



# Sustainable Palm Oil Production in Peru



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## About the Project

Unlocking Forest Finance (UFF) brings together NGOs, environmental and social sector safeguarding institutes, financial sector experts and strategic advisors including Credit Suisse, European Investment Bank and Althelia Ecosphere. UFF is managed by Global Canopy.

The project relies on a number of local partners: Environmental Services Development Company (CDSA) in Acre, Brazil, the Amazon Environmental Research Institute (IPAM), in Mato Grosso, Brazil, and the Centre for Development and Research in Upper Amazonia (CEDISA) in San Martin, Peru.

Other implementing partners and subcontractors are: The National Agricultural University of La Molina (UNALM) in San Martín, World Wide Fund for Nature (WWF-UK, and other WWF offices), Climate Bonds Initiative (CBI), Vivid Economics, Helmholtz Centre for Environmental Research (UFZ), the International Institute for Sustainability (IIS), the International Institute for Applied Systems Analysis (IIASA), the National Institute for Space Research – Centre for Earth Systems Science (INPE-CCST).

This project is part of the International Climate Initiative (IKI). The Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) supports this initiative on the basis of a decision adopted by the German Bundestag.

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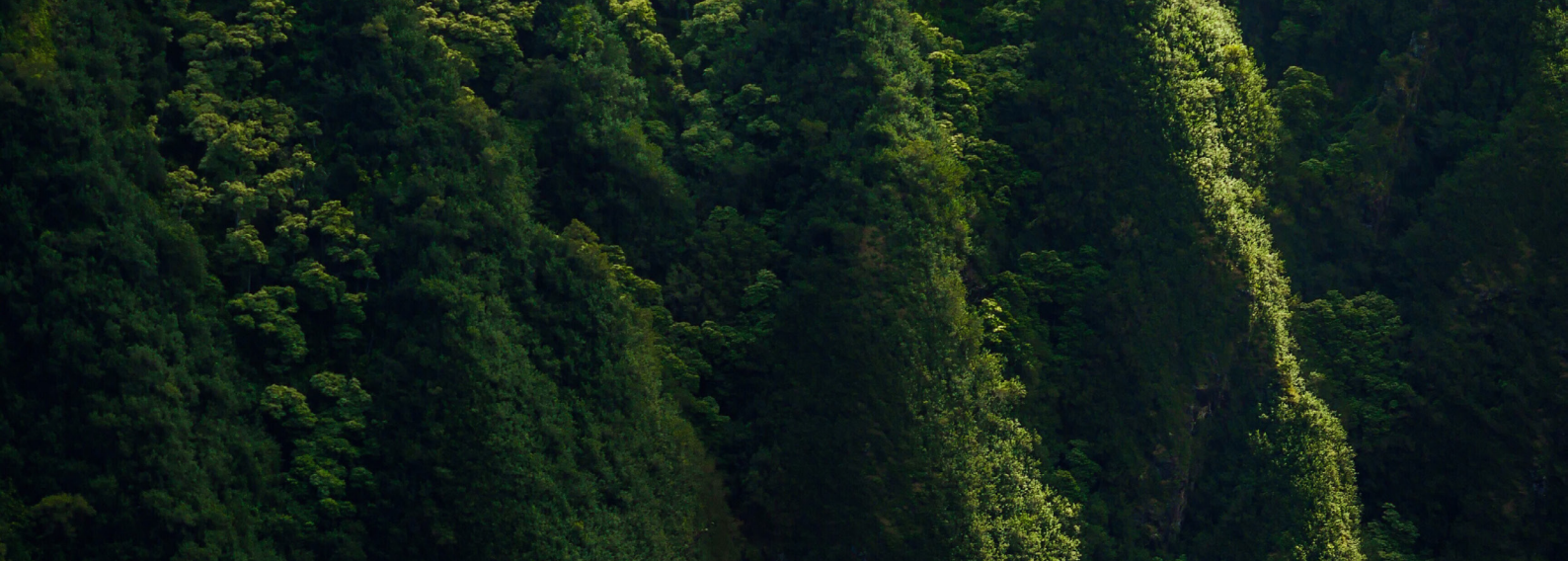
Federal Ministry for the  
Environment, Nature Conservation,  
Building and Nuclear Safety

