

West-Papua

Social investment opportunities in the cocoa sector

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Introduction and context

First, we begin by introducing the research committee, and the partners involved in this project.

Further, in order to understand the research and the concepts presented, a description of the province of West-Papua in the form of a PESTEL analysis is necessary.

In addition, a thorough introduction to cocoa as the basic preliminary knowledge for the rest of the research is provided.

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Field research and cases

This research encompasses three regions in West-Papua. For each of the regions three descriptions are provided.

First, a general case description, which gives an overview of relevant KPIs, and a general description of the business climate.

Second, the difficulties that are prone to inhibit successful business ventures are presented.

Third, the opportunities for entrepreneurial initiatives and foreign investments are identified.

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Concepts and conclusion

Based on the knowledge collected through the desk and field research, the research committee conceived five practical concepts that could provide value to the development of social investments in the local cocoa sector.

Each concept is described with the following parameters: the targeted problem area, the affected target group, geographical implementation area, investment amount, and the time horizon of the implementation.

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Dear reader,

In front of you lies a research report that is part of a comprehensive view of regional development for a part of the world that is still unknown to many. Nevertheless, it is meant to be used as an example of a transition to a sustainable form international trade as envisioned by five students from Amsterdam, with an undeniable interest in the choices society makes about economic, social and ecological development.

The world is a tumultuous place, and currently in a distressing state. 22,000 children die everyday of poverty. 805 million people go hungry every day. Climate change causes rising sea levels, droughts, biodiversity loss, and overall damage to the ecosystem. However, there is a growing community of organisations, institutions, scientists, politicians and entrepreneurs that not only realise that the current path we take as a society is a destructive one, but actively participate in the positive and sustainable reversal of it.

This particular research is part of a bigger goal to create an alternative integral investment plan for a region that is now mainly dominated by (unsustainable) mining and energy extraction. Together with Stichting Duurzame Samenleving Papua-Barat, PATO, Cargill, and the Dutch ministry of Foreign Affairs, we have created a business case in line with the UN Sustainability goals for 2030, to set an example for a new approach of international trade and economic development.

In line with the ambitions of those who have dedicated their lives and careers to build a world that we can be proud of, use this report to advance their aspirations and your own ambitions. Use it, copy it, correct it, criticize it, and share it.

Let's not recoil from the future, but strive to solve its puzzles, speaking in measured terms, in prose not poetry.

Yours faithfully,

Filipp Peresadilo
Chairman of the IDP research committee



Executive summary

The *Why?*

West Papua, with its 40 million hectares of rainforest, is one of the last true 'green lungs' of our planet. It is rich in natural resources such as gas, oil, copper and gold. Due to this, the area is under heavy pressure from the extraction industries to exploit these resources. Meanwhile, the local Papuans gain very little from the exploitation of the region. However, the natural riches of Papua can also be used in an ecologically and economically sustainable way by working in consort with the native people rather than by exploiting the region.

The *How?*

By investing in the West-Papuan cocoa sector. This sector is promising, since farming is a part of the traditional Papuan way of life and cocoa is a crop that can be produced in an ecologically sustainable manner. Furthermore, the region has a lot of potential for high quality cocoa cultivation due to very positive climate and soil conditions, as well as a proof of concept in the form of high quality cocoa from New Guinea.

The *What?*

Five concrete investment plans to help native Papuan farmers to achieve a level and quality of cocoa production that lets them access the domestic and international cocoa markets in concert with the investor in question. These five projects cover a range of investment lengths, amounts, and levels of difficulty.

The *Who?*

Made possible through a collaboration of non- and for-profit organisations, and young organisations as well as long-established names, this report was written for any organisation willing to invest in an ecologically, socially, and economically sustainable future of the Papuan cocoa sector. This can include both niche players looking for relatively small quantities of single-source, fine-or-flavour cocoa as well as larger bulk players looking for sustainable opportunities in a new region perfectly suited for cocoa cultivation.

Introduction to the Research committee

The research committee consists of five motivated students who are ready to make a difference in the world. Their goal was to set up a project that will have long-term social and sustainable impact. With their international experience and knowledge in the field of business, economics and international management, they are motivated and confident that they can set an example for a new sustainable way of international trade. What makes them unique is their strong motivation, straightforwardness, distinctness, Dutch sobriety and humor. Moreover, they are very interested in exploring other cultures. With their diverse personalities they are a team that compliments each other.



Filipp Peresadilo (25), Chairman

BSc Economics and Finance, and Information Science at the University of Amsterdam

During his studies, Philipp has traveled to over 50 countries so far, and had the unique opportunity to study on four different continents; in Canada, China, Peru, and the Netherlands. As for extracurricular activities, he has participated in two international projects in Stanford, US and Canberra, Australia. He is outspoken and always up for a good debate. At the University of Amsterdam he organized *Room for Discussion*, a public interview platform where he hosted and organized hour-long public interviews with world-renowned economists, academics and politicians including Ratan Tata, Mario Draghi, Christine Lagarde, and Alvin Roth. In his free time, Philipp is a passionate rugby player and coach

"These experiences have opened my eyes on the tremendous opportunities that open up when you put people from every corner of the world together, who have a drive to solve the challenges that we are facing now as a society. My goal with the International development project is the same: bring those people and knowledge together, to solve a very specific challenge."



Mayra Werges (22), Treasurer

MSc Business Economics (Finance) at the University of Amsterdam

During her exchange to Lisbon, Mayra met a lot of international students. This experience made her realize that internationalization is influencing our lives daily in a lot of respects. In her opinion, innovation is needed for a global sustainable future of health, housing, and especially food security. Therefore, Mayra wants to use her expertise in economics and business to help people in developing countries that face problems or obstacles in achieving the goal of a sustainable future and have a lack of innovative solutions. The International Development Project was an opportunity to make a positive and sustainable difference in the life of people who need it, to put theoretical knowledge and skills into practice and to explore the world.

"My time in Papua was an opportunity to apply my skills in practice and help a far off community with the challenges they face on a daily basis."



Vincent Altorffer (25), Acquisitor & External Relations

MSc Business Economics (Finance) at the University of Amsterdam

Vincent has three goals in life: to continuously learn and develop, to make a difference in the lives of the people around him and the world at large, and to have fun while accomplishing these tasks. In the International Development Project, all of these three factors came together in one project, and this fuelled his decision to participate.

Vincent's decision to join the project turned out to be one of the best decisions in his life: he learned a lot about how people live away from modern society in an environment that could not be more different than his own. However, the biggest lessons he learned were about himself. He learned that he has many things to be thankful for, but also that living is an opportunity to discover the world's vast beauty in every of its many aspects.

"The insights I gained in Papua will stay with me for the rest of my life, and it is all thanks to my experiences in the sprawling and immensely beautiful Papuan jungle."



Linde Crijns (23), Secretary

MSc International Management at the University of Amsterdam

Linde joined the International Development Project because the world and all its different countries, cultures, religions and inequalities has always fascinated her. During her master degree in the field of International Management she gained a lot of theoretical experience in the field of international business. This project was the perfect opportunity to use this knowledge to help a local community, to gain practical experience in the (non-profit) sector and to broaden her horizon. During the field research stage in West-Papua, she was informed of her graduation at the University of Amsterdam. At that moment, the contrast couldn't have been bigger: she had the chance to learn and develop herself while at the same time she was meeting children and families in West-Papua without access to primary education. She realized how blessed we are in the Netherlands and how much work there still is to do in places like West-Papua. From now on, for Linde eating chocolate will never be the same again.

"Seeing how the local Papuans made a subsistence living by providing the primary resources that make our lives possible changed my outlook on my personal life in the Netherlands."



Anniek Schepers (23), Coordinator

BSc International Economics and Business at the University of Amsterdam

By meeting new cultures during her international bachelor studies, her exchange to Canada, and her volunteering work in Zimbabwe, Anniek realized how different people live and act. The circumstances she was born and raised in are so different from most others. Exactly this is what Anniek realised in West-Papua as well. It was amazing to see the exceptional family and village relationships and the care the local Papuans have for each other. Especially striking was the sharing culture and the way this impacts concepts such as ownership. Anniek is glad that she was a part of this project, and that she had the chance to work with and meet so many great individuals and to see the beauty of West-Papua.

"During this project, I not only brought knowledge and skills with me, but also learned the valuable lesson that sharing is central to human nature."

Introduction to the Involved partners

Before and during the project in West-Papua, the International Development Project (IDP) was supported by four key partners, forming a unique combination of non- and for-profit organisations and of startups and long-established entities. By providing financial support, knowledge, and time, these organisations were key in making the project possible.



Study association Sefa

Sefa is the study association of Economics and Business (EB) at the University of Amsterdam. Throughout the year, Sefa accommodates different activities for students of all years and disciplines. Sefa has 6.500 members of which 300 are active within a committee. One of the projects that Sefa supports is the yearly International Development Project (IDP). The mission of this project is to broaden the horizon of students whilst aiding a developing country with specific social-economic issues. Desk research in the Netherlands will provide the students with a holistic view of the problems experienced by the local community. The combination of independent research and the cooperation with a social enterprise gives the students the perfect circumstances to conduct a research that will give the social enterprise and the local community the tools to improve on an existing local problem.



Stichting Duurzame Samenleving Papua Barat

Stichting Duurzame Samenleving Papua Barat (SDSP) was founded from private initiative in 1995 in the Netherlands. SDSP is a Dutch NGO without political or religious backgrounds and is run completely by volunteers. SDSP helps the locals of West Papua—whilst preserving their own identity and culture—to build up a sustainable society in which health care, education, agriculture, housing and nature conservation are organized in an efficient and effective manner.

