Autonomous and sustainable cocoa and coffee production by indigenous Asháninka people of Peru

Field mission for the verification of impact indicators of the Development Impact Bond agreement

CFC/2013/03/139FT

Amsterdam, 30 December 2015
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KIT | Sustainable Economic Development
Introduction

This document reports on the outcomes of a field mission to the Peruvian Amazon to verify the results of a Development Impact Bond (DIB) set up by the Common Fund for Commodities (CFC), the Rainforest Foundation UK (RFUK) and the Schmidt Family Foundation (SFF) to support sustainable cocoa and coffee production and marketing by indigenous Asháninka people. The field mission took place from 6 to 17 December, visiting the project office in Satipo and project sites in Tabecharo and Rio Ene, Junin province, Peru.

The report describes the achievements made for the different impact indicators agreed upon by the DIB partners. Information has been collected by reviewing project documents including field activity reports, project data, as well as through discussions with project staff, field observations, focus group discussions, interviews with farmers and other stakeholders.

The next section introduces the project, providing some background to DIBs and introducing this particular DIB project. Hereafter a short description is given of the applied methodology guiding the verification, followed by a presentation of the results of the DIB, indicating how far the targets set for each of the four impact indicators have been achieved. Specific data supporting the conclusions are presented in annexes. The last section provides a reflection on the verification work done, some observations how the DIB has been applied in this particular case, and some preliminary conclusions how a DIB approach can be instrumental in increasing the performance and impact of development projects.
Project background

To support sustainable cocoa and coffee production by indigenous Asháninka people of Peru the Common Fund for Commodities (CFC), the Rainforest Foundation UK (RFUK) and the Schmidt Family Foundation (SFF) entered into a partnership structuring it around the principles of an innovative financing mechanism known as a Development Impact Bond (DIB). DIBs bring together private investors, service providers, commissioners (governments or donors) to deliver results that society values.\(^1\) DIBs are result-based contracts where private investors pay in advance for interventions needed to achieve jointly agreed results, and work with service providers to ensure that these results are achieved; donors and/or governments make payments to investors if the interventions succeed, with returns linked to progress achieved, where degree of success is objectively verified by an independent party. DIBs are an adaptation of Social Impact Bonds (SIBs), an approach pioneered in the United States, Australia, Britain, Canada and Ireland to reach effective and cost-efficient solutions to social problems. DIBs are designed not just to be a new way to attract funding for development but also to provide a new business model for development programs encouraging innovation and flexibility for better results, avoiding unnecessary detailed, counterproductive, inflexible prescriptions by donors or governments that hinder rather than help projects. The focus is on the results where the service provider has a large room of maneuver to decide how to reach these results, what activities to implement, making maximum use of its expertise, its ability to respond to changes, to capture new upcoming opportunities.

DIBs offer several potential advantages. They can transform social problems into opportunities for investment by monetizing the benefits of tackling social problems, so attracting private sector investors wanting to bring their resources and skills to development. DIBs can create incentives for investors and service providers to put in place the necessary feedback loops, data collection and performance management systems required to achieve desired outcomes, resulting in a bottom-up, client-centered, and generally more effective, approach to service delivery. Finally, because investors provide funding, and assume risk, for interventions expected to lead to improved social outcomes, DIBs could attract funding where donor agencies and governments might not be willing or able to fund directly.

SFF, RFUK and CFC showed interested in the DIB approach and wanted to experiment with a practical case, through a relatively small pilot initiative, to evaluate its effectiveness, efficiency, as well as legal, administrative and other operational aspects. They identified a longer running collaboration by RFUK in the Peruvian Amazon to be ideal for this pilot. SFF took the role of the investor, pre-financing RFUK to cover the costs of implementing project activities. RFUK is the service provider performing all activities, together with its partner organizations in Peru, that may be required to achieve the objectives of the DIB. CFC is the commissioner, or donor, that will reimburse the investor based upon the achievement of the predefined results of the DIB project. SFF, CFF and CFC agreed to engage KIT, the Royal Tropical Institute, as the independent party to verify the accomplishment of the jointly agreed results.

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The parties agreed that the total investment of the DIB would not exceed 110,000 USD covering the implementation of project activities and all administrative, service and related fees and expenses. Details of the DIB set-up were documented in DIB agreement, which was undersigned by all the involved parties.²

The overall objective of the DIB, as described in the DIB agreement, is to support the indigenous Asháninka people of Peru by assisting the members of the Kemito Ene Association in establishing an environmentally sound production and marketing system for coffee and cocoa. The following results were agreed upon among all the parties involved, formulated as specific, objectively verifiable project performance indicators:

1. 60% of Kemito Ene members increased their supply to the Association by at least 20% thereby improving their income received from Kemito Ene;
2. At least 60% of Kemito Ene members improve their cocoa yield to 600 kg/ha or more;
3. At least 35 tons of cocoa bought and sold by Kemito Ene in last year of the project;
4. At end of project 40 producers have 0.5 ha of newly established coffee plots with leaf rust resistant varieties.

