



**Verified Carbon
Standard**

LOSS EVENT REPORT YELLOW IPÊ GROUPED REDD PROJECT



Ecológica

Document Prepared by Ecológica Assessoria LTDA

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1 LOSS EVENT DETAILS

1.1 Summary Description of the Loss Event

The Yellow Ipê project is verifying the 2nd MR, which covers the period between 01/01/2021 to 04/19/2023. During the year 2022, starting in September, it was detected that the area suffered several attempts at land grabbing and illegal deforestation, which were promptly tackled by the project management, in partnership with the responsible environmental agencies.

Thus, a road opening was identified, which was later understood to be part of the illegal demarcation of a nearby property. Later mapping identified the loss of 58.16 ha of Forest in this action, reported as deforestation in the year 2022 in the monitoring report.

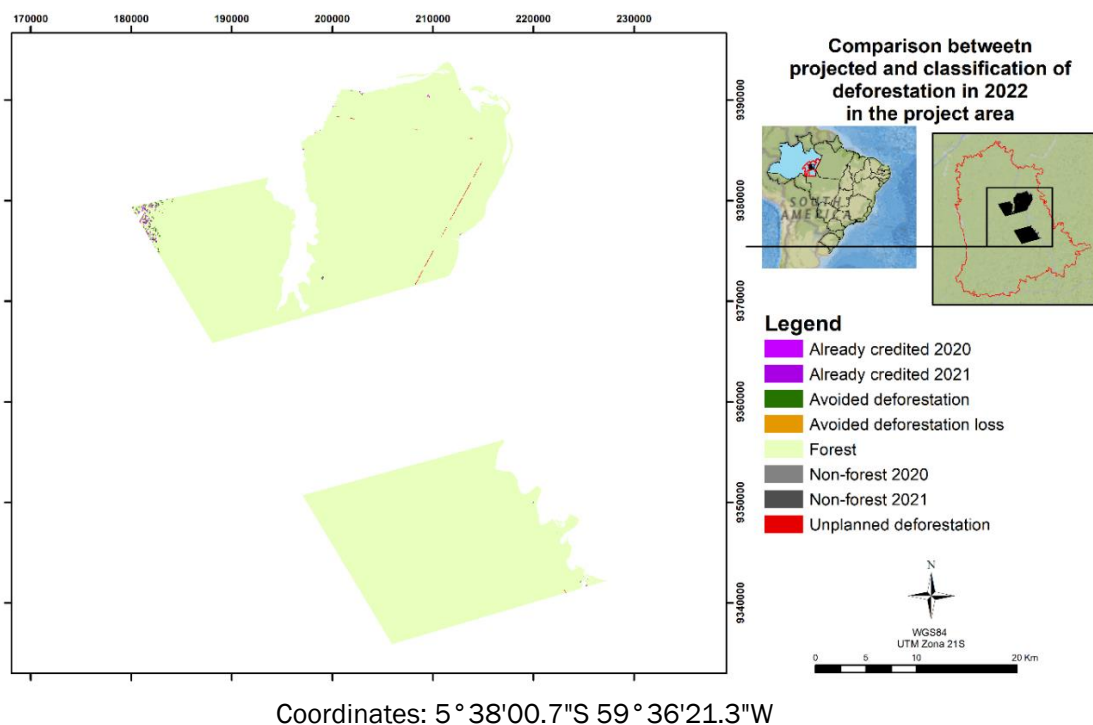
The event did not represent a loss in the carbon stock, since a shallow cut was carried out at the site of action. The disturbance was stopped and it was possible to verify that the area is already in regeneration. Open areas will be permanently removed from the possibility of generating credits.

1.2 Date of Loss Event

Deforestation, and loss event, occurred during the year 2022, probably between June to August of this year. The event was located by the local team during a flight surveillance in September 2022.

1.3 Location of Loss Event

The loss event occurred in the project area, “Gleba 4” of the Instance 1 property.