SDSP has 20 years of experience in successful development projects in the Indonesian province where it supports sustainable development that includes preserving the ecosystem and local culture of West Papua. The organization raises awareness for West Papua with governments, development organizations, social organizations, private persons and corporations. They support projects initiated by locals. SDSP believes that areas can be developed in a modern manner, where the role of a private party is central. Development is by definition a long-term project, where commitment can only be maintained when all of the involved parties experience a profitable cooperation.



Cargill

Cargill is a global agro-industrial firm with major business units in trading, purchasing and distributing agricultural and other commodities including grain, steel, livestock and vegetable oils. With decades of experience with sustainable developments in the cocoa industry of West Africa and projects in the Sulawesi region of Indonesia, Cargill is committed to creating a stable and sustainable supply of cocoa for the future. Papua is seen as a possible future frontier to meet the increasing demand for cocoa from Indonesia and other parts of South-East Asia. Cargill Asia-Pacific was the main sponsor of this project and a major supplier of knowledge and other inputs that were paramount in bringing this project to a successful end.



PATO

Founded by Iko Zijlstra, a Dutch veteran, PATO is a cooperation of Papuan cocoa farmers in the Sentani region near Jayapura. The cooperation is locally run by Derek Wainyambe, a Papuan local who is from the Sentani region. Apart from being a simple cooperation, PATO also offers its members micro-financing services. This has resulted, amongst other things, in the opening of a number of kiosks in remote villages offering goods that villagers could normally only purchase in the city, such as band-aids. PATO has big plans, and is currently setting up a central fermentation and storage centre, and a cooperation-owned collection service. Iko Zijlstra, Derek Wainyambe, and the PATO cooperation were kind enough to introduce us to its members and local buyers, and show us the topics that farmers and buyers struggle with. These lessons were invaluable in mapping the vast opportunities in the Papuan cocoa sector.

Introduction to the The unequivocal potential of West-Papua

West Papua, with its 40 million hectares of rainforest, is one of the last true 'green lungs' of our planet. It is rich in natural resources such as gas, oil, copper and gold. Due to this, the area is under heavy pressure from the extraction industries to exploit these resources. Therefore, the Papuans are confronted with exploitations of their habitat, in a way that is not sustainable in both ecological and socio-economical terms. Meanwhile, the development of West Papua runs behind the rest of Indonesia in almost every respect; and within the region, there is a big difference in economic development between indigenous Papuans and Indonesian transmigrants. The transmigrants are generally better educated than native Papuans and get better chances on the labour market. Indigenous Papuans therefore face the risk of being excluded from the future economic and infrastructural development of the region. This problem can be mitigated by integrating indigenous Papuans in the modern economy through channels that are in harmony with their traditional way of life. Therefore, we aimed to identify specific investment

In line with the UN Sustainability goals for 2030, this project encourages sustainable entrepreneurship, which will have a positive impact on the local population and will protect the unique environment of the Papuans.

opportunities for international companies who can develop the local community in West Papua in a sustainable way, while preserving the unique biodiversity and local culture.

In line with the UN Sustainability goals for 2030, this project encourages sustainable entrepreneurship, which will have a positive impact on the local population and will protect the unique environment of the Papuans. West Papua is potentially interesting because the island has a unique ecology and culture, and provides plenty of space for (sustainable) development. Our project has two discrete targets. On the one hand, we want to let our research initiate a long lasting cooperation between sustainable international parties and the local Papuan population, in both a commercial as well as ecological and social sense. On the other hand, we also want to expand the network of SDSP partners in the Netherlands with companies and other parties who are willing to work on the sustainable development of West Papua.

By using the SDSP's exploratory study, interviewing experts, and reviewing existing literature, we soon focussed on cocoa as a way to potentially help local Papuans develop their economic independence while at the same time doing so in a sustainable and culture-friendly way. Consecutively, our field research confirmed many of the assumptions we started with, while at the same time adding valuable new insights into what exactly is necessary to further develop the local area. This report aims to capture these insights and give a clear overview of the vast potential of cocoa cultivation in one of the most unique and uncharted areas of our globe.



Context

A short primer on cocoa

Papua, with a climate that is especially well suited for the cultivation of cocoa is set to be conducive of cocoa cultivation for decades to come.



Cocoa presents an opportunity for both investors as well as native Papuans to improve income and living conditions and develop a new cocoa region, all while being both ecologically.

Cocoa is the seed of the cocoa tree (*Theobroma Cacao*) from which cocoa solids and cocoa butter are extracted to produce chocolate and other cocoa-derived products. There are three main varieties: Forastero, Trinitario, and Criollo. Forastero is the variety that is considered to be the working horse of the cocoa global cocoa production, and accounts for 80-90% of the world production. Criollo is by far the most rare variety, often considered a delicacy, but also has (by far) the lowest yields and is less resistant to diseases and other pests than the other varieties. Trinitario is a hybrid species between Forastero and Criollo and is used in high-end chocolate. The Papua Kerafat,

which was recently rediscovered in the Sentani region, is a Trinitario-species.

Why cocoa?

Cocoa presents an opportunity for both investors as well as native Papuans to improve income and living conditions and develop a new cocoa region, all while being both ecologically and economically sustainable. This is the case due to three primary reasons: (1) the current issues in the global cocoa supply chain, (2) the underlying environmental conditions in West-Papua, and (3) the historical and current records of the New-Guinean cocoa industry.

The current issues in the global cocoa supply are numerous and complex, and a full essay on this topic is beyond the scope of this report. However, a number of large relevant trends can convey the bulk of the problem and show why West-Papua might be a (part of the) solution. The global cocoa production is still primarily dependent on West Africa (especially for cocoa consumed in the West) where over 60% of the world's supply is produced. However, the West African cocoa sector is suffering from a set of unique problems (such as slavery) that are becoming an ever greater deterrent for the next generation of cocoa farmers in that geographical area to take over cocoa farms from their parent. Although this is unlikely to become a problem in the short run, the medium term implications might be vast (such as a cocoa shortage). This, together with a rising demand for cocoa in Asia (especially China) make New-Guinea and West-Papua as a part of this island especially well located to supply this growing demand. Next to

this, the changing climate is of growing concern to the cocoa industry. However, Papua, with a climate that is especially well suited for the cultivation of cocoa is set to be conducive of cocoa cultivation for decades to come.

West-Papua's climate- and good soil conditions also mean that cocoa can be harvested year-round and yields are high (according to farmer and buyer interviews and internal Cargill documents). Although Papua has a main- and midcrop (April to August and October to December, respectively), farmers in Papua can generally harvest cocoa year round. This means, that cocoa farmers in the region can rely on cocoa for a relatively constant income, making the crop an attractive option in this region. Soil conditions in the Papuan rainforests are also considered very conducive to cocoa cultivation, meaning that there is less of a necessity for valuable inputs such as fertilizer and irrigation, and that yields are generally good or very good.

However, the most important indicator of the vast opportunity in West-Papua is its former track record of cocoa production and the current production of cocoa in New-Guinea. During the Dutch time (until the 1960s) and up until the early 2000s, some of the best cocoa in Asia and especially Indonesia was produced in West-Papua, and prices in Manokwari were the highest in the nation. Due to a series of unfortunate events, this is currently no longer the case, but this does show that the region has a vast untapped potential. This is also shown by the current cocoa production in Papua New Guinea, which is generally considered (or sold as) a high-end chocolate input. West-Papua has this potential, as well. Some Dutch chocolate companies are already selling West-Papuan chocolate of the "Papua Kerafat" variety, a Trinitario species re-discovered a few years ago. Currently, these operations are small scale, but are an important proof of concept for the region.



A PESTEL analysis of the region

The relevant business climate in Papua

Political factors

Politics play an important role in the Papuan cocoa industry and the Papuan business climate at large. There are a few political factors that need to be taken into account when considering to enter the cocoa industry in Papua. First of all, the central government in Jakarta has food crop priority programmes, which means that they stimulate and sometimes subsidize the cultivation of food crops such as rice, soy beans and certain kinds of vegetables. Second of all, there are political tensions exist between the local Papuans and the central government of Indonesia, as a result of the still strong strive for West-Papuan independence among a fairly large proportion of the local Papuans. Third and most important of all, investing in West-Papua at any significant scale requires the political backing of local key politicians, most importantly the Bupatis or “regents” of the different Papuan regions. This backing is fairly easily obtained if economic development is helped along by an investment, but it still requires the attention of any investor interested in West-Papua.

Economic factors

One of the main economic advantages that cultivating cocoa brings to farmers is stability in income. Even though cocoa has a main and a midcrop, in general there is a year round harvest (in contrast to other crops). However, analysing the cocoa industry in West-Papua specifically we found that there exists a lack of up-to-date agricultural resources such as good storage and knowledge of modern agricultural practices. Most of the Papuan farmers lack the possibility to invest due to the persistence of subsistence farming. Furthermore, there is a lack of transparency of price formation for cocoa beans, mainly due to a relatively long supply chain and information-asymmetry between farmers and buyers. These economic factors contribute to a limited ability to compete on the global cocoa market, which causes a limited focus on the domestic market for chocolate in Indonesia. This in turn pushes prices for Papuan cocoa down and further compounds the economic problems among Papuan cocoa farmers.

