



Macauba Palm Oil in Silvicultural System

Country / Region: **Brazil** | Project Id: **PFIPBR501A** | Fund Name: **FIP** |

MDB : **Inter-American Development Bank**

Comment Type	Commenter Name	Commenter Profile	Comment	Date
Comment 1	Gaia Allison	United Kingdom	<p>The UK is pleased to approve the following decision relating to the promising Macuba-Plant Oil with Impact project:</p> <p>The FIP Sub-Committee notes the final estimate of USD 400,000 for project implementation and supervision services for a project in Brazil entitled, Macauba – Plant Oil with Impact, and approves USD 200,000 for the first tranche of funding for such costs for the IDB.</p> <p>This is on the understanding that the issues raised regarding the original concept are fully addressed in project development. In particular, this applies to the risk that the project may give rise to perverse incentives, through increasing the return on agricultural land, thus encouraging further conversion of forest land to agriculture.</p>	Jan 20, 2014
Response 1	Gloria Visconti	IDB	<p>All the issues raised by UK at the time of the endorsement of the concept note have been taken into account in the design of the full project proposal.</p>	Jun 28, 2017
Comment 2	Katie Berg	United States	<p>We appreciate seeing a private sector project come forward but have a few questions before moving to approve it.</p> <p>General: We understand the argument about incentives to placement on degraded pasture land in this particular context; however, why does the IDB believe that a successful pilot would not lead over time to clearance of forest land to plant Macauba, given potential returns?</p> <p>Safeguards: Has IDB looked at INOCAS' environmental and social management system? What safeguards does INOCAS have in place to protect workers and monitor environmental impacts? Why was this project rated Category C for environment?</p> <p>Financial: It would be helpful to understand how the ownership structure was determined given FIP's (through MIF) large equity contribution. Also, we were unclear on the profit sharing plan on exit -- will MIF retain profits earned through this investment, or will they be returned to the FIP?</p> <p>Thanks much, Katie Berg U.S. Treasury Department</p>	Jun 27, 2017
Response 1	Gloria Visconti	IDB	<p>The IDB/MIF team would like to thank the US delegation for the comments received. Please find below specific responses to the questions raised:</p> <p>1. Question: We understand the argument about incentives to placement on degraded pasture land in this particular context; however, why does the IDB believe that a successful pilot would not lead over time to clearance of forest land to plant Macauba, given potential returns?</p> <p>Team Response: Inside the project, it is a hard requirement that INOCAS will only work with and support smallholder farmers who plant Macauba on pasture land in a silvopastoral system. This is included in the project requirements as negotiated with IDB/MIF and it will also be a requirement in the contract between INOCAS and the participating farmers. Thus, inside the scope of the project, it can be assured that no additional forest will be cleared for Macauba.</p> <p>It is the specific purpose of this project to demonstrate the large-scale feasibility and economic attractiveness of the silvopastoral model. Macauba generates the most return when used in agroforestry schemes on pasture land, especially in areas which were already degraded. Pasture area in Brazil totaled 170 million hectares in 2010 (SECOM 2010). If 50% of those pastures were converted into silvopastoral systems with 200300 palms per hectare, Macauba oil production could exceed today's global palm oil production. Note, in addition, the inclusion of the impact of the project on</p>	Jun 29, 2017



land-use change in areas adjacent to the project site in the project evaluations, as indicated in the response to the UK question.

2. Question: Has IDB looked at INOCAS' environmental and social management system? What safeguards does INOCAS have in place to protect workers and monitor environmental impacts? Why was this project rated Category C for environment?

Team Response: Full due diligence of the investment was undertaken, with external consultants contracted to review ESG aspects, in addition to normal IDB ESG review. The full due diligence report shows that, overall the project has low to medium ESG risks. Inocas is in the early stages of developing the policies and documentation to manage ESG, but they have a strong, experienced, and knowledgeable CEO, with the skills and willingness to fully comply with ESG standards.

There are limited environmental risks in the harvest of wild Macaúba fruits and the establishment of Macaúba plantations. There are no negative impacts for cattle from growing the palms on pasture, demonstrated by the fact that they naturally occur already on pasture.