2 DATA AND PARAMETERS

2.1 Data and Parameters Monitored in Affected Area

Data / Parameter	ACPA ^t
Data unit	Ha
Description	Annual area within the Project Area affected by catastrophic events at year t.
Source of data	- Remote sensing data and GIS, - Supervisor reports.
Description of measurement methods and procedures to be applied	The following sources will be monitored: - INMET¹ - Periodic reports from area supervisor - INPE²
Frequency of monitoring/recording	At each time a catastrophic event occurs.
Value applied	0
Monitoring equipment	Remote sensing and GIS
QA/QC procedures to be applied	Best practices in remote sensing and GIS. Furthermore, the following sources will be also monitored to confirm the data obtained from remote sensing and GIS: - INMET - INPE - Periodic reports from area supervisor
Purpose of data	This parameter is used to calculate project emissions in the project scenario. Provides an ex post estimation of the area affected by catastrophic events within the project area
Calculation method	Remote sensing and GIS

¹ INMET. Instituto Nacional de Meteorologia. Available at:

<http://www.inmet.gov.br/portal/index.php?r=home/page&page=rede_estacoes_conv_graf>.

² INPE. Instituto Nacional de Pesquisas Espaciais. Available at: <<https://queimadas.dgi.inpe.br/queimadas/bdqueimadas>>.

Comments	The value will be calculated ex-post each time a catastrophic event occurs, when significant. Decreases in carbon stocks and increases in GHG emissions (e.g., in case of forest fires) due to natural disturbances (such as hurricanes, earthquakes, volcanic eruptions, tsunamis, flooding, drought, fires, tornados or winter storms) or man-made events, including those over which the project proponent has no control (such as acts of terrorism or war), are subject to monitoring and must be accounted under the project scenario, when significant.
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Data / Parameter	ABSLPA _t		
Data unit	Ha		
Description	Annual area of deforestation in the project area at year t		
Source of data	- Remote sensing and GIS		
Description of measurement methods and procedures to be applied	Forest cover change due to deforestation will be monitored through periodic assessment of classified satellite imagery covering the project area.		
Frequency of monitoring/recording	Annually		
Value applied	Year	Dense Tropical Rainforest	
	2022		58.16
Monitoring equipment	Remote sensing and GIS		
QA/QC procedures to be applied	Best practices in remote sensing. Procedures according to VM0015's Map Accuracy Assessment that states that the minimum classification accuracy of each class or category in the Land-Use and Land-Cover Map and Land-Use and Land-Cover Change Map, respectively, should be 80%.		
Purpose of data	This parameter will be used to calculate baseline emissions and project emissions in the project scenario. Provides the <i>ex-ante</i> and <i>ex post</i> values of the deforested area per forest class within the project area.		
Calculation method	Analysis of satellite images and maps.		
Comments	-		

Data / Parameter	ΔCUDdPA_t		
Data unit	tCO ₂ e		
Description	Total actual carbon stock change due to unavoided unplanned deforestation at year t in the project area		
Source of data	- Remote sensing and GIS - Supervisors reports.		
Description of measurement methods and procedures to be applied	Forest cover change due to unplanned deforestation will be monitored through periodic assessment of classified satellite imagery covering the project area.		
Frequency of monitoring/recording	Annually		
Value applied	Year	ΔCUDdPA_t	
	2022	43,287.87	
Monitoring equipment	Remote sensing and GIS		
QA/QC procedures to be applied	Best practices in remote sensing.		
Purpose of data	This parameter will be used to calculate project emissions in the project scenario. Provides the <i>ex post</i> value of the change in carbon stocks due to unavoided unplanned deforestation within the project area.		
Calculation method	Emissions from deforestation at each forest class are estimated by multiplying the detected area of forest loss by the average forest carbon stock per unit area.		
Comments	N/A		

