Child 3	14	
Child 4	12	
Child 5	8	
Child 6	7	
Child 7	4	
Child 8	3	
<b>Total</b>		10 people

### Family B

Name	Age	
Father	36	
Mother	30	
Child 1	13	
Child 2	11	
Child 3	5	
Child 4	3	
Child 5	3	
<b>Total</b>		7 people

### **Field Inspection of Damage**

A team composed of village leaders, representatives of the Forest Department, KBAs Project, Maya Leaders Alliance, Toledo Alcalde Association, affected farmers and the Project consultants carried out a site visit on May 18, 2017 to the location of where the incident occurred

in the Reserve. The purpose of the visit was to establish the location and extent of the damages reported by the two farmers.

### **Calculation of Damages**

Based on site observations and interviews carried out, the losses incurred by the two affected famers include material and economic loss. Material loss includes destruction of thatched buildings, harvested and stored crops, equipment and personal effects. Economic loss includes lost income resulting from the loss of the crops due to the burning which occurred and payment of the fine for the confiscated horses. In addition to the material and economic losses, the farmers and their families have been experiencing hardships as a consequence of the loss of their crops and food source.

#### **Buildings**

The buildings lost were traditionally built structures used for the storage of corn and rice, and temporary shelters occupied mainly during planting and harvesting activities. The estimate of loss for these buildings is based on replacement cost which includes labour costs for construction as well as for the harvesting of forest resources such as cohune leaves, posts, bush-sticks and tie-tie (vines). The size of the structures was measured based on the remnants of the posts still present in the ground. There were four buildings in total that were destroyed by fire.

Based on information obtained from the farmers during interviews, the value of labour cost (person-days) varies for each building depending on size. One of the buildings belonging to Family B, measuring 14' X 17' with an area of 238 square feet, took approximately 10 person-days to build at a cost of \$30 per day or at \$1.26 per square feet. Similarly, one of the buildings belonging to Family A, measuring 20' X 13' with an area of 260 square feet, took approximately 15 person-days to build at a cost of \$30 per day or a \$1.73 per square feet.

The simple average of these two costs ( $\$1.26 + \$1.73$ ) was taken in order to standardize the price at \$1.50 per square feet. The value of each building was therefore estimated as follows:

*Square footage of building X \$1.50 per square foot*

#### **Crops**

Given the total destruction of the harvested crops, it was difficult to determine the exact quantity of corn and rice that were lost. We rely on the self-reported information provided by the farmers. Family A reported that he had the equivalent of 96 shelled bags of corn stored while Family B reported he had the equivalent of about 76 shelled bags of corn stored. Additionally, Family B reported having 10 bags of rice paddy (with hull) stored while Family A reported having only 4 bags of rice paddy. Each bag is equal to 100 lbs. however in order to obtain a retail value of \$1.00 per pound it must be milled at which time approximately 20% is lost in weight through hulling. The final approximate weight therefore is 800 lbs. for Family B and 320 lbs. for Family A.

The market value of corn lost for each farmer was calculated as follows:

*Self-reported quantity X average retail market price per pound of corn*

The market value of rice lost for each farmer was calculated as follows:

*Self-reported quantity X average retail market price per pound of rice*

### **Equipment**

The current replacement cost (store price) was used to estimate the value of the equipment lost in the fire. Only Family A reported having lost equipment and remnants of these equipment were observed. Family B did not report losing any equipment in the fire.

### **Personal Effects**

The items lost and quantity was self-reported by the farmers. The current replacement cost (store price) for new items was used to estimate the total replacement value of personal effects lost in the fire.

### **Lost Income**

In addition to the material loss experienced by the farmers, they also lost household income specifically from having to dispose of small livestock earlier than usual as well as having to shut down a micro-enterprise (fast-food stand) which sold corn-based products, that was operated by the wife of Family B. The type (chicken and pigs) and quantity of livestock disposed of was self-reported by the farmers while the average daily profit for the micro-enterprise was self-reported by the wife of Family B. Family A had to dispose of 7 pigs and 20 chickens while Family B had to dispose of 30 chickens prematurely. All chickens were estimated to weigh about 3 lbs. each while pigs weighed approximately 40 lbs. each at time of disposal. Usually the pigs are disposed of when weighing around 100 lbs. and chicken at 5 lbs. The weight loss per pig is 60 lbs. while that of chickens is 2 lbs. The wife of Family B operated her fast-food stand 5 work-days during the week.