The main social risk is HR. However, national labor law is strong in Brazil, and compliant HR policies are currently being developed. Inocas has demonstrated that harvest workers will be able to earn a living wage harvesting Macaúba, though since they are being paid per kg of fruit collected, rather than an hourly or daily rate, the team has asked them to monitor the earnings of individual workers to ensure that their predictions are true. Inocas is currently drafting their health and safety documentation for harvest workers. The model for hiring the harvest workers for the wild Macaúba is not yet finalised by the project. It is important that Inocas' H&S manual includes procedures that cover all options for this relationship.

Inocas aims to build two oil mills. Once the mills are built and before operations begin, they will require an environmental impact assessment and an environmental health & safety risk assessment and management plan. The project currently has no grievance mechanism, although Inocas understands the need for a process and is willing to put one in place.

An Environmental and Social Action Plan has been developed in the course of the Due Diligence of the investment, and the IDB/MIF will monitor its implementation.

Finally, the project was screened by the IDB's ESG department under normal procedures and was declared a category C.

3. Question: It would be helpful to understand how the ownership structure was determined given FIP's (through MIF) large equity contribution. Also, we were unclear on the profit sharing plan on exit -- will MIF retain profits earned through this investment, or will they be returned to the FIP?

Team Response:

The IDB/MIF team sought expert advice from Althelia Climate Fund on the valuation of Inocas. We submitted this valuation memo with the approval documents but do not think that it was circulated. Their analysis is excerpted below.

Quantitative Valuation Methods

There is no right way to value a start-up. It is more of an art than a science. It relies on judgment and experience as much as quantitative analytics. That said, the following quantitative methods are available for quantitative valuations:

1. Methods based on one or a series of cash flows:

a. Discounted Cash Flow – discounted cash flow of the business using chosen discount rate.

b. Risk adjusted DCF – same as above with a risk adjustment of NPV.

c. First Chicago – scenario based analysis of cash flow, where NPV is equal to sum of probability-weighted NPVs of cash flows under the different scenarios.

d. Venture Capital method – a discounted calculation of the valuation based on the expected profit of the company at exit, and the investor expected rate of return at exit.

2. Methods based on comparisons with other companies:

a. Multiples – uses metrics (e.g. P/E ratio) of similar companies that are publicly listed and adjusts for the company in question.

b. Transaction comparable – uses price of transaction/funding round for a similar company and adjusts for company in question.

c. Scorecard Valuation – uses median pre-money valuation of similar companies and then adjusts (usually by intervals of \$500k) based on a scoring against 7 indicators.

d. Risk Factor Summation – calculates the risk factor of 12 characteristics, assigns dollar values in multiples of \$250k to each of the characteristics, sums these values, and then adjusts the median value of similar companies by this summation.

3. Methods based on balance sheets:

a. Book value – the assets minus liabilities.

b. Liquidation value – the book value should all inventory (at a loss) and assets be sold.



4. Berkus Method – attribute pre-determined values (e.g. \$500k) to the progress that a company has already made in 5 specific steps of commercialization. Max valuation is \$2.5 million.

Methods Applicable to Inocas

We can see which of these methods applies best to Inocas by ruling out which are not applicable. Firstly, Inocas is a start-up in an entirely new sector. Macaúba as an industry does not yet exist. The potential to open up a new market is a huge opportunity for IDB. But it also means that there are neither similar companies nor similar transactions with which to compare Inocas.

To illustrate the point more clearly, if we were to take a transaction in a closely related industry sector, palm oil, we would not find any companies of a similar risk level and of a similar size to Inocas. This is because palm oil, as a major industry, has existed for around 100 years: start-ups in palm oil therefore tend to be much larger scale (as there are more experienced teams, much larger volumes of cash and more liquid capital available) and lower risk (as there is much lower technology, implementation and market risk).

Secondly, although Incoas is generating some revenue, it has a team, and it has partnerships, it is still in the start-up phase. It does not have the assets or inventory that would make a balance sheet based valuation of any use. This rules out using the methods listed under section 3.