Data / Parameter	EBBBSLPA_t		
Data unit	tCO ₂ e		
Description	Sum of (or total) baseline non-CO ₂ emissions from forest fire at year t in the project area		
Source of data	Remote sensing data and GIS, Supervisor reports.		
Description of measurement methods	Slash-and-burn deforestation to clear the area is carried out for subsistence agriculture, which is the main cause of deforestation		

and procedures to be applied	within the project area. Therefore, baseline deforestation in the project area involves fire and all above ground biomass is burnt.		
Frequency of monitoring/recording	Annually		
Value applied	Year	EBBBSLPat	
	2022	2,829.05	
Monitoring equipment	Remote sensing and GIS		
QA/QC procedures to be applied	Best practices in remote sensing.		
Purpose of data	This parameter is used to calculate non-CO2 emissions due to forest fires within the project area in the baseline scenario, providing an ex ante estimation.		
Calculation method	Non-CO2 emissions from biomass burning are calculated according to requirements of methodology VM0015 v1.1. Baseline deforestation in the project area involves fire and all above ground biomass is burnt to clear the area to subsistence agriculture. Therefore, this parameter is estimated as the multiplication of the annual area of deforestation of initial forest classes in the project area in the baseline scenario (ABSLPAicl, t) times the total GHG emission from biomass burning in initial forest classes (EBBtoticl,t).		
Comments	Ex post monitoring of forest fires and non-CO2 emissions (EBBPSPAt) will be done to determine GHG emissions within the project area (when the forest fire was significant).		

Data / Parameter	EBBPSPA _t
Data unit	tCO ₂ e
Description	Sum of (or total) actual non-CO ₂ emissions from forest fire at year t in the project area
Source of data	- Remote sensing data and GIS, - Supervisor reports.
Description of measurement methods and procedures to be applied	If forest fires occur, these non-CO₂ emissions will be subject to monitoring and accounting, when significant. In addition to remote sensing data and GIS, which can identify the area affected by forest fire, periodic reports from area supervisors,

	who live inside the project area, could also confirm the data obtained.		
Frequency of monitoring/recording	Annually		
Value applied	Year	EBBPSPA t	
	2022	0	
Monitoring equipment	Remote sensing and GIS		
QA/QC procedures to be applied	Best practices in remote sensing and GIS.		
Purpose of data	This parameter will be used to calculate <i>non</i> -CO ₂ emissions due to forest fires within the project area in the project scenario, providing an <i>ex post</i> value.		
Calculation method	If forest fires occur, <i>non</i> -CO ₂ emissions from biomass burning will be calculated according to requirements of methodology VM0015 v1.1. Therefore, this parameter will be calculated as the multiplication of the annual area of deforestation of initial forest classes in the project area in the project scenario times the total GHG emission from biomass burning in initial forest classes ($EBB_{tot_{icl}, t}$), when significant.		
Comments	The deforested area was not burned, i.e., the forest was cut with a chainsaw and no fire was used. All logs remain in the field.		

Data / Parameter	RF _t
Data unit	%
Description	Risk factor used to calculate VCS buffer credits
Source of data	- VCS Non-Permanence Risk Report – Yellow Ipê Grouped REDD Project. - Remote sensing data and GIS. - Supervisor report. - Literature data.
Description of measurement methods and procedures to be applied	All sources of data from the VCS Non-Permanence Risk Report will be used to measure the various risk factors.

Frequency of monitoring/recording	Annually
Value applied	12
Monitoring equipment	Remote sensing and GIS.
QA/QC procedures to be applied	Best practices in remote sensing and GIS. The VCS Non-Permanence Risk Report will be verified together with the monitoring report at each verification event.
Purpose of data	This parameter represents the non-permanence risk rating of the project, which was used to determine the number of buffer credits that shall be deposited into the AFOLU pooled buffer account.
Calculation method	This parameter was calculated using the last available version of the AFOLU Non-Permanence Risk Tool. All the risk factors described in the VCS Non-Permanence Risk Report will be assessed.
Comments	N/A

2.2 Description of Impact on Project Activities and Monitoring Plan

The loss event did not impact project activities or the monitoring plan. After identifying the infraction, the team acted quickly on several fronts to tackle deforestation and prevent the opening of larger areas. Around 58 ha were deforested using chainsaws, cutting trees at 50cm to 1m height. After cutting, due to the measures adopted by the Proponents to avoid further actions, all logs were left in the site and have not been removed from the project area. It is important to note that the area was not burnt, i.e., no fire was used to clean the area. The figure below shows the impact of the loss event within the project area.



Figure 2. Picture from the airplane during a flight surveillance in September 2022, when the loss event was discovered in the project area

Several measures have been taken to stop deforestation after the identification of the loss event, which are listed below and available with photographic records in section 4.