Social factors

The Papuan culture is characterized by a few important features that influence the cocoa sector. The culture (Budaya Kasih) is characterized by sharing, trust, hope and religion. Therefore, the concept of ownership in West Papua is completely different compared to the Western concept. West Papuans share almost everything: food, clothes, money and other property. This is a remnant of the traditional gift economy, which makes it difficult to own property and reinvest excess wealth, leading to a large degree of underinvestment in farms among traditional Papuans. This problem is further compounded by the short-termism among Papuans, which makes concepts such as saving and investing alien to large parts of the Papuan community. These important aspects of Papuan culture are the main social drivers for the underrepresentation of Papuans in the local middle-class and business community, an overrepresentation among the farming community, and are also a main driver of relative poverty among traditional Papuans. In fact, compared to the other inhabitants of Indonesia, West-Papuans are the least developed and least experienced ethnic group. They have less economic wealth in comparison to transmigrants in West Papua (mostly

Technological factors

Technological factors that influence the cocoa sector in West Papua can be assigned to two categories: knowledge and infrastructure. The first, knowledge, is a factor of influence mainly due to a lack of this important input among native Papuans. Specifically, a lack of technical knowledge and a lack of training negatively impacts cocoa productivity and quality in the region. Furthermore, a lack of post-harvest processing knowledge and infrastructure (drying infrastructure, fermentation boxes, proper storage) further compound the problem. The latter, infrastructure, is an important factor due to its relatively fast development in the region. The central Indonesian government currently funds large infrastructure projects including large road building projects and harbour expansions to fuel further economic development in the region. This positively influences the export capabilities of West-Papua and the ease with which local farmers can access the national and global cocoa marketplace.

Ecological factors

The overall ecology of West-Papua is considered to be extremely well suited for cocoa cultivation. Soil conditions, climate, and relatively well-preserved forests are all positive key factors for the cultivation of cocoa. The most well-observed combined effect of this is a year-round harvest, even between main- and midcrop seasons. This not only positively influences cocoa supply, but also leads to cocoa being a relatively stable source of income for farmers throughout the year. Furthermore, cocoa is a shadow-crop suitable for cultivation within forests, which not only helps to preserve the Papuan jungle when compared to other crops, but also mixes well with the respect for nature that is central to Papuan culture. The most important cocoa-specific negative ecological factor within West-Papua currently is a variety of pests in the region, including CPB, black pod, and VSD.

Legal factors

Several legal factors influence investment in the cocoa industry in West-Papua, mainly Indonesian national legislation. An exhaustive description of the legal implications of investing in West-Papua is beyond the scope of this report, but two main pieces of legislature that are relevant for the cocoa industry are a 10% export tax on cocoa and a 1996 regulation banning foreign ownership of Indonesian land. These two pieces of legislation are aimed at improving the position of Indonesian citizens versus foreign investors, and at giving an impulse to the domestic cocoa processing industry.



2 Field research and cases

The research encompasses three regions in West-Papua. For each of the regions three descriptions are provided. First, a general case description, which gives an overview of relevant KPIs, and a general description of the business climate. Second, the difficulties that are prone to inhibit successful business ventures are presented. Third, the opportunities for entrepreneurial initiatives and foreign investments are identified.

Region 1

Jayapura and Sentani region

Case analysis

Jayapura and Sentani are the most promising regions from the point of supply-chain management. The business climate is comparatively developed, and relatively transparent in the way business is done and what parties are active in the market. Three different parties gave insight into the situation of Jayapura and Sentani.

PT ECOM

ECOM has two main areas of focus: sustainability; and development and trading. The company is a price taker; prices are daily updated from the city Surabaya. These prices are unstable, especially for the farmers. In order to combat this instability, an opportunity is given to the farmers to set up a contract for a fixed price for a short period. In addition, ECOM has created the concept of cocoa doctors: individuals who are directly trained directly and function as an example with their gardens for the other cocoa farmers in their villages. For the long-term, they want to increase their throughput of cocoa, but at this moment the production of cocoa farmers is limited. Also, ECOM wants to have a shorter supply chain. Non-fermented beans can be sold in the domestic market, but the volume and quality are low.

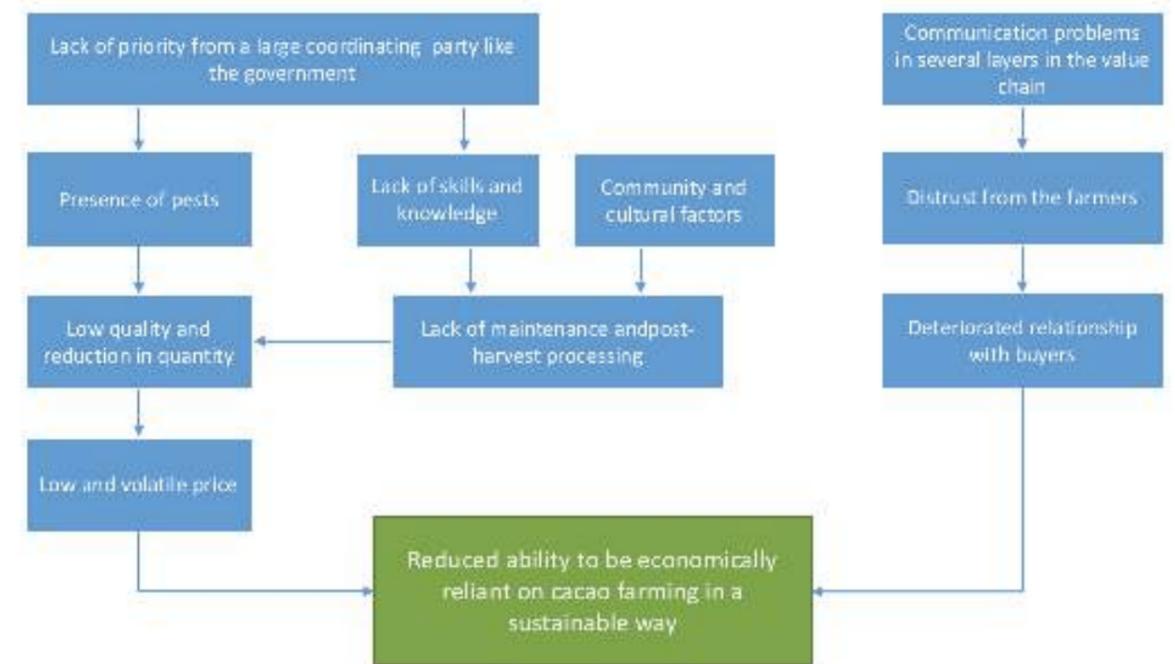
WWF

The main mission of the World Wildlife Fund in Sentani is to protect the rainforest and the local biodiversity. They act as a buyer of sustainably produced cocoa, to motivate local farmers to produce cocoa without damaging the environment. Cocoa is one of the few crops that can be produced within the rainforest without damaging it in the long-term; the plants are able to grow with minimal direct damage to the current ecosystem and therefore maintain the rainforest flora and fauna. The price that they give is 26.000 IDR per kilogram of dry beans, and they focus on the international market.

At first, it seems that the two parties are taking a similar approach. However, ECOM and WWF do not work together as they divided the responsibility of development of the villages. In addition, WWF is focusing on organic Papua Kerafat beans with a stable price, while ECOM does not differentiate between wet, dry, (non) fermented, Jember or Papua Kerafat beans and gives a daily (variable) price.

The PATO Cooperation

The PATO cooperation is set up as an organization to empower the local Papuans and is supported financially by a Dutch veteran who was stationed in the area in the 60s. The goals of the cooperation is to combine the power of multiple farmers and villages to sell better cocoa. The farmers have given up trust in buying parties. They are now looking for a party that can restore this trust. ECOM gives good prices for the time being, but WWF gives the better training from a developmental point of view. A combination of both would be perfect; a cooperation between ECOM and WWF. In addition, modernization of the agricultural system in the Sentani region is necessary. PATO's manager indicates that a better cooperation between the farmers could lead to an improved negotiation power. Finally, the area also lacks a well-organised local policy in the field of cocoa.



Difficulties

Lack of priority from a large coordinating party

The lack of priority for the cocoa sector from a large coordinating party leads to lack of skills and the primary cause of the presence of pests. These two effects only seem to be manageable by a central coordinating unit.

Mindset of the community

Second, many companies have visited the villages in Sentani over time to buy cocoa beans. Disappointing prices turned away many villagers from cocoa cultivation. To empower them, they need to work together and be supported by training. Chris and Derek envision that parties such as WWF and ECOM work together so that both a good price and preservation of the rainforest is maintained. A stable price over extended time periods might be a good motivator for the farmers to return to cocoa cultivation.

Pest

Pests are a major problem for all stakeholders. Pests in general reduce both the quality and quantity of cocoa beans harvested in West-Papua. According to virtually all stakeholders, pests are the main problem for the low volume. The effect of pests can also be seen when looking at the hard numbers around quantity and quality aspects of cocoa in West-Papua, both of which have decreased substantially over the 2000 – 2008 period. Due to lowered quality and quantity, price formation is relatively poor, which in turn has the effect of reducing efforts to cultivate good quality cocoa

Lack of communication between parties

The communication between the buying parties is subpar. The price of the beans is not clearly communicated, and even buying parties on the ground (such as ECOM) have no real idea of how cocoa prices are determined. Besides, ECOM and WWF are working on comparable projects, without knowing what the other party actually does, and the parties are not competing with each other due to the division of villages. This duopoly, diluted by other smaller buyers who in turn sell to bigger players, causes a fragmented market where prices are volatile and relatively low, which forms a major turnoff for (potential) cocoa farmers.

Opportunities

Coordinating potential of the PATO cooperation

A cooperation is already set up (PATO) with Dutch coordination and a strong vision to improve the livelihoods of the farmers in the Sentani region. The bigger the PATO cooperation becomes, the larger the negotiation and price-setting power of the local farmers gets. PATO is currently expanding its capabilities by, for example, building a storage box where farmers can store their cocoa for longer periods of time. This would make it possible to wait for a better price. WWF is focusing on the production of organic cocoa beans. This means that these beans could be of interest parties that export outside of the domestic market.

Organically grown Papua Kerifat beans

Currently, the Papua farmers in the Sentani region cultivate their cocoa within the rainforest, without destroying the local biodiversity. This is encouraged by their own culture and customs, and the WWF, one of the largest buyers that demands organically grown cocoa.



