Zero Deforestation

(UPDATED IN SEP/2022)

The success of the Forest Reserves Protection and Biodiversity Monitoring Programs is due to the zero deforestation and forest preservation policy adopted by Agropalma Group in the year of 2001.

It was during 2001 that the company had conducted the final deforestation activities on its lands, properly licensed and authorized by the competent environmental authority. The policy of banning deforestation and establishing new plantations only in areas already degraded by human activity has been adopted since then. We are proud to say that since 2001 company did not carry any deforestation (legal or illegal), so the area of deforestation is zero.

Our commitment to zero deforestation also applies to all our suppliers, which we monitor in person every two weeks. Following the RSPO and Brazilian Forest Code, our deforestation cut-off date in 2008. We are proud to say that record only one of our suppliers having made deforestation and or ecosystem in an area of 81,3ha. This area was cleared in 2008 and 2009 and it was occupied by pastures (48%), shrubland (25%) and secondary forest (27%). Currently 80.23ha are being restored as compensation and 1.06ha are being restored as remediation (in riparian buffer).

In 2021, according to guidelines from the Zoological Society of London (ZSL), Agropalma Group has undertaken the commitment of zero conversion of any Natural Ecosystem, including primary ecosystems, regenerated natural ecosystems, managed natural ecosystems and partially degraded natural ecosystems that still have a relevant ecological function and are liable to natural or assisted regeneration. This commitment applies to companies own plantations as well as to suppliers plantations.

In addition, since 2021, also following ZSL guidelines, Agropalma commits to restore ecosystems and their values to their prior condition and/or provide suitable compensation to restore these values in the case of non-compliant deforestation or conversion within the company’s own operations. This commitment also applies to all FFB suppliers and in case any of FFB suppliers make a non-compliant conversion and it refuses to restore the area, company will stop buying from this supplier until a restoration plan is being implemented. Although we have no areas for restoration based in this commitment, must be crucial to follow the criteria established for new plantations as described below, especially as a preventive approach to avoid any damage to ecosystems and non-compliant conversions.

NEW PLANTATIONS

Agropalma establishes new plantations according to the following criteria, which are applied to all our own plantations, all family farm plantations and all integrated producers in partnership with the Company:

- Conduct a socioenvironmental impact study, which includes assessment of high conservation value (HCV) and high carbon stocks (HCS) before planting. The HCV and HCS assessment are done by a professional accredited by the HCV Network’s
Accreditation Licensing Scheme, assuring that HSC assessment follows the HCS Approach Toolkit as methodology.

- The area to be planted is not, (or was not) covered by native vegetation, even secondary forests, since November 2005.
- The area to be planted does not have any high conservation value.
- The area to be planted has no peat or organic soils or any other type of soil considered unsuitable for planting oil palm.
- New plantings carried out in partnership with family farmers or integrated producers shall be established only after they provide their free, prior and informed consent.

Since November 2013, when the POIG Letter was published and introduced the concept of evaluation of High Carbon Stock (HCS), Agropalma has not established any new plantations. The few new plantations by integrated producers were implemented in areas with non-native vegetation, predominantly pastures, so that no HCS assessment was necessary. Since, 2019, after the implementation of RSPO P&C 2018, HCSA methodology became mandatory for all RSPO members, and HSC assessments using the HCSA toolkit were carried before all new plantings made by our family farmers and integrated outgrowers.

Complementing the efforts to ensure zero deforestation, Agropalma Group has a robust fire detection and firefighting system. The company has trained firefighters, equipment, tools, vehicles and heavy machinery used in firefighting. In addition to the local visual identification of fire outbreaks, Agropalma also has an alert service provided by RSPO and WRI (Fire Watch).

Whenever a fire outbreak is identified, the Emergency Action plan (EAP) is triggered and the company allocates the required resources to put it out. Moreover, the company occasionally carries out awareness raising campaigns on the importance of fire prevention.

The analysis of our data history reveals that very few fires affect Agropalma. They mostly start outside the farms and always occur in the second semester, during hotter and drier months. The chart below features the fire management information of 2020 and 2021:
<table>
<thead>
<tr>
<th>Alert date</th>
<th>Ammount of outbreaks</th>
<th>Areas inside farm or in the region?</th>
<th>Confirmed</th>
<th>Action performed/ Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>17/jul/20</td>
<td>1</td>
<td>external</td>
<td>yes</td>
<td>Situation follow-up. The neighbor controlled the fire before Agropalma was impacted.</td>
</tr>
<tr>
<td>30/ago/20</td>
<td>1</td>
<td>internal</td>
<td>no</td>
<td>A team was sent to the location to check, but found no fire outbreaks.</td>
</tr>
<tr>
<td>14/out/20</td>
<td>1</td>
<td>external</td>
<td>yes</td>
<td>The fire outbreak occurred in the neighboring area, but the fire did not spread to Agropalma’s area.</td>
</tr>
<tr>
<td>29/out/20</td>
<td>1</td>
<td>internal</td>
<td>no</td>
<td>A team was sent to the location to check but the fire outbreak was not found.</td>
</tr>
<tr>
<td>30/out/20</td>
<td>1</td>
<td>external</td>
<td>yes</td>
<td>Situation follow-up. The neighbor controlled the fire before Agropalma was impacted.</td>
</tr>
<tr>
<td>12/dez/20</td>
<td>1</td>
<td>external</td>
<td>yes</td>
<td>The fire outbreak occurred in the neighboring area, but the fire did not spread to Agropalma’s area.</td>
</tr>
<tr>
<td>08/fev/21</td>
<td>1</td>
<td>external</td>
<td>yes</td>
<td>Situation follow-up. The neighbor controlled the fire before Agropalma was impacted.</td>
</tr>
<tr>
<td>12/set/21</td>
<td>1</td>
<td>internal</td>
<td>no</td>
<td>A team was sent to the location to check but the fire outbreak was not found.</td>
</tr>
</tbody>
</table>
Greenhouse gas management