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## About Global Canopy

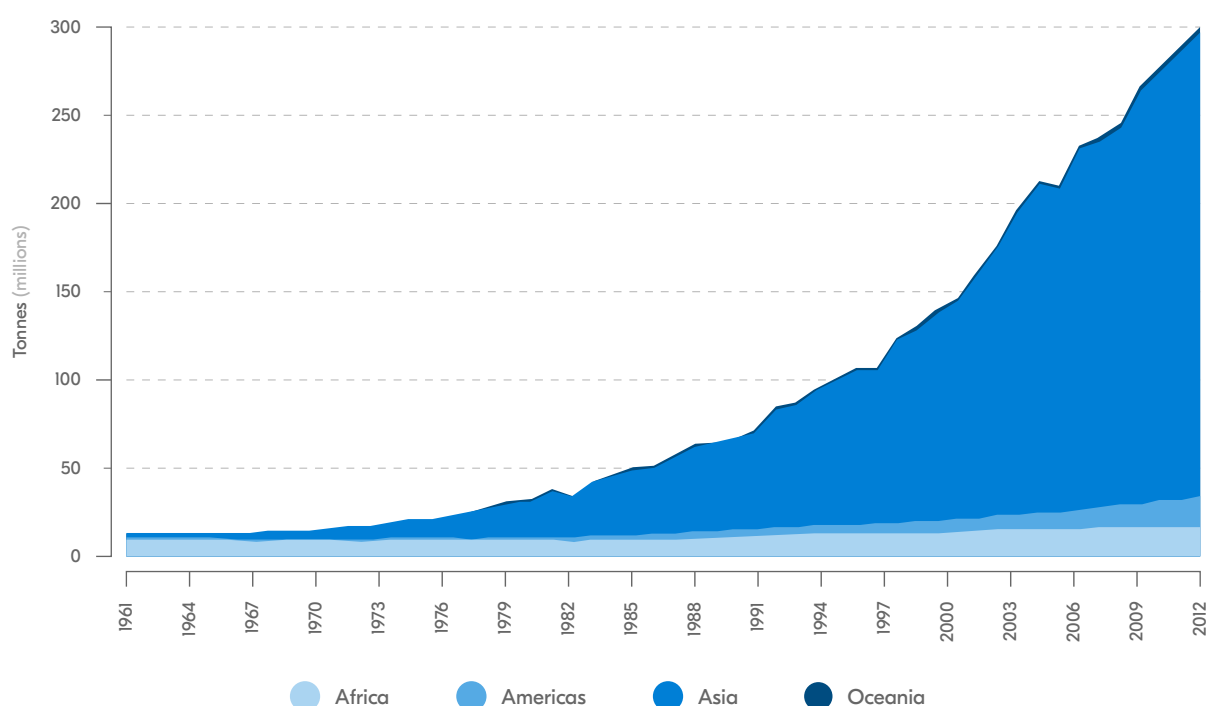
Global Canopy is an innovative environmental organisation that targets the market forces destroying tropical forests. Since 2001, we have been testing new approaches to tackling deforestation, and guiding companies, investors and governments worldwide to think differently about our planet's forests.



## Boosting forest-friendly palm oil production in Peru

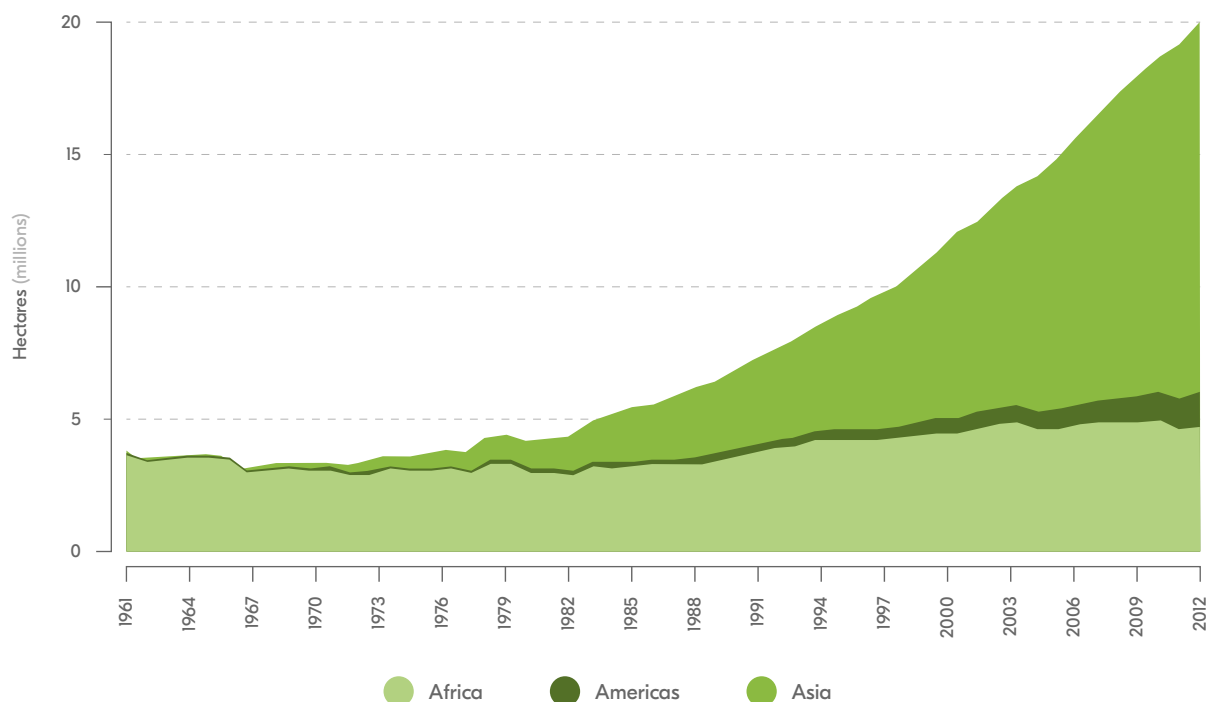
Palm oil and its by-products are ubiquitous as an ingredient in food, cosmetics and household products, appearing in over 50% of products on supermarket shelves. Its usefulness has led to rapidly increasing global demand, and palm oil is now a multi-billion dollar industry. Most of the production of oil palm tree fruit, the raw material for palm oil and other derivatives, is dominated by plantations in South-East Asia. The ongoing expansion in production has led to well documented deforestation, smoke haze affecting the region, and human rights problems. The graphics below show the speed at which the industry has grown.

### Palm fruit production



Graphic 1. Palm fruit production  
Data source: FAO

## Area harvested for palm fruit



Graphic 2. Area harvested for palm fruit  
Data source: FAO

The dramatic increase in palm oil demand together with the conditions required for oil palm cultivation makes this an attractive economic activity for other tropical regions. Demand for palm oil is likely to increase as global population and purchasing power grows, particularly given the current absence of alternatives. This increased demand creates market pressure to increase supply. There are, broadly speaking, two options to increase supply: increasing planted area or increasing productivity on land already given over to palm oil production.