The following schedule was made defining the exact payment for the achievements made for each of the four results:

In a DIB the independent verifier provides the information to what extend the results have been achieved, in this case assigning in what range category the different impact indicators fall. It was agreed among the parties to assign the same weight to each indicator, implying that each indicator represents a maximum of 25 percent of the maximum project budget assigned by the commissioner. This means each indicator represents a maximum of 27,500 USD of the maximum project investment of 110,000 USD.

The following payment scheme was agreed among the parties, related to the different categories presented in the table above:

- When the total target is achieved for an indicator, the commissioner will reimburse the investor with the full amount available for that indicator, or 27,500 USD;
- When the target for an indicator is 75% achieved, the commissioner will reimburse the investor with 75% of the amount available for that indicator, or 20,625 USD;
- When the target for one indicator is 50% achieved, the commissioner will reimburse the investor with half of the amount available for that indicator, or 13,750 USD;
- When the target for one indicator is not achieved, the commissioner will not reimburse the investor.

KIT, the independent verifier, visited the project areas to collect information on the impact indicators. The methodology it applied to do this, is presented in the next section.
Methodology

To collect reliable information whether the defined impact indicators of the DIB have been achieved, and to what extent, the following methods were applied:

- Review of project documentation, including progress reports, field activity reports and publications;
- Meetings and discussions with the project team, both in the project office, during travel and at the field sites, mainly focusing on information and data collection and obtained results;
- Analyses of the data provided by the project staff;
- Direct observations in the field through visiting two project sites, one for coffee and one for cocoa;
- Focus group discussions with coffee and cocoa farmers at the two project sites, involving women and men;
- Informal interviews with female and male farmers and other stakeholders during the field visits.

To verify the progress of the four impact indicators, for each indicator the main sources of data were identified:

<table>
<thead>
<tr>
<th>Impact Indicator</th>
<th>Description</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60% of Kemito Ene members increased their supply to the Association by at least 20%, thereby improving their income received from Kemito Ene</td>
<td>purchase records of the Kemito Ene specifying the amounts bought each year from each Kemito Ene member</td>
</tr>
<tr>
<td>2</td>
<td>at least 60% of Kemito Ene members improve their cocoa yield to 600 kg/ha or more</td>
<td>productivity figures for each farmer for each cocoa harvest reported by the project’s field staff</td>
</tr>
<tr>
<td>3</td>
<td>at least 35 tons of cocoa bought and sold by Kemito Ene in last year of project</td>
<td>sales data of the Kemito Ene specifying for each year the amounts sold to its buyers</td>
</tr>
<tr>
<td>4</td>
<td>at end of project 40 producers have 0.5 ha of newly established coffee plots with leaf resistance varieties</td>
<td>figures on number of hectares with newly established coffee plots for each coffee farmer reported by project’s field staff</td>
</tr>
</tbody>
</table>

The focus group discussions and the stakeholder interviews generated additional relevant information but also helped the verifier to get a better insight in the context, relevance of the DIB set up, and the overall performance of the project.
At the end of the mission, the verifier presented the preliminary results with the project team. A discussion followed on the obtained results, but also on the learning following the application of a DIB in practice.

After the mission, an email summarizing the project’s achievements on each of the four indicators, was written to the DIB parties.

Annex 1 presents a detailed overview of the mission activities. Annex 2 list the main people included in the assignment.
Results

In this section the results of the verification exercise are presented. Here the outcome for each impact indicator is described, while supporting data are presented in annexes.

Impact indicator 1
At the end of the baseline year 2013 Kemito Ene had 99 members\(^3\) and of these 45 managed to increase their sales between 2013 and 2015 with 20% or more. These 45 members that have reached the target, represent 45% of the total Kemito Ene associates in 2013. This implies that the achievement of this impact indicator falls between the 59% and 41% range, meaning that 75% of the target is achieved. Supporting data are presented in Annex 3.

Impact indicator 2
At the end of the project 15 members of the 99 members included the 2013 baseline did reach the target of a cocoa productivity of 600 kg/ha or more. This represent 15% of the baseline; the 99 members Kemito Ene had at the end of 2013. This means this target has not been achieved. Supporting data are presented in Annex 4.

Impact indicator 3
In 2015 Kemito Ene has sold in total 47,428 kg of cocoa to different buyers. The indicator has acceded the target of 35 MT, implying a full achievement of this indicator. Details are presented in Annex 5.