(UPDATED IN SEP/2022)

Our carbon footprint is measured using the RSPO PalmGHG Calculator, including total land use change emissions. The Calculator reports on two indicators: one that offsets the carbon sequestration resulting from our 64,000 hectares of conservation area and one that excludes conservation areas. Including Agropalma’s conservation areas allows us to understand the real impact of our entire operations and highlights the importance of forests in mitigating climate change. However, we also want to measure our progress and impact against other companies in the palm oil sector, which usually don’t have forest reserves to consider in GHG calculations.

The main source of GHG emissions in our plantations is the historic change in land usage, which represented 474,663 tons of CO2 in 2021, which we cannot manage. Around 32% of our
gross emissions come from manageable sources such as palm oil mill effluent (POME), fertilizers or fuel for transport and mill use. POME is by far the most significant manageable source and an area that we are targeting for emission reductions.

In order to avoid future unnecessary GHG emissions from land conversion, Agropalma is committed to ensuring its plantations as well as its FFB suppliers are in compliance with the zero-deforestation policy, do not establish plantation on areas with high carbon stocks or on peat soils of any depth, apply agriculturally proper dosages of fertilizers and maintain tractors and trucks used for harvesting and transportation of CFF in good condition, in order to avoid unnecessary increases in fuel consumption.

Our goal is to reach a neutral emissions balance, which has already been achieved when considering the forest reserves as carbon absorbers. However, regardless of the performance of forest reserves, we keep determined to reduce our emissions, through optimization of fuel consumption and fertilizer application and, mainly, by implementing technologies for the effluents, such as methane capture systems and more recently, the compost system design that will contribute to give a more efficient destination to the effluents generated.

We expect to complete effluent treatment and methane capture for all six mills by 2025. By sequestrating the methane of our effluents, we are committed to reduce 60% our manageable GHG emissions intensity, by 2027. It is important to share that the installation of new effluent ponds in PARAPALMA and AGROPALMA mills have already been concluded, remaining the need of coverage installation and methane capture. The CPA mill is relatively small and methane elimination technologies are being identified and evaluated.
Climate Risks
(UPDATED IN SEP/2022)

While we can contribute to climate change mitigation, by managing well our operations and residues and especially by assuring the protection of our forest reserves, we might be affected by climate change.

Agropalma plantations are located between the latitudes 2° 13’ 20”S and 2° 42’ 19”S. The average annual rainfall is 2.500 mm, not so well distributed. The dryer months (July, August, September and October) regularly receive less rainfall (57 mm in average), resulting in an average cumulative hydric deficit of 300 mm. This situation means that Agropalma plantations are located in the lower limit for the recommended requirement of rain as well as in the superior limit for hydric deficit.

However, in between 2014 and 2018, average rain was 2321 mm with an increased hydric deficit of 438 mm. This situation had a severe impact in our plantations, causing a drop of up to 20% in our yields. Fortunately, 2019, 2020 and 2021 presented a regular rainfall and hydric deficit of 2.775 mm and 277,4 mm in average, respectively.
Considering we have a relatively short historical series of data for climate analysis (38 years), it is not possible to predict a reliable trend to our specific location. Nevertheless, company clearly understand that climate change is happening and, if it causes the reduction of the total amount of rainfall or make the driest months even dryer, the yields of our plantations will be severely affected, and company will face important agronomic and commercial challenges.

To mitigate or eliminate the damage caused by the potential fewer amount of rain, company have to implement three strategies: (1) implement regenerative techniques to improve soil chemical and physical conditions to allow palm roots grow deeper to explore water not available to them currently – already being implemented; (2) seek for or develop genetic varieties more tolerant to higher hydric deficits (already been implemented); (3) as last resource, implement irrigation system – company already have a trial in 60 ha, testing 2 different technological options.

Climate change has also potential to modify incidence of plagues and diseases in our plantation. Currently we have every year 4 or 5 months in which the rainfall is low. This “dry” season breaks the life cycle of many species that otherwise could become a plague or disease. To a plant disease develop, it needs at same time a host, a pathogen and a proper environment. Therefore, in case climate change makes our region rainier and more humid, especially in the months that are currently drier, probably some species of insects and fungus will be benefited from the new environment, by don’t having their life cycles broken. In this case, we might have more plagues and diseases to manage, changing our current natural condition of low plagues and diseases incidence.

To mitigate the risks of Agropalma being surprised by new diseases or plagues caused by changes in climate patterns, we need to keep our phytosanitary monitoring activities as well as comparing and analyzing the results against the climate indicators, especially rainfall and air humidity, bus also considering temperature and the incidence of hours of direct sunlight. If we have an indication that a new plague or disease is likely to develop, we will then exchange experience with other companies that face the same problems to exchange expertise and making our own efforts to develop a non-chemical management strategy. It is important to register that no chemical prophylactic is going to be adopted.