Until now, the main production strategy has relied upon plantation expansion. However, since plantation expansion cannot continue indefinitely in Asia, companies are looking at new frontiers and expanding plantations in Africa and South America. In the case of South America, local biofuel mandates constitute additional demand factors<sup>1</sup>. Expanding the area under plantation without adequate controls can cause significant deforestation and fail to respect human rights. This causes land tenure and labour conflicts, and displaces other crops, creating a food security risk.

<sup>1</sup> Some of these mandates consider ethanol or a combination of ethanol and biodiesel.

However, increasing yields would help to significantly boost production in existing plantations. If implemented properly and with the adequate incentives and conditionalities, an approach focused on increasing productivity can improve the livelihoods of smallholders and ensure the volume needed by palm oil purchasing companies is available, while protecting the remaining forests and their vital ecosystem services.

This brief focuses on the opportunities associated with boosting smallholder yields and our view on the right incentives for achieving sustainable palm oil production in Peru.

## Tackling Expansion in the Peruvian Amazon through Sustainable Palm Oil

Peru has experienced a significant expansion in palm oil plantations over the last decade. Almost all these plantations are located in the Peruvian Amazon, which provides the ideal conditions for the crop to thrive. However, this also presents a huge environmental risk. Given the commitments of the Peruvian palm oil sector to increase production in a sustainable way<sup>2</sup>, there is an urgent need to address these risks so that palm oil production truly represents a sustainable development opportunity for the country.

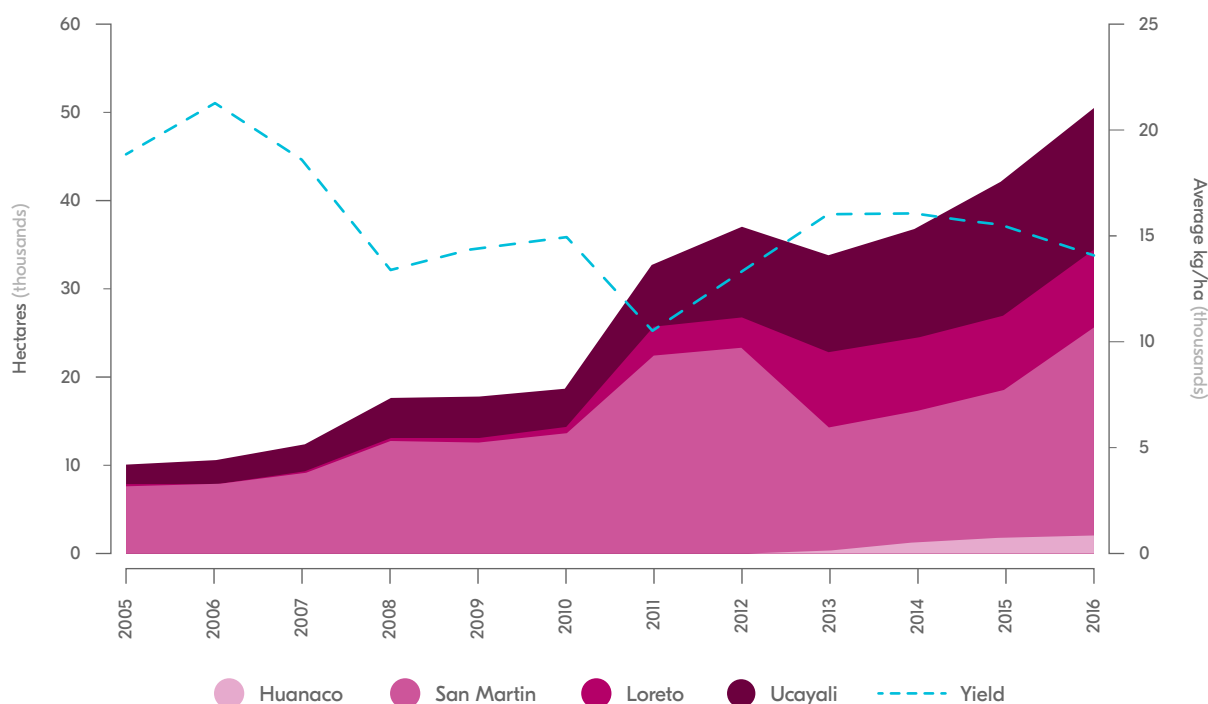
### Oil Palm in Peru

Similar to other areas of the world that grow palm oil commercially, Peru has seen a significant increase in the area cultivated to produce palm oil, a trend which will continue and may accelerate. Plantations are concentrated in four Peruvian departments, all of them located in the Amazon region. According to the Ministry of Agriculture (MINAGRI), in 2016 there were just over 51 thousand hectares planted with oil palm in Peru. However, in 2014 Junpalma, the Peruvian National Association of Palm Oil Producers, estimated over 77 thousand hectares of oil palm plantations in Peru. There is clearly therefore a lack of reliable information. Increases in plantation area seem not to be matched by increases in productivity; Graphic 3 shows significant increases in planted area with no associated increase in yield. One potential explanation for this could be the increasing involvement of smallholders with less access to technical capacity.