Region 2

Ransiki region

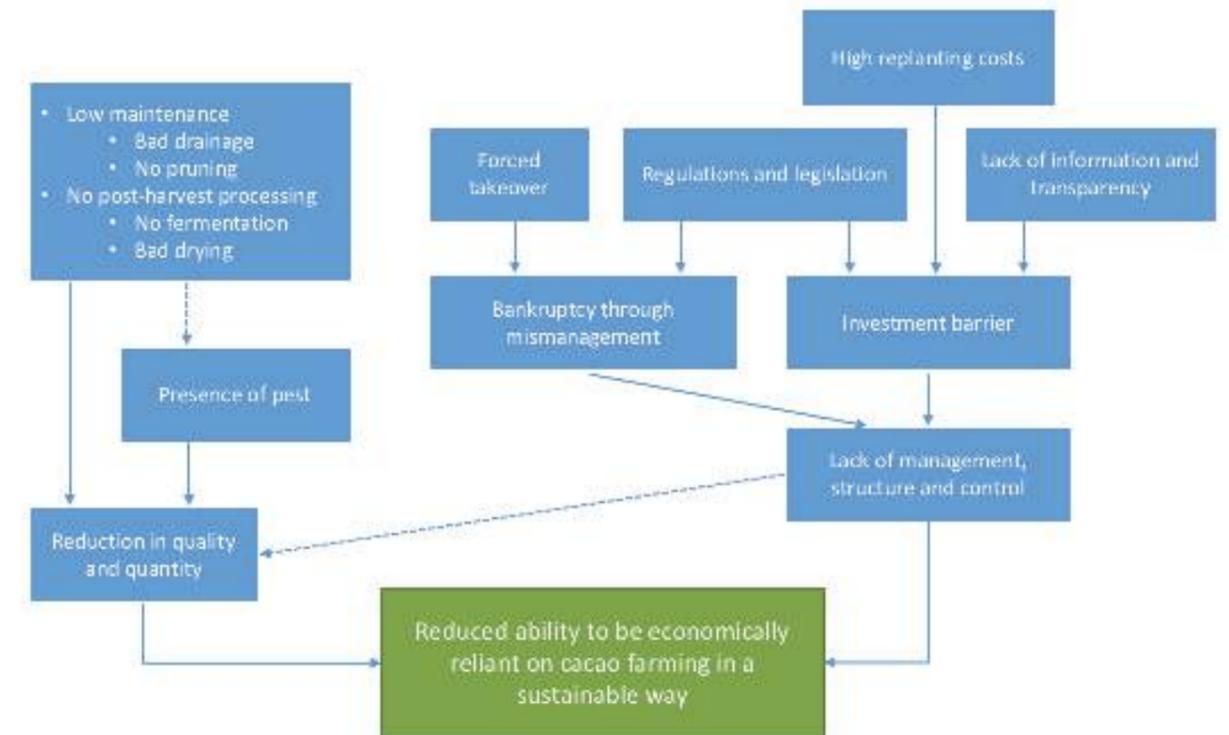
Case analysis

The cocoa plantation of PT Aspram located in Ransiki, the capital of the region Manokwari Selatan, has been abandoned since 2006 and is currently waiting for an investor to take over the plantation. PT Aspram, formally PT Cokran, was a professional cocoa producer. The company had, for example, division of labour and centralized post-harvest operations including drying ovens. The company was first owned by the Dutch and later had a British owner. Under the Soeharto regime, the British owner was forced to sell the plantation to a Malaysian owner around 2000. Due to mismanagement, mainly corruption, PT Aspram was forced into bankruptcy within a few years and the plantation has been abandoned since then. The shell company still exists and owns the rights to the land, which includes 1600 hectares of land with a concession of 2000 hectares that is usable for cocoa. However, the shell company also still owes a debt to its former employees. The total sum to take over the company is estimated at 18 billion rupiahs (approximately €1.25 million). Until now, there have been no clear future plans for the plantation. Over the last 10 years, no individual investors have shown interest in continuing the cultivation of cocoa professionally as has been the case until 2006. There are some speculations about a local governmental takeover or a plan to change the plantation to a palm oil plantation.

After the bankruptcy of PT Aspram, the former workers divided up the cocoa plantation, each former worker harvests the cocoa beans in an area of around 3 hectares. According to one of the farmers, he and his wife have a daily harvest of about 20 kilo dry beans per day at the end of the main crop (around June/July). The cocoa beans are collected by PT Sulawesi, a family company located in Manokwari. PT Sulawesi is the biggest buyer of the cocoa beans in Ransiki. Approximately 95% of the beans are bought by PT Sulawesi. PT Sulawesi buys mixed beans, that is, fermented and unfermented, and dries the beans themselves if the moisture level is too high.

The manager of PT Sulawesi does not want to buy directly from the farmers, but via middlemen. In his opinion it is more difficult to work and communicate with Papuans (the farmers) compared to transmigrants (the Middlemen). Papuans speak other dialects and languages, their work performance is subpar and their work ethic is at a very low level according to the manager. PT Sulawesi buys via four middlemen that are located in Ransiki, who transport the beans to the PT Sulawesi storage in Manokwari. Cocoa farmers in the area hand-deliver the cocoa to the middleman, there is no pick-up process. In some occasions, e.g. personal relations, PT Sulawesi buys the beans directly from the farmer. The middlemen earn between 500-1000 IDR net per kilo of dry beans, depending on the quality of the beans. They often also have a small store because they do not earn enough from cocoa only. One of the middlemen said that he buys around 5 metric tonnes of dry cocoa beans per week during the main crop season (April – July) and sells them onwards to Manokwari. PT Sulawesi has a bonus system for the buyers, in which they provide a transportation vehicle, a drying system or another gift related to their operations to the middleman that collected the most and the best quality cocoa beans within one year.

The price for the cocoa beans is updated and communicated daily by the headquarter of PT Sulawesi in Surabaya. On the 27th of July 2016, the price per kilo of dry cocoa beans, both fermented and unfermented, was 33,000 IDR. This is in line with the price mentioned by the farmers in Ransiki which is around 30,000 and 33,000 IDR per kilo. PT Sulawesi prefers to have their family members occupy key positions within the firm. They lack management staff (family members) to have a representative in Ransiki and are therefore not investing in PT Aspram. Moreover, they are already the biggest buyer of the cocoa beans from the Ransiki plantation and thus also lack incentives to invest. According to the manager of the cocoa storage in Manokwari, they shipped 20 containers (18 tonnes) during the last main crop. The beans are sold to PT Olam, located in Surabaya, and are only used for the domestic market due to the lack of certification.



Difficulties

The main difficulties and obstacles are illustrated in the figure on the previous page and are explained in this section. These difficulties and obstacles lead to the fact that the farmers in Papua have a reduced ability to be economically reliant on cocoa farming in a sustainable way over the most recent years. Due to the bankruptcy of PT Aspram and the lack of investors to take over the company, Ransiki is less economically prosperous than it has been and it could have been. Efficient management of the cocoa plantation would increase the prosperity of the area.

No central coordination of the cocoa plantation

Currently, there is no central coordination of the cocoa plantation. The mismanagement of PT Aspram removed the structure, coordination and control of the plantation. The way in which the company went bankrupt led to many problems in Ransiki, such as responsibility problems. One of the main problems that arises because of the lack of coordination is stealing between farmers. There is no incentive to maintain the plantation because if one farmer does maintain the field, the good harvest will be partially stolen by other farmers. This is possible because none of the farmers legally owns the plantation and therefore all the farmers have an equal right to harvest the cocoa pods. This reduces the motivation to take good care of the trees (i.e. a classic case of free riding problem). Moreover, the old post-harvest facilities and offices have been demolished. The plantation itself is still intact (and producing relatively good quality cocoa), but the trees are old (around 20 years of age) and several hectares have been flooded, meaning that replanting is necessary for at least part of the plantation. This is another reason why an investor has to come in within a short timespan: the longer it takes until a new investor takes over the plantation, the more difficult it becomes to harvest good cocoa from the existing trees. Right now, the costs for clearing roads, replanting and general renovations are roughly estimated at 15 billion rupiahs (approximately €1 million).

Pest and lack of expertise

The other main problem in the Ransiki areas according to the farmers and the buyers is the existence of pests. This is a big problem because the farmers lack knowledge and expertise to deal with the pests. Moreover, the local government does not prioritize pest control. In general, for the local government cocoa production in Papua has a low priority. Nevertheless, the pests were already present during the days in which PT Aspram ran the plantation, meaning that the pests are not serious and can be relatively easily

combated. One of the former workers of the plantation said that he prunes and uses pesticides, which he purchases at the store of the middleman (the buyer of the cocoa beans). According to this farmer, he is not able to buy fertilizers in Ransiki. Whereas a middleman showed us that he sells it. Indicating that farmers are not aware of the resources they can buy in Ransiki to improve the quality and quantity of their beans. The manager of the PT Sulawesi storage in Manokwari asked for an expert from PT Olam to help with the pest, he got a positive response but is still waiting for the expert to come.