Thirdly, the Berkus Method can't be used since the maximum valuation is lower than the IDB investment. This method is more applicable to pre-revenue start-ups.

This leaves only the methods based on the cash flows, section 1, as applicable to Inocas.

Cash Flow Analysis of Inocas

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With regard to point 2, any profits that accrue to IDB/MIF under the investment as outlined in paragraphs 2.47-2.48 will be returned to the FIP.

Comment 3 Colette O'Neil United Kingdom

The UK is pleased to see this innovative private sector pilot project come forward under the PSSA facility and approve the proposal. We have the following comments and ask that these be looked into and answers provided before the document goes to the MDB Board for approval: Jun 27, 2017

The results of the feasibility study and the project proposal make a compelling case for investment setting out market potential. As supply increases, it will be important to review the extent to which Adequate market demand for future macauba products exists, and whether increased supply will affect price and therefore the degree of attractiveness to smallholders

Details of the how the FIP's equity stake will exit are provided but further detail on what happens if exit is not possible and investment remains tied up would be helpful.

We note that the IDB ranked the project a C in terms of environmental and social impact. Under IDB rules, this operation therefore does not require an environmental or social analysis beyond the screening and scoping analysis for determining the classification. However, where relevant, these operations will establish safeguard, or monitoring requirements. The UK would like to see the following in place:

- *Milestones should be determined and tracked to ensure progress*
- *the mid-term and final evaluation should look beyond the immediate investment site to assess the extent to which there has been any impact on land-use and/or farmers beyond the project's intervention area.*

We also approve the switch from loan to equity investment for the FIP contribution of \$3 million

Regards
Colette

Response 1 Gloria Visconti IDB

The IDB/MIF team would like to thank UK for the positive assessment of the project. Please find below responses to the specific questions raised: Jun 29, 2017

1. Question: The results of the feasibility study and the project proposal make a compelling case for investment setting out market potential. As supply increases, it will be important to review the extent to which Adequate market demand for future Macauba products exists, and whether increased supply will affect price and therefore the degree of attractiveness to smallholders.

Team Response: This is an important factor in the profitability of the company and will be reviewed by the IDB/MIF in its participation in the Board of Inocas at shareholder meetings.

2. Question: Details of the how the FIP's equity stake will exit are provided but



further detail on what happens if exit is not possible and investment remains tied up would be helpful.

Team Response: In order to reduce the exit risk of the transaction a sell back right (Put Option) was granted to SPV-INOCAS. As the Term Sheet indicates, if an exit is not possible through the sale of FIP's shares to existing shareholders or an external investor, SPV-INOCAS will have the right to exercise such Put Option. Under the Put Option, the company, Inocas, will be obligated to buy back the (FIP) shares from SPV-INOCAS at a price of 1.3 x the amount of the original investment, which would still generate profits over the investment. If the buy-back cannot be financed using cash flow or reserves, external financing will be sought. This put option must be exercised within a maximum term of 12 years. In summary, this put option basically guarantees that the FIP investment in SPV-INOCAS will not be tied up indefinitely and must be liquidated by the end of year 12.

3. Question: We note that the IDB ranked the project a C in terms of environmental and social impact. Under IDB rules, this operation therefore does not require an environmental or social analysis beyond the screening and scoping analysis for determining the classification. However, where relevant, these operations will establish safeguard, or monitoring requirements. The UK would like to see the following in place:

- Milestones should be determined and tracked to ensure progress
- the mid-term and final evaluation should look beyond the immediate investment site to assess the extent to which there has been any impact on land-use and/or farmers beyond the project's intervention area.

Team Response: Targets related to environmental, economic, and social benefits are included in the project's logical framework. Progress toward these targets will be tracked in the MIF's project management system through semi-annual reports. In addition, through its position on the Board of INOCAS, the IDB/MIF (and its advisor, Althelia) will review ESG compliance at shareholder meetings. An Environmental and Social Action Plan has been developed in the course of the Due Diligence of the investment, and the IDB/MIF will monitor its implementation.

With regard to the impact on land use outside the project's intervention area, the team has included a reference in paragraph 2.85 to explicitly require this in the mid-term and final evaluations.