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<sup>2</sup>In 2016 the Ministry of Agriculture published the National Plan for the Sustainable Development of palm Oil. Available here: <https://bit.ly/2HwHLoy>

## Peru - Planted area & yield

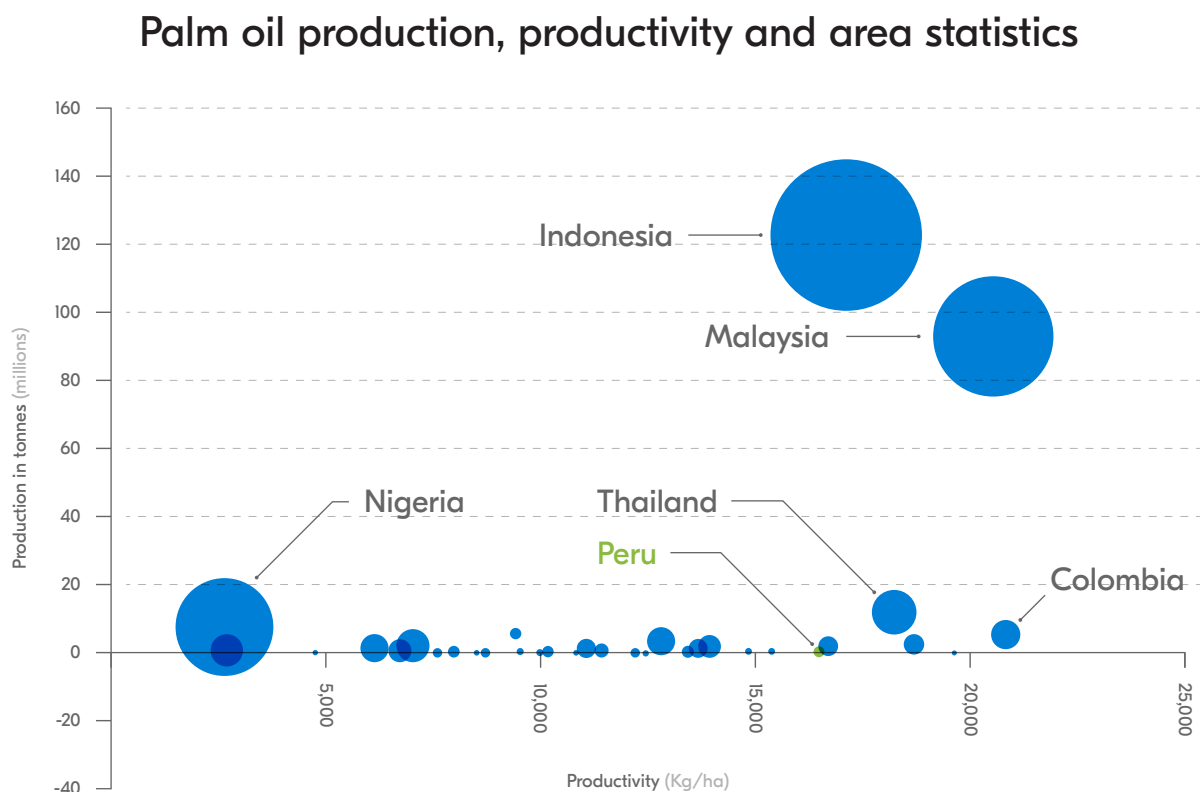


Graphic 3. Peru - Planted area & yield  
Data source: MINAGRI

As of 2014, Junpalma estimated that 47% of the harvested area was planted by small and medium-scale farmers. Small-scale farmers having a significant role in overall production would provide a considerable opportunity to enhance sustainable economic development – while achieving the targets of the Peruvian National Palm Oil Plan – if these farmers were able to access the resources they need to increase their production in a sustainable way. Whilst including financial support, the ideal terms for which this briefing discusses, this would also include technical assistance and equipment.

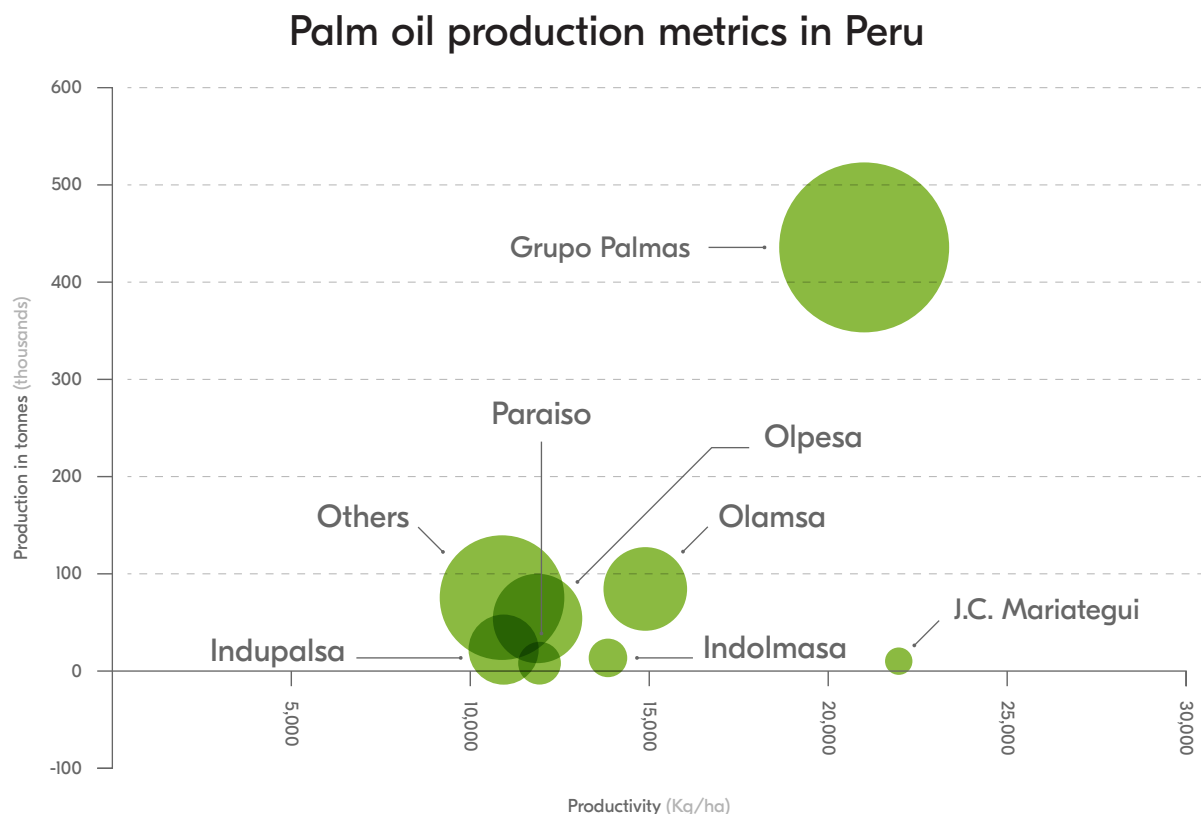
## Opportunity 1: Boosting smallholder yield