Bad postharvest processing

Generally, the farmers in Ransiki do not ferment their cocoa beans. They have no sufficient knowledge about the fermentation process and are not sufficiently familiar with it. Moreover, they lack resources to implement the fermentation process. However, the main reason that fermentation is virtually non-existent is due to the lack of incentives to ferment. The price for fermented beans and non-fermented beans are currently the same. This is because PT Sulawesi requires a minimum quantity of 1 container of fermented beans per month, which is currently not feasible. Therefore, there is only one price for all beans and thus no farmer has an incentive to ferment the beans. This problem is an example of classic game theory. If only one farmer decides to ferment his beans to try to get a higher price, there are too few beans to fill 1 container each month. Thus, the fermented beans will not yield a higher price from the middleman and the farmer will therefore decide not to ferment the beans. By this logic, no farmer will have an individual incentive to ferment, and no beans are fermented. Normally, fermented beans are worth IDR 1,000 – 2,000 more per kilo than non-fermented beans in the current market. A further problem is that there is no immediate separation of the beans from the core of the cocoa pods. This results in high waste in the beans and a lower price. Lastly, the quality of the drying process is low (e.g. drying on the street). Therefore PT Sulawesi checks the moisture level of the beans when they arrive at the storage in Manokwari with an Aquaboy, a device to test the moisture level of the beans. PT Sulawesi dries the beans themselves when the moisture level is too high; either outside in the sun on foil, or with an industrial dryer powered by gasoline. When the beans arrive in Surabaya (headquarter), the moisture level is checked again with an infrared system. To conclude, due to the bad maintenance and bad post-harvesting processing the quality and quantity of the beans is lower than it potentially could be. PT Sulawesi believes that it would be better if a central party such as the local government would regulate and control for quality.

Lack of transparency and information

It is difficult if not practically impossible to get objective inside information about a number of important questions, including:

- What are the future plans of the plantation's current owners?
- Why was there no company willing to invest in the last 10 years?
- Why is PT Aspram not liquidated?

Despite these difficulties, we still retrieved some important information, since the former ground manager of the now bankrupt Ransiki plantation gave us a detailed look into the business and the way in which it formerly ran by means of old documents that he still kept. The plantation currently occupies around 1600 hectares of land, but the concession still owned by the shell company is 4000 hectares in total (of which about 2000 is usable for cocoa, since the total area of 4000 hectares includes a protected forest). However, it is hard to get an unbiased indication of the true costs and legal implications of this investment opportunity.

Opportunities

Abandoned cocoa plantation in Ransiki

The Ransiki community is in favour of a company taking over the control of the cocoa plantation. Even though the farmers generally earn more money now by harvesting the last scraps of cocoa in the plantation (after a good harvest), they generally prefer to work for a company instead of farming on their own accord because they prefer the stability of a wage over the volatility of their income. About half of the people in Ransiki farm cocoa. Moreover, one of the middlemen in Ransiki said that he does not oppose the possible return of a company to take over the cocoa business in the area.

High quality beans

As stated by a Middleman and PT Sulawesi, the quality of the cocoa beans in Ransiki is good compared to the quality of the beans from the other nearby areas such as Manokwari. According to PT Sulawesi, a cocoa expert confirmed this to the company. They also believe that there is a positive future for cocoa in Ransiki whereas they are less positive about the other areas. Mainly because the government does not prioritize pest control. Furthermore, the beans from Ransiki are sold for the highest price in the Manokwari region, which also signals that the quality of the Ransiki beans is recognized in the Indonesian market.

Region 3

Manokwari and the north coast of the Bird's Head

Case analysis

Manokwari and the Northern Coast of the Bird's Head is a region spanning the coastal area of both the Manokwari and Tambrauw regencies. In the area around Manokwari, both indigenous Papuans as well as transmigrants from other parts of Indonesia cultivate cocoa to various degrees of success. During the late 1990's, the Indonesian government conducted a large cocoa seedling distribution project in cooperation with the Asian Development Bank. According to several interviewees, including a Kapalan Kampung and traditional leader of a visited village and a buyer in Sausapor, the production was quite high and income from cocoa substantial in the decade following the programme. However, starting in the mid-2000s, CPB and other pests became more prevalent, and production began to decline. Currently, farmers in the area are left to their own accord and receive no support from either local governments, national governments, or NGOs. This is strengthened by the fact that Indonesia's policy has shifted towards supporting the cultivation of food crops such as rice and soy instead of cocoa.

According to Chris, the owner of PT Sulawesi (Manokwari's largest cocoa buyer) the area with the best quality cocoa in the Manokwari area currently is Oransbari, a transmigration area to the south of Manokwari. Most of the farmers in this area are illiterate, but have historically received a relatively large amount of help from both the government and the military. Current productivity in the area is about 300 - 500kg per hectare of good quality (yet unfermented) beans without the use of fertilizers, with productivity declining seemingly due to increasing severity of black pod disease (which affects around 20% of all pods during the rainy season) as well as CPB. The farmers mainly use the insecticide Fastac from BASF as a general treatment against cocoa pests. This product seems to be most popular due to its availability in the area.

Prices in Oransbari fluctuate at around 32.000 IDR per kg (as of July 2016), which is amongst the highest in the Manokwari area. In fact, these prices are so high that many

farmers in the area still choose to cultivate cocoa despite the government's hefty subsidy programme for farmers to switch to rice cultivation. Interviewed farmers in the area explained that the army helps farmers that switch to rice farming by building paddies and helping with infrastructural projects. This support, combined with the continued productivity decline of cocoa farms could, however, change the trade-off that farmers face in the near future and force more farmers to turn their cocoa gardens into rice paddies or soy plantations.

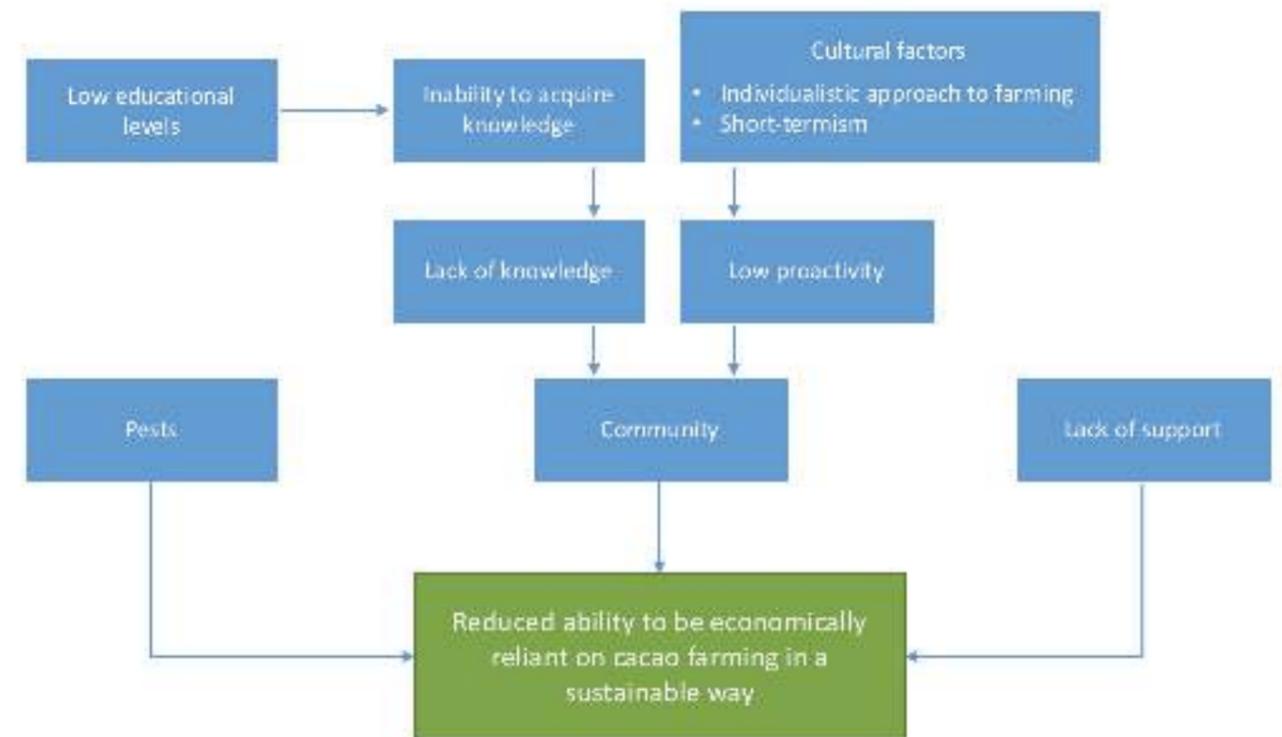
To the north of Manokwari, cocoa is cultivated almost exclusively by native Papuans, in contrast to the Javans who cultivate cocoa in Oransbari and other transmigration areas to the south of Manokwari. Most cocoa farmers started cultivating cocoa after the seedling programme in the 1990s, and made good money from cocoa in the years directly following the programme. Currently, however, most farmers from villages close to Manokwari do not actively maintain their cocoa gardens anymore due to their inability to cope with the increased severity of pests (according to our observations the most prevalent pests are CPB and black pod disease). In fact, in recent years some farmers have started transforming their cocoa gardens into fields for other crops (mainly banana and other fruit crops) simply because their cocoa gardens were no longer yielding any harvestable pods.

Further down the coast towards Sausapor, in the remote villages only reachable by boat, the situation is similar but seems to be less severe. According to several interviewed farmers in different villages, every family has at least one hectare of cocoa gardens that is still being harvested, which would bring the total area of cocoa to several thousand hectares. However, maintenance efforts seem to be low or non-existent, and the severity of pests in the area is also high. Next to this, there seems to be a very high degree of market fragmentation: farmers in villages closer to Manokwari get close to 30.000 IDR per kg of dry beans, while farmers closer to Sausapor get around 17.000 IDR per kg of dry beans as of July 2016.

In Sausapor, the situation is comparable to the other smaller villages along the Northern Coast, with prices at around 17.000 IDR per kg of dry beans, and low to non-existent maintenance efforts. The total area of cocoa gardens in the Sausapor area is around 200 hectares, but this amount is slowly declining due to cocoa gardens being converted to other crops. One buyer in the Sausapor area (who is one of only two buyers that still do business here) has a large Nutmeg seedling programme that he offers to the cocoa farmers in the area. His reason for starting the programme, is that the amount of beans currently being harvested in the Sausapor area is too low to make a living for him.