- Installation of the Operational Base, Acquisition of operational means and Structuring of a Specialized Team

The base was installed in a place strategically equidistant from the extreme points of the project area. Among the investments made to structure the Base and Operational equipment, it is important to highlight: 4 aluminum vessels with new outboard engines (200 HP, 90 HP and 3 of 30 HP); two outboard electric motors; 6.5 HP sterndrive engine; security materials; drone; computer; satellite phone; cell phones; trackers; GPS; television; solar power system; internet access equipment

(Starlink); generators; Survival kits; First aid kit; construction of the headquarters structure (living area, septic tank, bathrooms, support area); Kitchen utensils; fishing gear; a boat; among others.

- Planning and conducting systematic surveillance within the area

The surveillance team covers part of the extension from the Yellow Ipê project area on foot on a monthly basis, arriving at predetermined places, seeking to identify possible threats to the ecosystem.

- Legal measures

Since October 2022, several interventions have been carried out against illegal agents operating in the region, Among the actions that demanded legal measures, it is important to highlight:

- 1) On 03 NOV 22 - Notitia Criminis - General Delegate;
- 2) On 03 NOV 22 - Proponents filed a repossession suit (n° 0600790-05.2022.8.04.6200);
- 3) On 07 NOV 22 - Warrant of Repossession, issued by the Novo Aripuanã district judge, determining that the invaders abstain from practicing any act that may disturb the Proponents' possession;
- 4) On 11 NOV 22 - Testimonials Collected with the participation of IPAAM;
- 5) On 21 NOV 22 - Noticia Criminis, communicating to the Public Ministry of Novo Aripuanã-AM the reiteration of criminal acts that have been committed in the areas;
- 6) On 28 NOV 22 - Search and Seizure Warrant, sent to IPAAM, determining the seizure of the equipment used for the extraction of wood;
- 7) On 19 JAN 23 - Decision for Trustee of the Media Owners;
- 8) On 21 JAN 23 - Suspensive Effect and favorable decision to the project owner on the Interlocutory Appeal filed by the Proponents, in order to prevent the equipment used for logging from being returned to the invaders;
- 9) Manifestation with the Opinion of the Registry of Borba; and

- Public Security and Inspection Bodies

Due to the invasion of property, which was motivated by criminal activity of degradation to the environment, legal attributions were conducted with the Brazilian Public Safety and Inspection Bodies (OSPF).

Three police operations were carried out in the area. The first took place on November 11th 2022, the second between November 30th and December 5th 2022, and finally the last one on December 14th 2022. The entities involved were the Military Police of the State of Amazonas (PMAM), the Civil Police of the State of Amazonas (PCAM), the State Public Ministry (MP-AM) and the Amazon Environmental Protection Institute (IPAAM).

All these operation activities incurred costs project proponents exceeding R\$ 3,000,000.00 (around US\$ 600,000). It is important to note that this project does not have any other financial resource than carbon credits revenues, which demonstrates the importance of the REDD project for forest conservation.

- Sensibilization of the local population and promotion of alternative income generation opportunities

The daily presence in the region made it possible to strengthen relationship with the local communities.

This work involves carrying out several social impact activities, such as: reforestation and improved croplands, in which experts were contracted for conducting trainings with the riverside communities; enhancement of the logistic chain, for taking the products to the places of consumption; employing part of the population as company employees; stimulating local crafts; improvements in school and church structures; providing medical and dental assistance; sociocultural activities; among other measures.

- Measures to increase natural regeneration of the deforested area

As described above, trees were cut using chainsaws, and natural regeneration is undergoing in a very good condition. No logs have been removed from the project area after deforestation. These logs will be left in the field for decomposition and protect the soil from erosion. In addition, seedlings from native species will be planted in more impacted areas.

Therefore, after the implementation of the aforementioned measures to tackle deforestation in the project region, the deforestation was reduced to zero within the project area from September 2022 to April 2023. It is expected that this increased presence in the region will maintain deforestation at very low levels.

Furthermore, it was also possible to note the fast natural regeneration from the trunk regrowth, which demonstrates that most of the trees have not been killed during this invasion. During the sit visit conducted in June 2023, it was observed that several trees had reached heights exceeding 10 meters, showing a very good natural regeneration. Figures below show the natural regeneration in the damaged area.