Graphic 4 shows the Peruvian position in terms of production (Y axis), productivity (X axis) and total land harvested (size of sphere). At world level, Peru is a small producer of palm oil with a relatively small area in production and about average yield.



Graphic 4. Palm oil production, productivity and area statistics  
Data source: FAO

However, looking closely at Peruvian productivity reveals greater complexity: broadly speaking the highest productivity is on plantations owned by large-scale producers, such as Grupo Palmas. These producers also constitute a significant proportion of harvested area and production. Yield for smaller producers is closer to 11 tonnes per hectare than to the national average of about 16 tonnes per hectare.



Graphic 5. Palm oil production metrics in Peru  
Data source: Junpalma

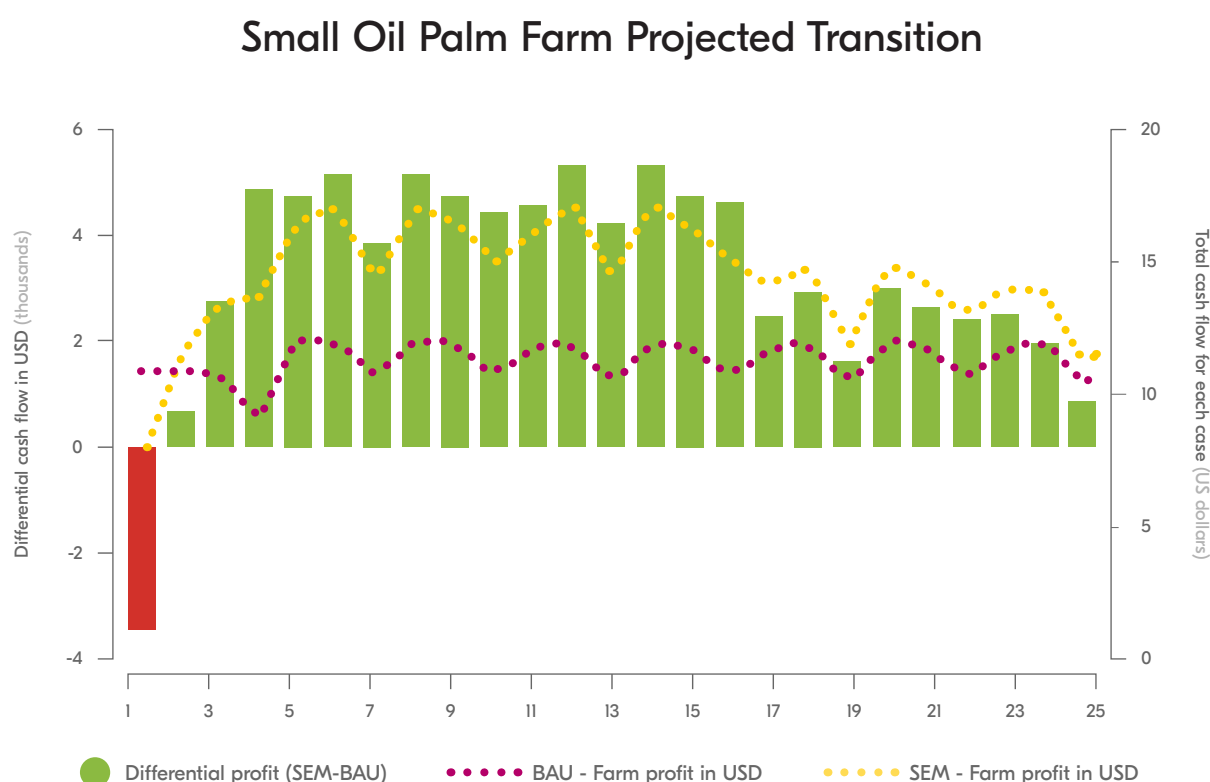
Helping smallholders sustainably increase yields will be key to boosting Peruvian palm oil production in a competitive way while achieving zero deforestation and wider sustainable development goals. From our Unlocking Forest Finance project, we know that in San Martin, the region where most of the oil palm production in Peru takes place, smaller producers have a yield of about 12 tonnes per hectare. Changes in their practices could boost this productivity to around 22 tonnes per hectare.