The common theme for all of the areas, is threefold: the community feels abandoned, there is a lack of knowledge and availability of pest control, and

farmers would actually prefer to cultivate cocoa over other crops. First of all, the feeling of abandonment comes from the fact that after the seedling programme, farmers were never educated in how to properly care for their cocoa trees. This lack of knowledge transfer also directly leads to the currently inability to control pests and the general lack of knowledge of cocoa cultivation amongst farmers. Despite these two problems, however, cocoa farmers actually do prefer cocoa cultivation over cultivation of other crops, mainly due to the high price and ability to harvest cocoa year round (despite the existence of a main- and midcrop). These insights lead to the opportunities discussed in the next section.



Difficulties

Pest problem

A recurring problem in the cocoa sector in Papua is pest control. Even in the small villages around the Northern coast, that live and operate isolated from each other, pest in the cocoa beans was a problem. In Sausapor, pest was a problem as well.

No governmental support

The lack of governmental support in the cocoa industry is an indirect obstacle in Manokwari and the north coast of the Bird's head. In Sausapor, many farmers changed to cultivating other crops such as nutmeg.

Opportunities

Good quality of cocoa beans

The first opportunity in this region is the fact that the cocoa beans that are still being harvested, are of a relatively good quality (despite the lack of fertilizers and good maintenance). According to Chris from PT Sulawesi, bean count and fat content are very good, which warrants the relatively high price of around 30.000 IDR. Furthermore, quality will only increase if farmers adopt proper pest controls and good agricultural practices to maintain their cocoa gardens.

Willingness of farmers to cultivate cocoa

Several farmers and Kapala Kampung that we interviewed expressed their desire to cultivate cocoa for two main reasons: cocoa's ability to provide a relatively high income, and the fact that cocoa can be harvested year round. The fact that several people independently expressed this desire means that the willingness to participate in programmes aimed at improving or re-introducing cocoa cultivation is high amongst the target population of farmers. This in turn increases the likelihood of success for projects in the region.

Presence of the university

The University of Papua (Universitas Papua) currently already has a post-harvest programme for cocoa aimed at increasing the post-harvest knowledge of local cocoa farmers as well as providing them with the proper tools to process cocoa. This programme could potentially be expanded to include cocoa cultivation, meaning that the university could function as a platform for improving cocoa cultivation in the region.





3 Concepts and conclusion

Based on the knowledge collected through the desk and field research, the research committee conceived five practical concepts that could provide value to the development of social investments in the local cocoa sector. Each concept is described with the following parameters: the targeted problem area, the affected target group, geographical implementation area, investment amount, and the time horizon of the implementation.

Target problem areas

- Cultural factors
- Poor maintenance

Target group

- Coordinators
- Farmers

Investment

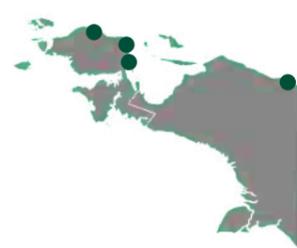
Low

Term

Short to intermediate

Region

All visited research areas



Work division in groups

A transition from the now common practice of individuals looking after their own respective plots of land towards an approach where groups of farmers look after a combined plot of land. This relatively simple approach will overcome the fundamental issue of motivation and low proactivity as well as increase productivity for all farmers involved due to the possibility to divide labour. Work division in groups can be achieved by appointing a central coordinator in a (group of) village(s) and gaining support from the local farmers by setting up a pilot project to showcase the productivity increase resulting from work division in groups. If successfully executed, this will result in a noticeable increase in cocoa productivity in the pilot project farms, which will in turn create support in the local community to further roll out the concept.

Why?

The idea behind the division of labour dates back to ancient Greece, and is at the heart of modern industry. However, most Papuan cocoa farmers still work individually on their respective plots of land. This is not only bad for the productivity due to the inability to divide labour, but working alone in a farm is also bad for the motivation of the farmer.

To circumvent both of these issues, farmers should instead work together in groups of four to five individuals who as a group tend to multiple plots of land. This allows for work to be divided amongst the men (and women) while at the same time motivating the entire group to work in the farm together by improving the communal feeling of working in the gardens.

Who?

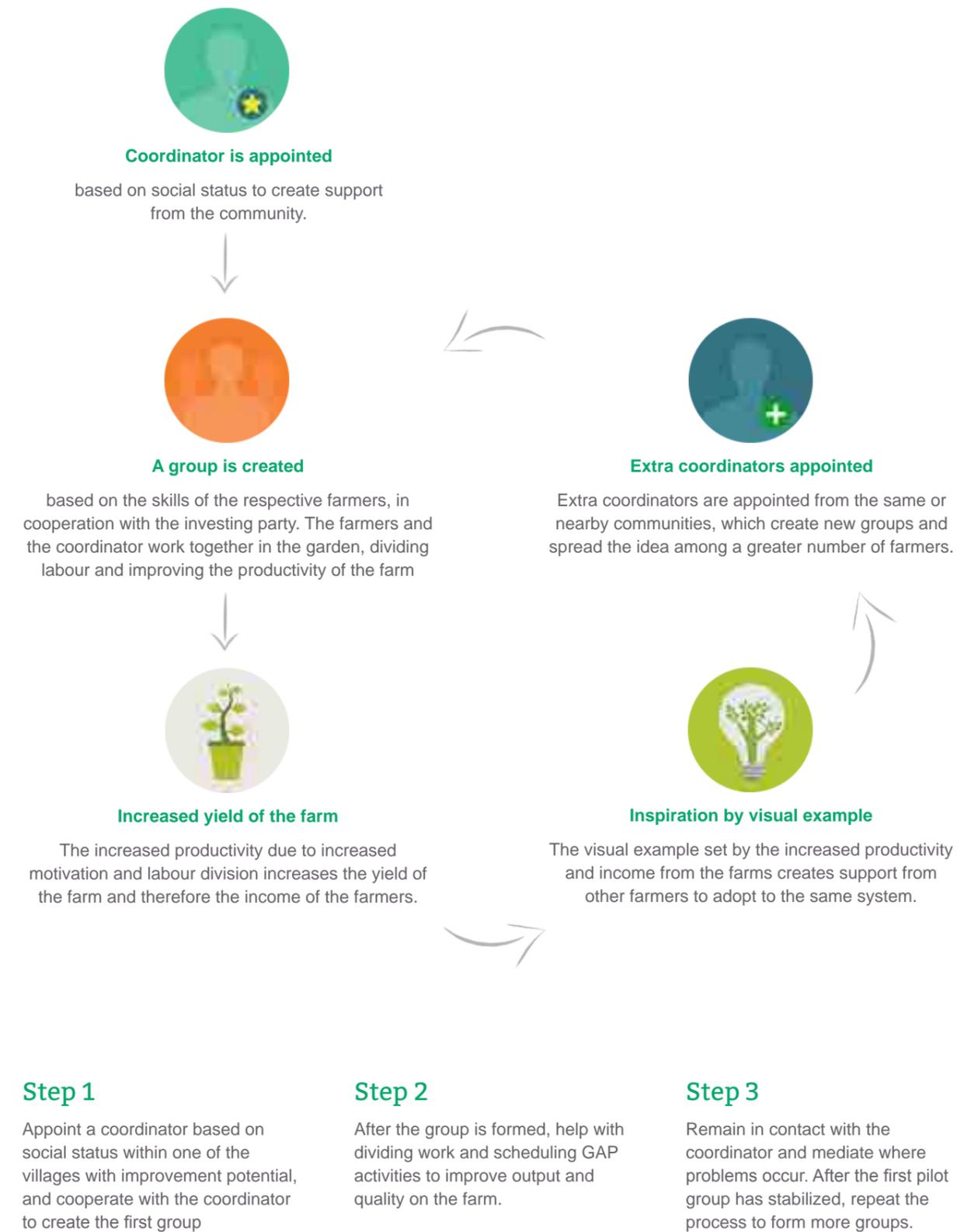
In essence, only two parties are involved: a village or group coordinator, and the cocoa farmers themselves.

Where?

This idea can be implemented in all areas of Papua we visited.

When?

This solution is achievable in the short to medium term. The idea is relatively simple to implement, but building the personal relations and trust needed to turn this idea into a success will take time and considerable effort.



Target problem areas

- Lack of education
- No knowledge retention
- Poor pest control

Target group

- Dutch universities and Unipa
- Farmers

Investment

Medium

Term



Intermediate to long

Region

Manokwari



Interns as cocoa experts

An exchange programme for Dutch or other international students who are willing to volunteer a part of their time by doing an internship in cooperation with the University of Papua (UniPa) as a cocoa-expert in West-Papua. This programme would set up (an) example garden(s) within the vicinity of large cocoa production centres to show what an optimally managed cocoa garden looks like. This would serve as a visual example for the local Papuan farmers and would show them what there is to gain through the continuous hard work of properly managing and cultivating cocoa in the field. A cooperation has to be set up between a Dutch/international university and the UniPa to facilitate the acknowledgement of educational credits for Dutch student (if necessary).

Why?

Even in regions where knowledge of good agricultural practices (GAPs) and post-harvest processes are passed on to local farmers, the gain in quality and quantity of the harvested cocoa is less than expected. Based on our extensive range of interviews and field visits, the cause of this seems to be that the effort and the noticeable effect of this effort are too far apart. In other words: proper farm-work only has a noticeable effect several months or even years later. Due to this, too many farmers do not properly apply practices or do not apply these practices consequently over extended periods of time. A visual example of the effect that exerting the necessary effort could have, would help immensely in this regard.