Figure 3. Natural regeneration in June 2023 showing trees with more than 10m high



Figure 4. Natural regeneration showing a great diversity of species, picture from June 2023

It is noteworthy that the project activity itself and the structuring of the monitoring plan were crucial for the infraction to be identified and quickly stopped. The presence of the team in the field, along with the support of satellite monitoring and legal action, was effective in resolving the conflict.

3 QUANTIFICATION OF ESTIMATED LOSS

3.1 Carbon Stock at Previous Verification

The carbon stock in the project area, estimated in the VCS PD and applied in the 1st MR, is presented below:

Forest class	PROJECT AREA								
	Aboveground*			Belowground**			TOTAL		
	Biomass (Mg ha ⁻¹)	Biomass to Carbon (tC/ha)	C _{bi,cl} (tCO ₂ /ha)	Biomass (Mg ha ⁻¹)	Biomass to Carbon (tC/ha)	C _{bb,cl} (tCO ₂ /ha)	Total biomass (Mg ha ⁻¹)	Biomass to Carbon (tC/ha)	C _{tot,cl} (tCO ₂ /ha)
Dense Tropical Rainforest	327.40	163.70	600.23	78.58	39.29	144.06	405.98	202.99	744.29

3.2 Carbon Stock after Loss Event

The carbon stock remains the same as validated in the PD after the loss event. This is concluded because there was a clear cut of the trees on the road, and therefore, the surroundings of the forest remained homogeneous. The deforested area will be removed from the accounting area for credits generation for the entire crediting period.

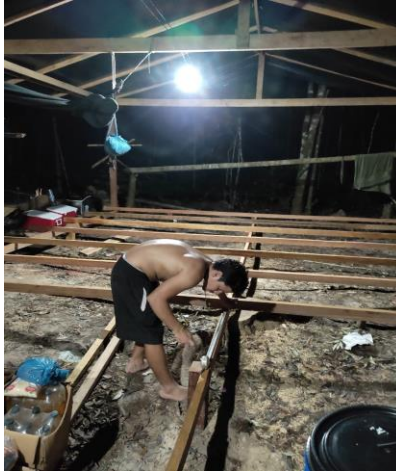
3.3 Summary of Estimated Loss

Total actual carbon stock change due to unavoided unplanned deforestation of 58.16 ha at year 2022 in the project area is 43,287.87 tCO₂e. Total project emissions in 2022 was 43,287.87 tCO₂e.

Total VCUs generated in the loss year is 8,732 tCO₂e, while PD estimate was 41,543 tCO₂e. It is important to state that the generation for the year, and during the monitoring period (2021 – 2023) was not negative, and thus, it did not result in a reversal. The loss has not devastated a significant portion of the project area, and no impact is expected for the following monitoring years.

4 ADDITIONAL INFORMATION

- Installation records of the operational base



20 – September - 2022



20 – September - 2022



Aerial view February, 2023



October, 2022



February, 2023

- Records of operational means and equipments



Fast boat, with 200 HP engine



Fast boat, with 200 HP engine



Boats with 90 and 30 HP engines



GPS



Operating Equipment



Trackers



Solar panels



Inverses of the Solar System

- Records of patrols carried out and itineraries



Departure for recognition



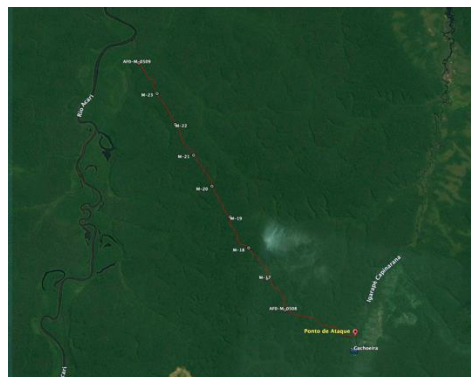
Recognition inside the forest



Recognition of milestones



Moment of river displacement



Travel through the forest of 43 km (round trip) inside the area

- Some means seized through the action of the safety and supervision bodies