We have estimated the potential costs and benefits for farmers of transitioning to such a system. The results are very encouraging. For clarity, under Business as Usual (BAU) we refer to a farmer who has around eight hectares of oil palm in production under a traditional system with a peak productivity of 13 tonnes per hectare. The Sustainable Ecosystem Management (SEM) scenario implies a transition towards an integrated pest management system, with the addition of phytosanitary controls, improvements in fertilisation, soil analysis and the implementation of a management plan based on the results, and technical assistance. This is projected to result in a peak productivity of 22 tonnes per hectare.



The cash flow estimations in Graphic 6 assume the farmer has the capacity to fund the transition on their own, i.e. there is no credit assumption. The additional costs correspond entirely to the changes in practices described above.

The analysis shows that by transitioning to the SEM system, the farmer would be worse off in the first year, although she still would have a positive cash flow.



Graphic 6. Small Oil Palm Farm Projected Transition

The reduction in cash flow comes from an increase in costs related to the implementation of better practices, while productivity remains the same in year one. However, from the second year onwards the SEM system generates better cash flows for the farmer than the traditional system. This is because while the SEM system is more demanding, with increased costs, this extra cost is more than compensated for by higher productivity. Therefore, it is in the interests of smallholders to transition to the SEM system.

However, despite the potential financial gains from the transition, smallholders rarely have the financial resources to implement the new system on their own. Hence, access to finance with the right incentives represents another opportunity.

## Opportunity 2:

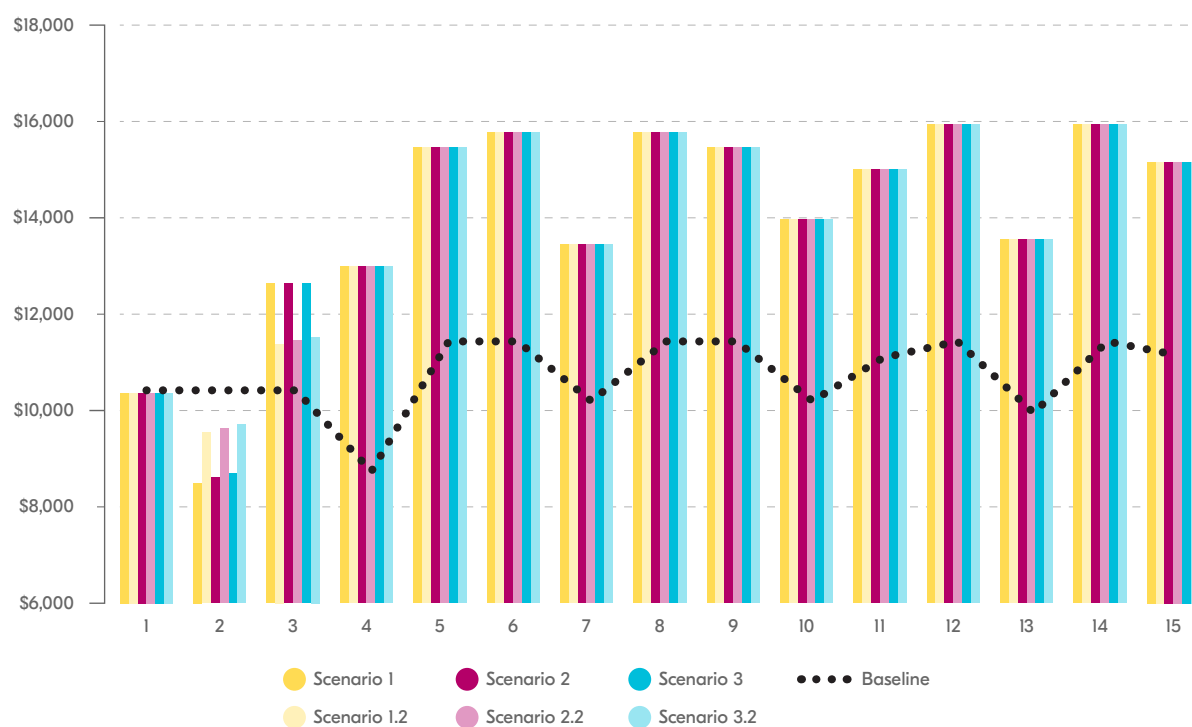
### Couple uptake of sustainable practices with enhanced access to credit

Access to credit is an under-exploited alternative to help the farmer overcome financial shortfalls during the transition period and to stimulate long-term broad uptake of sustainable practices. To achieve this goal, enhanced access to credit would need to be developed in a way that does not significantly impair the farmer's cash flow.

As detailed in our previous brief<sup>3</sup>, agricultural credit can be either a barrier or a huge incentive to transition towards more sustainable agricultural practices. It all depends on the terms.

Graphic 7 provides a snapshot of what the cash flow of our example farmer could look like if they transitioned using credit under a range of terms.

#### Examples of transition with credit



Graphic 7. Examples of transition with credit

There are six scenarios: an interest rate of 24% per year and a one year payback period (Scenario 1); an interest rate of 24% and a two year payback period (Scenario 1.2); an interest rate of 15% per year and a one year payback period (Scenario 2); an interest rate of 15% per year and a two year payback period (Scenario 2.2); an interest rate of 7% per year with a one year payback period (Scenario 3); and an interest rate of 7% per year and a two year payback period (Scenario 3.2). The baseline corresponds to the farmer's cash flow under the BAU scenario, which assumes no credit. The additional assumptions are that the farmer will ask for credit equivalent to their financial gap for the first year and that she will implement the transition for their eight hectares in production from the first year.

In general, the principle holds that a lower interest rate with a longer payback period is more beneficial for the farmer. While in the case of oil palm the transition cash flow is strained for only one year, paying back the credit in a 12 month period generally just delays the financial gap for one year. Independently of the interest rate, the best results for the farmer are related to having access to credit with a two year payback period. Combining a two year payback period with a 7% interest rate is the best scenario for the farmer in this example.