Loss of income from the early disposal of livestock was calculated as follows:

*Total weight lost due to premature disposal X current market price;*

*Weight lost is the difference in weight at full maturity and weight at pre-mature sale X number livestock disposed. Market price is the price per pound that local chicken and dressed pork are sold in the village.*

Loss of income from the closure of micro-enterprise was calculated as follows:

*Number of business days of business closure<sup>1</sup> X average daily profit. Business days is equal to 5 days per week.*

### **Payment of Fine**

A copy of the official receipt for payment of fine to the government treasury is used here.

### **Hardship**

Aside from the material and economic losses experienced by the two above-mentioned farmers and their families, their unfortunate experience has brought on hardships and psychological impacts. The Southern Maya system of subsistence farming has evolved to produce enough essential food crops such as corn, beans, and rice to satisfy the most basic nutritional needs of the family from one harvesting season to the next. Furthermore, the ability to grow and harvest food crops for auto-consumption by the family is a core cultural value of rural Mayan families in Southern Belize. It is inextricably linked to a deep sense of self-esteem and self-reliance.

A compensation cost for this hardship experienced by the farmers and their families since the date of the incident is also being included as part of the damages. As there is no formula for determining compensation for this type of hardship, in this instance we used the official minimum wage from the Ministry of Labour for every work day since the date of the incident (17<sup>th</sup> February 2017)<sup>2</sup>.

Therefore, the total hardship compensation calculated per farmer is as follows:

*Number of days elapsed since date of incident X 8-hour work-day at minimum wage (\$3.30 per hour). Work days calculated at 6 work days per week as farmers in the village often work on Saturdays and rest on Sundays.*

## **TOTAL ESTIMATE OF DAMAGES AND LOSSES**

The tables below summarize the damage and losses including hardship experienced by both farmers and their families based on the methodology described above.

### **Farmer 1: Family A**

Farm Camp	Dimensions (ft.)	Sq. ft	Cost/sq.ft.	Value
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<sup>1</sup> Calculated up to the time of compensation or up to the middle of August when the new corn crop will likely be harvested, whichever comes first.

<sup>2</sup> An alternative to calculating hardship compensation would be to use the General Poverty Line for the Toledo District which includes a 2009 Minimum Food Basket and non-food expenses per household. However, we felt the amount of \$2,901.58 per year adjusted for inflation or \$241.00 per month would be unrealistic in the case of the farmers as the scale of their farming activities alone clearly puts them well above this amount in terms of monthly income.

<b>Building 1</b>	14 X 20	280	\$1.50	\$ 420.00
<b>Building 2</b>	20 X 13	260	\$1.50	\$ 390.00
<b>Building 3</b>	11 X 15	165	\$1.50	\$ 247.50
<b>Total</b>	<b>\$ 1,057.50</b>			

Produce	Quantity (lbs)	Cost	Total
<b>Stored Corn</b>	9600	\$0.50	<b>\$ 4,800.00</b>
<b>Stored Rice</b>	320	\$1.00	<b>\$ 320.00</b>
<b>Total</b>	<b>\$ 5,120.00</b>		

Equipment	Quantity	Cost	Total
<b>Horse saddle</b>	2	\$300	<b>\$ 600.00</b>
<b>Spray pump</b>	2	\$150	<b>\$ 300.00</b>
<b>Total</b>	<b>\$ 900.00</b>		

Personal Effects	Quantity	Cost	Total
<b>Sleeping bags</b>	2	\$50	<b>\$ 100.00</b>
<b>Pot</b>	4	\$25	<b>\$ 100.00</b>
<b>Plates</b>	4	\$5	<b>\$ 20.00</b>
<b>Frying pan</b>	1	\$25	<b>\$ 25.00</b>
<b>Dish</b>	3	\$5	<b>\$ 15.00</b>
<b>Cups</b>	3	\$2	<b>\$ 6.00</b>
<b>Total</b>	<b>\$ 266.00</b>		