To do this, however, knowledge regarding cocoa cultivation is needed in the region; as well as a point of contact that the local farmers know

and trust. This is achieved by pairing knowledgeable foreign students with a trusted local institution such as the UniPa to ensure a proper mix of knowledge and approachability.

Who?

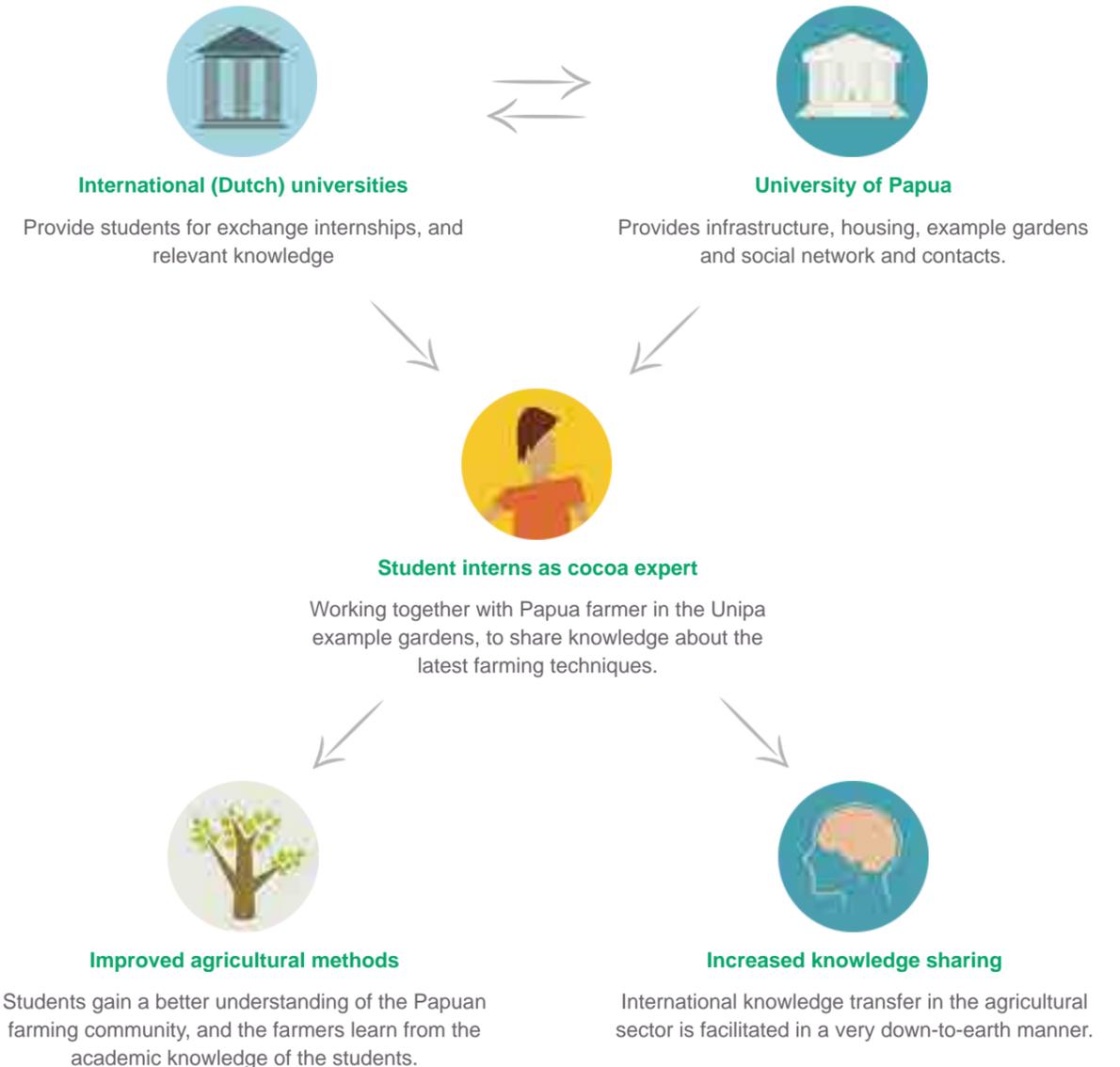
A foreign University (such as Wageningen University in the Netherlands), UniPa, and the local cocoa farmers.

Where?

This solution could work in a variety of settings, but would be most applicable to Manokwari due to the presence of the UniPa in the city.

When?

This recommendation would be achievable in the medium- to long term, depending on the ease of cooperation between institutions and the extent to which the programme is an official part of the curriculum of a Dutch university.



Step 1

Set up a collaboration with Dutch students (preferably with some botanical knowledge) and a local person who is the farmer's contact and local spokesperson for the project (most likely a contact at the Unipa).

Step 2

Use the students and local contact to set up an example garden in a region with many cocoa farmers. The student(s) will stay in Papua for a period of several months on a voluntary basis; the local contact will be the intermediary between them and the farmers.

Step 3

The students will maintain the garden, creating a visual example for the local farmers. After several months, new students take over where the previous volunteers left off, maintaining the farm and acting as teachers for cocoa farmers.

Target problem areas

- 📖 Lack of knowledge
- 💰 Income uncertainty

Target group

- 👨 Farmers

Investment

\$\$\$ \$ Medium/high

Term



Intermediate to long

Region

Sentani, Sausapor,
Manokwari and
the northern coast



The cocoa phone

A mobile communication system or application to improve the communication along the value chain, enforce quality control and support the farmers with information during the harvesting and post harvesting process of cultivating cocoa. For example, within a corporation, the leader is able to communicate with all the farmers at the same time. This is time and cost efficient and ensures that all farmers get the right information. A mobile application can give information that is specific to the stadium of the cultivation process in which the farmer is in. A movie or image shown in the mobile application can explain how a farmer has to do a specific task. At the same time, this application can also enforce quality control by asking the farmers to send pictures during the process or after a specific task that is given by the mobile application.

Why?

It is an innovative way to solve some of the problems observed. This solution will solve the lack of knowledge and expertise by transferring knowledge to the farmers, not only practical knowledge about the cultivation process but e.g. also knowledge about how to handle pests. At the same time there is direct communication which reduces the lack of transparency. And last, the payment system ensures that farmers have a more continuous income if they follow the instructions in the right way, which not only will decrease the income uncertainty of the farmers but will also increase the quality of the cocoa and thus the selling price.

Who?

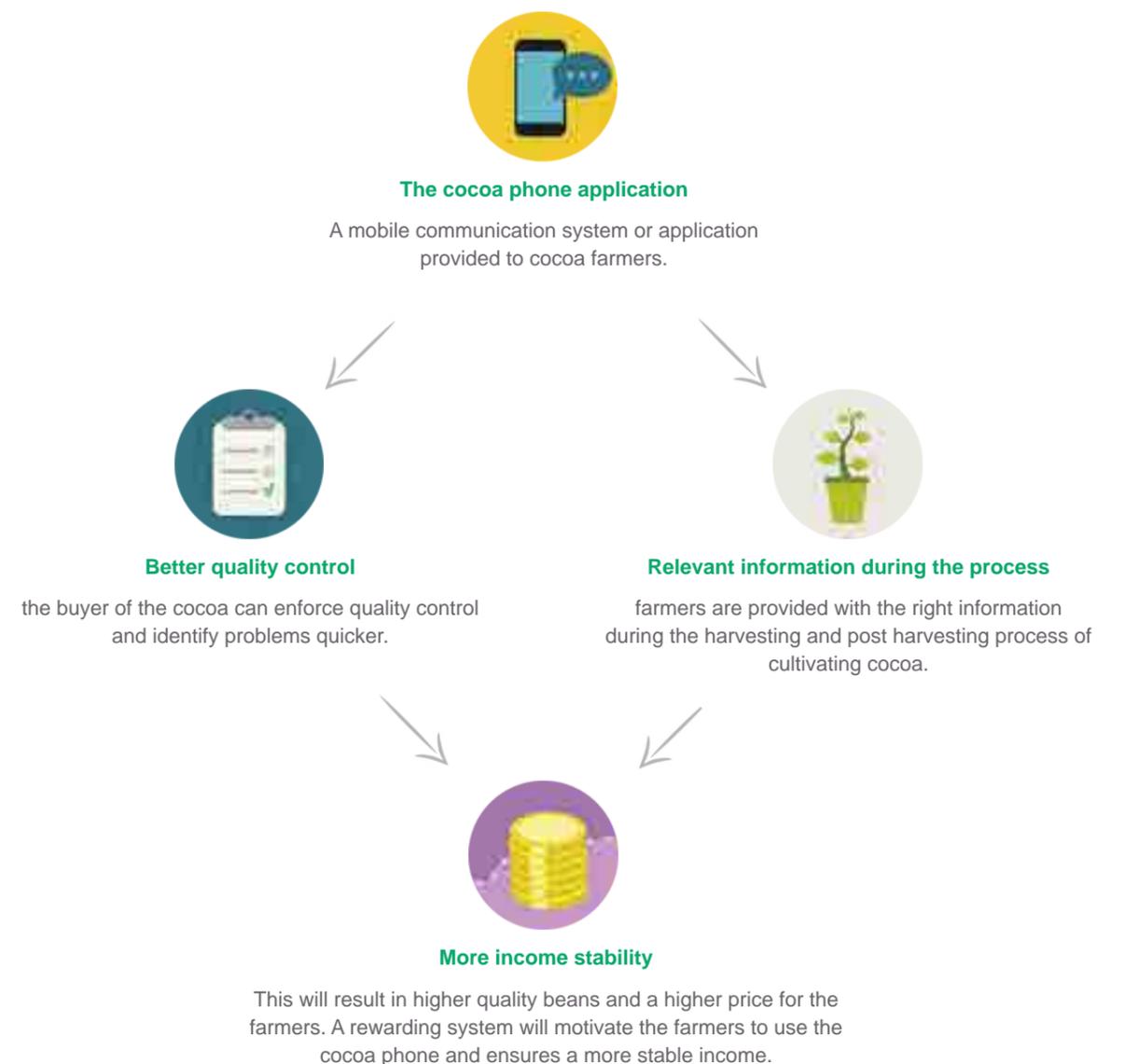
The cocoa phone can be used by cocoa farmers, a cooperation, cocoa experts, cocoa buying parties and NGOs.