Impact indicator 4
In 2014 in total 41 farmers installed 0,25 ha of improved coffee varieties. This same group of farmers installed an additional 0,25 ha in 2015. Another group of 21 farmers installed 0,5 hectares in 2015. Consequently, in total 62 farmers have installed 0,5 ha of improved coffee varieties. This means the target, set at 40 farmers installing 0.5 ha of improved coffee varieties, has been exceeded and that the indicator has been achieved. Data are presented in Annex 6.

Visualizing these achievements by using the impact indicator table introduced above, leads to the following schedule, where gray shade cells refer to the result achieved for each of the four impact indicators:

\(^3\) Initially Kemito Ene had 133 members in 2013 (see the list in Annex 3), but in total 34 associates lost their membership either because they deceased, resigned or didn’t pay their membership fee in 2013.
<table>
<thead>
<tr>
<th>Target total achieved</th>
<th>Target 75% achieved</th>
<th>Target 50% achieved</th>
<th>Target not achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60% of Kemito Ene members increased their supply to the Association by at least 20% thereby improving their income received from Kemito Ene</td>
<td>Between 59% and 41% of Kemito Ene members increased their supply to the Association by at least 20% thereby improving their income received from Kemito Ene</td>
<td>Below 20% of Kemito Ene members increased their supply to the Association by at least 20% thereby improving their income received from Kemito Ene</td>
</tr>
<tr>
<td>2</td>
<td>At least 60% of Kemito Ene members improve their cocoa yield to 600 kg/ha or more</td>
<td>Between 59% and 41% of Kemito Ene members improve their cocoa yield to 600 kg/ha or more</td>
<td>Below 20% of Kemito Ene members improve their cocoa yield to 600 kg/ha or more</td>
</tr>
<tr>
<td>3</td>
<td>At least 35 tons of cocoa bought and sold by Kemito Ene in last year of the project</td>
<td>Between 34 and 24 tons of cocoa bought and sold by Kemito Ene in last year of the project</td>
<td>Below 12 tons of cocoa bought and sold by Kemito Ene in last year of the project</td>
</tr>
<tr>
<td>4</td>
<td>At end of project 40 producers have 0.5 ha of newly established coffee plots with leaf rust resistant varieties</td>
<td>Between 39 and 30 producers have 0.5 ha of newly established coffee plots with leaf rust resistant varieties</td>
<td>Below 19 producers have 0.5 ha of newly established coffee plots with leaf rust resistant varieties</td>
</tr>
</tbody>
</table>

Conform the arrangement agreed upon among the DIB partners and the project achievements as reported by the independent verifier (KIT), the commissioner (CFC) is requested to reimburse the investor (SFF) 20,625 USD for impact indicator 1, nihil for impact indicator 2, and 27,500 USD for impact indicator 3, and 27,500 USD for impact indicator 4, in total an amount of 75,625 USD.
Discussion

First of all, the work of the verifier has been immensely facilitated by the members of the project team: their frankness, their openness, their quick response to any question raised by the verifier, their full cooperation in granting access to their databases, their efforts in preparing the field trips, all greatly assisted the work that needed to be done and in fact made the assignment a pleasant expedition. At no moment during the field mission the verifier suspected any possible manipulation of data, hiding particular pieces of information or felt any resistance to respond to requests from the verifier; to the contrary the service provider and its project team were extremely open and helpful, taking the verification exercise as an opportunity to learn.

At the start of the verification mission there was some confusion regarding the starting date and the baseline date of the project, since these were not crystal clear from the DIB agreement. After consultations with the commissioner the starting date of the DIB was put at 1st of January 2015 while the baseline was set at 31st December 2013. These were particularly important for impact indicator 1 and 4 since the indicators were relative to baseline date.

For the baseline the active members of the Kemito Ene association were taken at the end of 2013. This meant that from the total of 133 members signed up in 2013, only 99 were included in the baseline. The rest, 34 members, either deceased, resigned, did not pay their membership fees or for other reasons lost their membership of Kemito Ene.

It is interesting to note that, very different from conventional development project, the DIB project included results generated over a larger time span than its own duration, from end of 2013 to end of October 2105. The DIB is looking at results obtained, and not so much at the results only obtained from the support provided by the DIB itself.

Initially, the service provider and project team expressed concerns for not reaching the target for impact indicator 4, installation of new coffee plots, since they expected the DIB would only measure the results over 2015. With the realization that baseline was set at the end of 2013, and therefore activities over 2014 could be included in the results, this meant that the concerns were ungrounded, to the contrary it resulted in a overachievement of that particular impact indicator.

The really complicated indicator was in fact the second one, increasing cocoa yield to 600 kg per hectare. The project team had in an early stage found out that the productivity figure they had collected in their baseline study, 400 kg/ha, was way too optimistic, or just plain wrong. It realized the cocoa yield is much lower in their project areas, for a number of reasons such as low yielding varieties and suboptimal management practices. Adding to this was a serious outbreak in 2015 of a pest called Mazorquero with had a devastating impact on cocoa productivity. Next to this, the fertilization program set up this year by Kemito Ene will only result in an increase in production, and yield, in 2016. It is obviously sour for the project team to realize that their efforts did not generate any return for the investor.