Lost Income	Unit (lbs.)	Price	Total
<b>Pigs</b>	420 <sup>3</sup>	\$5	<b>\$ 2,100.00</b>
<b>Chicken</b>	40 <sup>4</sup>	\$5	<b>\$ 200.00</b>
<b>Total</b>	<b>\$ 2,300.00</b>		

Fine				
Payment of Fine	1	\$500	\$	500.00

**TOTAL MATERIAL/ECONOMIC LOSS** \$ **10,143.50**

Hardship	Days	Price	Total
<b>Days</b>	191 <sup>5</sup>	\$26	<b>\$ 4,966.00</b>

<sup>3</sup> Mature weight of 7 pigs (700 lbs) less weight at disposal (280 lbs) = 420 lbs in loss

<sup>4</sup> Mature weight of 20 chickens (100 lbs) less weight at disposal (60 lbs) = 40 lbs in loss

<sup>5</sup> The total number of days for hardship for both farmers is calculated from 17<sup>th</sup> February, 2017 to 27<sup>th</sup> September, 2017.

<b>TOTAL HARSHIP</b>	<b>\$</b>	<b>4,966.00</b>
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### **Farmer 2: Family B**

Farm Camp	Dimensions (ft.)	Sq. ft	Cost/sq.ft.	Value
<b>Building 1</b>	14 X 17	238	\$1.5	\$ 357.00
<b>Total</b>				<b>\$ 357.00</b>

Produce	Quantity (lbs)	Cost	Total
<b>Stored Corn</b>	7600	\$0.50	\$3,800.00
<b>Stored Rice</b>	800	\$1.00	\$800.00
<b>Total</b>		<b>\$</b>	<b>4,600.00</b>

Personal Effects	Quantity	Cost	Total
<b>Foodstuff</b>	3	\$30	\$ 90.00
<b>Bucket</b>	2	\$10	\$ 20.00
<b>Pot</b>	3	\$25	\$ 75.00
<b>Sleeping sponge</b>	1	\$50	\$ 50.00
<b>Clothes</b>	4	\$25	\$ 100.00
<b>Hammock</b>	1	\$75	\$ 75.00
<b>Blanket</b>	1	\$25	\$ 25.00
<b>Cups</b>	3	\$2	\$ 6.00
<b>Dish</b>	3	\$5	\$ 15.00
<b>Total</b>		<b>\$</b>	<b>456.00</b>

Lost Income	Unit	Price	Total
<b>Chickens</b>	60 lbs <sup>6</sup> .	\$5	\$ 300.00
<b>Fast food stall</b>	159 days <sup>7</sup>	\$25	\$ 3,975.00
<b>Total</b>		<b>\$</b>	<b>4,275.00</b>

<b>TOTAL MATERIAL/ECONOMIC LOSS</b>	<b>\$</b>	<b>9,331.00</b>
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Hardship	Days	Price	Total
<b>Days</b>	191	\$26	<b>\$ 4,966.00</b>

<sup>6</sup> Mature weight of 30 chickens (150 lbs.) less weight at disposal (90 lbs.) = 60 lbs. in loss

<sup>7</sup> The number of days was calculated from 17<sup>th</sup> February 2017 – 27<sup>th</sup> September, 2017.

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<b>TOTAL HARSHIP</b>	<b>\$</b>	<b>4,966.00</b>
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## **TOTAL COMPENSATION RECOMMENDED**

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### **Compensation Value per Farmer**

In order to meet the full replacement of the material and economic loss suffered by both affected families, we are hereby recommending that the value of their loss be provided to them as compensation. Additionally, given the personal economic and psychological hardships that they have experienced over what is now a seven-month period, we are recommending an additional payment to compensate for this hardship. The total compensation is therefore calculated per farmer as follows:

#### **Farmer: Family A**

<b>Item</b>	<b>Compensation Value</b>
1. Material/Economic Loss	\$10,143.50
2. Hardship	\$4,966.00
<b>Total Compensation</b>	<b>\$15,109.50</b>

#### **Farmer: Family B**

<b>Item</b>	<b>Compensation Value</b>
1. Material/Economic Loss	\$9,331.00
2. Hardship	\$4,966.00
<b>Total Compensation</b>	<b>\$14,297.00</b>

## **RESETTLEMENT AUDIT AND ACTION PLAN (RAAP) VALIDATION MEETING**

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The final draft of the RAAP was shared by the Forest Department with the Maya Leaders Alliance (MLA) on 20<sup>th</sup> September 2017. The MLA ensured that it was subsequently shared with the affected families.