## **Banks can use this information to promote zero deforestation**

Uptake of sustainable practices can be built into the terms of access to these softer credit conditions. Instead of promoting a blanket reduction in interest rates and extension on payback period for credits to all oil palm producers, the Peruvian financial system should require a commitment to sustainable production and zero deforestation to grant access to these softer credit products. This requirement would need to operate in two stages<sup>4</sup>:

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<sup>4</sup> The Unlocking Forest Finance project has been working to define these sustainability criteria using what we call "Codes of Conduct". These codes of conduct should be embedded into a broader safeguarding framework that in turn links farmers and their on the ground activities to finance providers (banks, investors, etc) and to government.



- a. Before finance disbursement, the farmer needs to agree to use finance for a transition to sustainable production and needs a clear understanding of what that means;
- b. After disbursement, there needs to be a credible means by which to demonstrate that the farmer has met these sustainability requirements and that finance has not been used for, for example, expanding plantations into forested areas. Farmers who continuously comply with sustainable zero deforestation practices would have ongoing access to softer credit terms, while farmers failing to comply should, at least, revert to normal market terms (i.e. shorter payback periods and higher interest rates).

A differentiated sustainable oil palm credit product would actively involve the two stages described above. Its implementation requires a clear line of reporting through third party monitoring in collaboration with banks. It also requires that the banks act on the information received from the monitoring stage, i.e. that the bank amends the terms when farmers are in breach of sustainability criteria.

Successful implementation and mainstreaming of truly green oil palm credit products could also help tackle second level deforestation risk – the risk that farmers with boosted profits as a result of the transition then expand further into the forest – by making access to soft finance dependent on continuously sustainable activities.

Governments can support implementation of green credit products by providing incentives (see opportunity 3). They can enable the provision of vital technical assistance to support on the ground implementation of better practices. They can work with different stakeholders to expand their own deforestation control efforts through supporting reliable monitoring of farmers in transition. They can also redirect subsidies from typical funding structures, where economic activities are subsidised regardless of environmental impact, to help incentivise the green soft finance needed for sustainable production. This would benefit governments through the essential contribution sustainable agriculture can make towards NDC and SDG targets and commitments.

## Opportunity 3:

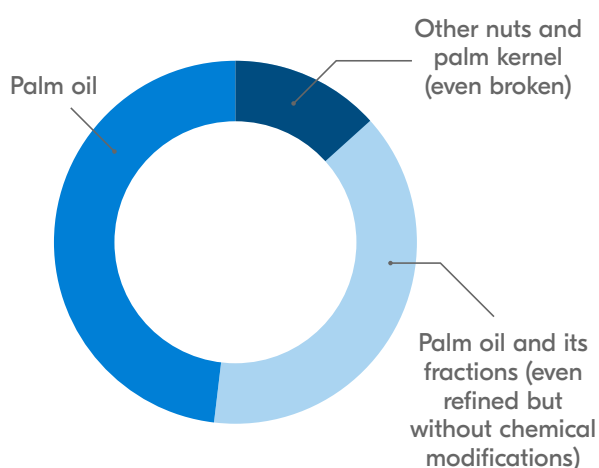
### Combine green finance with incentives

Ultimately, for the transition to sustainability to be successful and continuous, incentives are required. This shift requires devoting effort not only to shutting down activities or blacklisting producers that are considered negative, but also to putting more emphasis on the positive signals that different stakeholders can send to those actively engaged in sustainable and zero deforestation production.

#### a. The Market – Demand for sustainable Peruvian palm oil

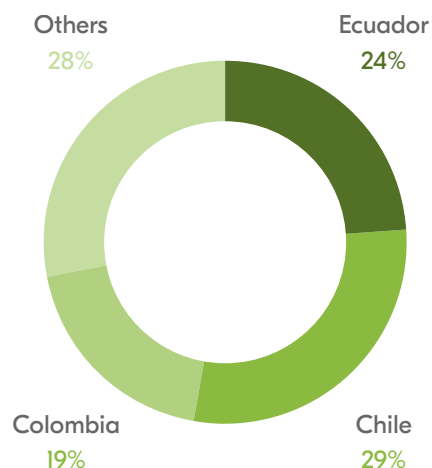
Market incentives, at least in the form of a preference without a price premium, for sustainable palm oil could be a great pull factor to adopt sustainable zero deforestation practices. The palm oil sector in Peru is engaged in the transition towards Roundtable for Sustainable Palm Oil (RSPO) certification. This is a national strategy currently involving government and the private sector, with support from even the largest palm oil producing and processing groups in the country.

Peruvian palm related exports  
29,268 tonnes in 2015



Graphic 8. Peruvian palm related exports 29,268 tonnes in 2015  
Data source: MINAGRI

Peruvian palm oil related exports by destination, 2015



Graphic 9. Peruvian palm oil related exports by destination, 2015  
Data source: MINAGRI

In 2015, Peru's palm oil related exports amounted to about 6% of its total agricultural exports. However, these commercial relations are concentrated on regional markets. Almost three quarters of the Peruvian palm oil related exports (in terms of volume) go to Chile, Colombia and Ecuador. The size of exports relative to total production also indicates that most of the oil palm harvested in the country is consumed domestically.

In terms of markets drivers for sustainability, this means that European markets with their sustainability requirements, such as sustainable land use, protection of natural diversity and respect for human rights, are less likely at present to exert pressure on exporting companies. On the other hand, Peruvian palm oil producers are keen to increase their overall palm oil exports, driven through increases in yield and expansion into areas which have already been converted or degraded.