The verifier included in the data analysis two additional scenarios: instead of opting for the original target of 600 kg/ha lowering this to 500 and 450 kg/ha (see appendix 4). Although merely

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The end date of the project was however clearly formulated in the DIB agreement: project activities to be completed at 31 October 2015 and project to be completed December 2015.
a theoretical exercise since the impact indicators have been set and firmly endorsed by all DIB partners, it created insight for the project team what would have happened when they had taken a more realistic productivity target. It appeared 21 farmers reached a yield of 500 kg/ha whereas 26 farmers reached the 450 kg/ha yield target; this equals to 21% and 26% of the total number of farmers in the baseline or merely achieving the 50% target for this particular indicator. Again, a theoretical exercise purely to review two alternative scenarios that were not chosen.

In the DIB agreement there is a provision that states that the service provider shall inform the parties without delay of any developments and/or unforeseen circumstances which could reasonably be expected to have adverse influence on the achievement of the indicators. Potentially, unforeseen circumstances relevant for the second impact indicator, on cocoa productivity increase, such management decisions based on erroneous information, pest outbreak or late delivery of fertilizer leading to major problems in the achieving the indicators, could have been reported by the service provider to the DIB partners.

The verifier realized that some of the indicators could have been better formulated, more precise, thereby assisting all DIB parties in creating more clarity on the desirable results. For instance, the first indicator on increasing sales to the Kemito Ene association did not include a minimum size, nor for initial or end volumes. This meant for example that increasing from as small is half a kg of cocoa beans sales in the baseline year, or even more extreme zero sales, to 1 kg sold to the association is already regarded as a success, and eligible for this impact indicator. Another issue refers to the earlier mentioned confusion about baseline date, this should have been more clearly included in the DIB agreement.

It was fascinating to see how the project team was well prepared to describe the project objectives, the activities completed, the equipment bought, the collaborations set up etc. The team could also explain in detail why certain tasks were accomplished, and others not, why certain targets were met and others not. The team soon realized, and that was a major learning point for them, that a DIB is focused on results and not on the way how the results have been achieved and explanations why certain targets were met, or not. The large degree of freedom to design a project in such a way that results are achieved, was an eye-opener to them. This is obviously logical considering the team has been operating in conventional development projects, following strict rules by donors regarding project design, approach, priority themes, reporting requirements etc. Also the insight landed that as project team you can have a direct influence in formulating results and setting targets, based on the your knowledge, practical experience of the project area, incorporating learning from previous initiatives, responding to new insights etc. Proposing results and agreeing to a set of indicators however also means that you have the responsibility take these seriously, to focus on reaching the mutually agreed targets. In conventional development projects explaining why certain targets were not met, perhaps were unrealistic from the start, is allowed and perhaps even common practice in such a difficult context as development. DIBs however, are different in this aspect, not reaching targets has a direct financial implication.

On a similar note, it was observed that the project team were facing some limitations, particularly for the second impact indicator on cocoa productivity, to present data that are required to be able to substantiate the progress made in the impact indicator. The information became

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5 Article 2, section number 2.02 on page 4 of the DIB agreement.
available, but only after the tedious work of reviewing numerous field reports and interviewing field staff; the team should have realized what kind of data requirements are connected to the different impact indicators, and design the project monitoring system around those data needs.

This DIB has been a very interesting learning exercise of the parties involved. The verifier could directly observe how this DIB leads to quite a fundamental shift in looking at development projects among staff of the service provider and project team. Each party will draw its own lessons from what it has learned by doing this DIB. Some food for thought was presented in this report. A more entrepreneurial, performance-oriented perspective has the potential to help development projects to be more flexible, to respond more quickly to what works and what not in achieving clearly defined results. The notion that the investor, motivated by getting its investment back and ideally obtaining a reasonable return on it, will assist the service provider to operate in a more entrepreneurial, result-oriented way, is potentially a very attractive proposition but in this DIB this relationship still has to emerge.

Although this has been a first, and rather small pilot, it can proudly say it has been to date the second DIB implemented in Latin America⁶. There seems to be fertile ground to further build upon this experience by CFC, RFUK and SFF: pioneers of DIB in Latin America...

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⁶ Personal communication by Peter Vanderwal, The Palladium Group
Annex

Impressions from the fieldwork

Focus group discussion with coffee farmers in Tabecharo

Coffee seedlings at Tabecharo

Focus group discussion with cocoa farmers in Boca Anapate
Cocoa in Boca Anapate

Office work in Satipo
On the road to Tabecharo

On the road to Tabecharo

Travel from Boca Anapate