A validation meeting was held in the afternoon of 27<sup>th</sup> September 2017, in the village where the families reside, to present, discuss, and validate the RAAP developed by the Project consultants with the aim of expediting the execution of the RAAP once the affected farmers had validated the RAAP together with any proposed changes proposed and agreed to during the validation meeting. Present at the meeting were the affected farmers, the Project consultants,

representatives of the KBAs project, representatives of the FD, representatives of the MLA, representatives of the TAA, as well as the Alcalde and Council Chairman of the village where the families reside.

The recommendations and rationale for compensation were presented both in writing and verbally by the project consultant's, together with the relevant translation in Maya to ensure that all present understood the contents and significance of the RAAP. Questions, comments, and replies were also subject to translation in Maya and English where required.

The affected farmers agreed that in general the RAAP adequately captured their losses and adequately compensated for this. However, they clarified that there were small value items which they had omitted to include in their original list of losses but for which they had no interest in seeking compensation.

The affected farmers also asked that the payment process be expedited as long delays in receiving payments would increase the hardships suffered so far.

Two requests were made by the farmers for minor modifications to the Compensation Strategy for practical and economic reasons. These are supported by the consultants and agreed to by representatives of the KBAs project. These requests are now integrated in the modified compensation strategy which is presented below.

### **Observations from the RAAP Validation Meeting**

1. There was support from the MLA and TAA and the village leaders for a disbursement schedule that recognized the need for a managed cash flow to the affected farmers that would not jeopardize the restorative aim of the RAAP in using monetary payments to support the recovery of family welfare and stability.

## **MODIFIED COMPENSATION STRATEGY**

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The following actions were validated during the meeting held on 27<sup>th</sup> September, 2017 in the village:

1. That 50% of the value of the Hardship Compensation be made immediately in cash and the remaining 50% of the value of the Hardship Compensation be made 30 days afterwards.
2. That the value for loss income from pigs and chickens be done as follows:
  - a. In the case of Family A, the value of the pigs that were lost will be invested in procuring young sheep. To this value will be added the value of the lost saddles

- which will also be invested in procuring young sheep.<sup>8</sup> Family A will identify the source of the sheep.
- b. The loss of income from chicken by Family A will be paid in cash but will be handled by the wife.
  - c. In the case of the wife of Family B, she will be provided with direct payment up to the value approved to purchase preferred local breed of chicks.

Small livestock are held and reared by rural families as “savings” and as such these should be built back up.

3. That the payment for loss of income from the fast-food stand belonging to the wife of Family B be paid directly to her in two equal monthly installments.
4. That the payment for equipment lost by Family A be done in-kind.
5. That payment for personnel effects lost by both farmers be done in cash to minimize procurement delays.
6. That the initial relief payment already provided to the two farmers be deducted from the remaining value before it is paid out.
7. That the payment of the remaining value of approved compensation amount be done in 4 equal monthly installments thereafter starting no later than 30 days after the first Hardship compensation payment was made.

## **The Payment Process**

The payments shall be made into joint bank accounts in which both the husband and wife are account holders with the aim to ensure that withdrawals are jointly controlled and the welfare of the family is paramount in making expenditures.

## **Monitoring**

It is the responsibility of the KBAs project to ensure that disbursement of funds proceeds as agreed and that livelihoods are restored to the levels before the incident. For this purpose, the KBAs project will monitor the status of the affected families every six months or more often as necessary, and report to the progress to the MLA, TAA, and the World Bank.

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<sup>8</sup> Family A made this request at the RAAP validation meeting explaining that he did not have feed for raising pigs but had pasture prepared to raise sheep which was also a good investment. He requested that the value of the compensation for the loss of the horse saddles be invested in the purchase of the sheep since he had already purchased replacement horse saddles.