Their interest in certification could be an attempt to gain entry to a broader range of markets, and mitigate any potential reputational risks associated with the increase in palm oil production, particularly in areas more sensitive to these issues. This is critical given the perception of some palm oil from South-East Asia, and the sensitivity and relevance of the Amazon region where this production is focused.

Since palm oil plantations are expanding in the Latin American region and there are significant internal demand factors for this expansion<sup>5</sup>, it will be important to address the consequent deforestation risk supra-nationally in the Latin American region. However, combining biofuel mandates with environmental requirements for palm oil sources at national level would be a good start, such as by requiring that all biodiesel used internally is produced using certified sustainable palm oil.

Another step to create demand for sustainable palm oil can come from shifting preferences downstream in supply chains. In general, purchasing companies might be sensitive to this approach if it implies a premium they cannot pass on to consumers. However, as sustainable production is incentivised by differential financial terms, big purchasers who do not have the capacity to monitor sustainable practices on the ground could simply turn to the same monitoring approaches and evidence used by banks to deploy sustainable credit to producers. In essence, it should be a system enabling banks, companies and government to source from and encourage sustainable production, and prevent unsustainable palm oil from being able to enter the supply chain.

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<sup>5</sup> Such as the mentioned biofuel mandates in several countries in South America



Companies that also finance their upstream operations and, more specifically, their producers, can also benefit from improved financial terms or direct their own producers to sustainable finance. It is likely that ensuring a stable demand for their production at market prices will engage farmers with sustainable palm oil in the long term, even despite the lack of a specific price premium.

Ensuring that all palm oil produced in Peru is sustainable brings enormous opportunities for the sector in terms of potential new markets, whilst also ensuring that production aligns with what is increasingly becoming a mainstream requirement.

### **b. Differential green credit lines could be extended to downstream operations**

For financiers not funding farmers directly, sustainable credit targeted to companies processing oil palm and commercialising it could still be deployed on the basis of a demonstrable commitment to source sustainable oil palm. This would also help incentivise the farmers and small cooperatives making efforts towards certification, by requiring that companies accessing this type of credit demonstrate sustainable production upstream.

In turn, Peruvian palm oil processing companies would benefit from increased sustainable local production. A transition to higher productivity oil palm plantations would not only increase farmer income, but also the national production of high quality palm oil that in turn could supply Peru's internal demand and export opportunities. If the 47% of the total area under plantation that is currently managed by smallholders attained the potential productivity outlined in this and other Unlocking Forest Finance briefings, that alone could increase production of palm fruit by at least 26%.

### **c. Enabling monitoring and technical assistance**

Another way to provide incentives for farmers and other stakeholders to transition to sustainable practices, complementing access to finance, is to help bridge the extra costs incurred by being sustainable. Technical assistance is key for small farmers starting to transition as most of them require knowledge transfer to implement RSPO standards and related initiatives<sup>6</sup>. Third party monitoring can also bring unbearable

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<sup>6</sup>One of the strategies and action points considered in the Peruvian National Plan for the Sustainable Development of Oil Palm is to provide technical assistance to producers to expand their plantations in a sustainable way and with an adequate environmental management. This element includes increases in yield. More information in <https://bit.ly/2HwHLoy>. Accessed on 22nd January 2018.

costs for smallholders if there is no support, a well critiqued issue in certification, but it is a central piece to ensure zero deforestation is implemented in practice. Companies might carry the financial burden to a certain extent, but it becomes more difficult at smaller operational scales.

Companies and lending banks can argue that providing technical assistance, or engaging in conservation activities or monitoring deforestation, are not necessarily part of their operations. Hence, it would be important to consider what stimulus governments could offer to those companies and banks who actively engage in sustainable production despite these arguments and difficulties. If their contributions reflect on the country's climate targets, for example, result based payments or initial support might help provide some incentives for the early movers.

## Recommendations

Based on the analysis above, there are several areas of intervention that can help boost sustainable palm oil production and tackle Amazon expansion in the long term:

1. While identifying suitable areas to expand plantations from an environmental and agricultural perspective is important, there is a massive opportunity in boosting smallholder yields for existing plantations. Boosting smallholder yields with the right incentives in place can not only significantly increase production but also use existing plantations in a more efficient way, sparing forests and improving farmers' livelihoods.
2. Enabling smallholders who are committed to sustainability to access finance, with differential terms for sustainable finance, is essential. Since smallholders rarely have access to financial resources to improve yields on their own, it is key to use agricultural credit as a tool to provide incentives for sustainable production, such as through longer payback periods and lower interest rates. Implementation would require joint efforts from lenders, governments and other service providers, such as monitoring agencies and technical assistance providers. Development and agricultural banks could be the early movers, potentially catalysing action across the financial system.
3. As long as sustainable production is competing with less sustainable alternatives, smallholders and other stakeholders will have an uphill battle to transition to sustainable practices. The extra effort of demonstrating sustainability implies additional investment of resources. Governments, big companies and other

stakeholders can provide additional incentives in the form of preferential demand for sustainable palm oil, for example through biofuel mandates, expanding sustainable credit conditions to other stakeholders down the supply chain, and supporting monitoring and technical assistance efforts. This will reduce the barriers for smallholders wishing to transition to sustainability.

The implementation of this view of sustainable finance will require coordination between different stakeholders to enable the necessary flows of resources and information. However, using finance as a mechanism to leverage sustainable production can also bring enormous benefits for smallholders, companies, governments and all stakeholders, while contributing towards sustainable land use, deforestation reduction and climate change mitigation on a global scale.