Where?

According to our research this solution is applicable in Sentani, Sausapor, Manokwari and the Northern Coast.

When?

This solution is achievable in the long term because the establishment of such a system takes time. Moreover, an investment is needed to make this solution realisable.



Step 1

Set up a farmer's cooperation or collaborate with a buying party to form a central hub with access to cocoa-related knowledge and give farmers feedback based on photos and phone calls

Step 2

Set up a pilot by distributing a limited set of camera-capable phones among trusted farmers so that they can communicate with the central hubs to show their progress and ask for help when needed.

Step 3

Based on the progress of the pilot, build up the platform through introducing a mobile application and further distributing phones to increase the reach and effectiveness of the cocoa phone.

Target problem areas

- Lack of education
- Pest control
- Poor bargaining power
- Poor production process

Target group

- Farmers
- Community

Investment

Medium

Term



Long-term

Region

Sentani, Sausapor, and Manokwari



Mobile community centre

A mobile community centre with experts that drives around several villages in a cocoa area. Farmers have the possibility to ask questions to experts in the bus and to easily transport their beans. The bus is used as central place for the post-harvesting process of cocoa. The bus drives around to pick up cocoa beans. The bus transports the beans to a central place where drying and fermentation takes place. This leads to efficiency, better quality beans, collaboration between farmers and a stronger negotiation position for farmers. The mobile community centre could be used for several alternative purposes.

Why?

On the one hand this community centre promotes communication, collaboration and knowledge sharing among local farmers. Which leads to bargaining power, better educated farmers and higher quality of cocoa beans. On the other hand this bus has a high social function as well, it functions as transport for local farmers and a meeting point for local farmers and buyers.

Who?

The mobile community centre is focused on local cocoa farmers, however farmers of other agricultural crops could be included as well.

Where?

This solution could be implemented on the intermediate term. An investment is needed to carry out this solution. However, note that this solution could only be carried out in areas that have adequate infrastructure systems.

When?

According to our research this solution is suitable for Sentani, Manokwari region and Sausapor. Whereas, the best possibilities would be in Sausapor due to the amount of farmers and the relative good infrastructure.



More collaboration between the farmers

The community centre facilitates more collaboration between farmers to become more efficient.



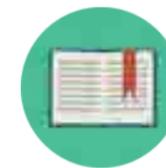
More negotiation power

By connecting the villages with each other, farming becomes more transparent, giving the farmers a better negotiation position.



Community center

A mobile community centre with experts that drives around several villages in a cocoa area. Farmers have the possibility to ask questions to experts in the bus and to easily transport their beans.



Increased knowledge sharing

The community centre facilitates more social interaction, and knowledge sharing between the separate villages.



Better quality of the beans

The facilities in the mobile community center provide the correct tools for post-processing of the beans

Step 1

Form a farmer's cooperation (in some areas cooperations are already present), set up a central place for the cooperation to ferment, dry, and store the beans.

Step 2

Acquire a vehicle that can transport both people and cocoa beans (such as a pick-up or bus). The vehicle will be used to transport the beans to the central community centre as well as to move farmers around the area, forming a means of transportation for members of the cooperation.

Step 3

Negotiate with a buying party to purchase the centrally processed beans at a premium; expand the project by using the vehicle to bring trainers to the farmers in remote villages and help them increase yields and bean quality.

Target problem areas

- 🎓 Lack of education
- 🏠 Lack of coordination

Target group

- 👦 School children

Investment

\$\$\$ \$ Medium/high

Term



Long-term

Region

Manokwari and the northern coast



Educational programme

The idea of an educational programme in the field of cocoa is that school children are able to follow an extra-curricular programme, in which they dedicate only a few hours per week to get an intensive but playful and hands-on agricultural experience. They learn the basics of agriculture, but also get a sense of responsibility and cause-effect relationships in the long-term. This will be taught in a community garden, where it is the responsibility of the children to grow and foster a small cocoa plantation.

Why?

Such an educational programme will provide better knowledge, and experience for the children, which they are able to share with their family members. Young Papuan students are also better able to pick up on good agricultural practices (GAPs) due to the lack of existing biases. But above all, it fosters an increases enthusiasm about agricultural processes, and teaches the students about long-term responsibilities.

Who?

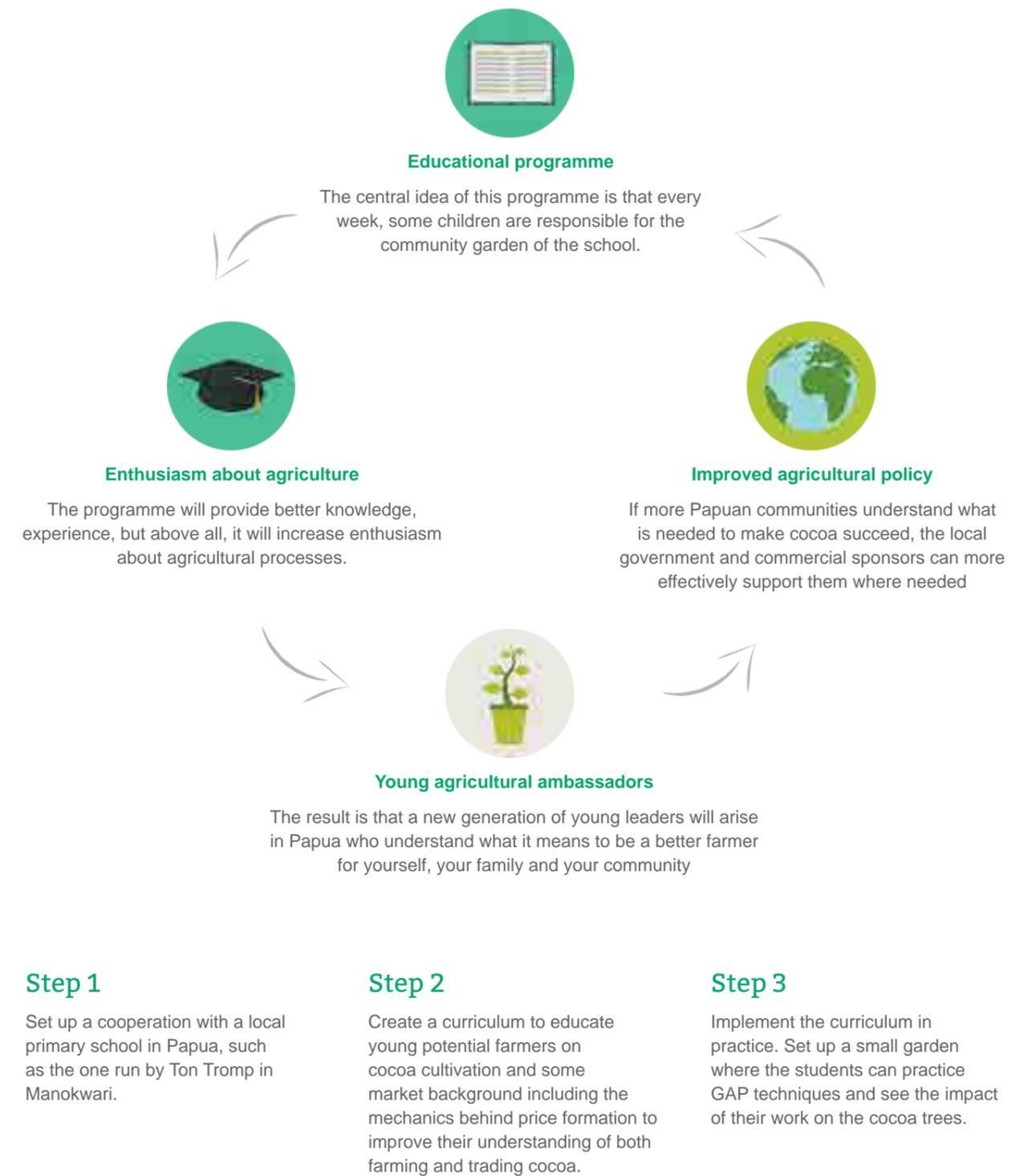
The main target group is school children that are affiliated with partner schools and kindergartens.

Where?

This project could be set up in the coastal areas of Papua, where there is cocoa. A good starting point would be schools in Manokwari that are already affiliated with the SDSP.

When?

This is a long-term project. A pilot project could be set up in a few schools for a few years, to see how children experience such an extra-curricular course, and if they gain any new knowledge and enthusiasm.



Conclusion

Concluding remarks on the field studies

The mission of our travel to West-Papua was to conduct a research and trade mission in one of the most unique places on earth, both in biodiversity and culture. West Papua is with its 40 million hectares of rainforest one of the last green lungs of our planet. The development of West Papua is running behind Indonesia in almost all respects. And within West Papua there is a big difference in development between indigenous Papuans and Indonesian immigrants. Indonesian immigrants are generally better educated than native Papuans and have more expertise. Indigenous Papuans therefore face the risk to be excluded from the development of their area. This problem can be reduced by integrating indigenous Papuans in the modern economy. Therefore, we aimed to identify specific investment opportunities and researched the state of the cocoa sector, in order for future sustainable investments to develop the local community in West Papua in a sustainable way, while preserving the unique biodiversity and local culture.

The cocoa sector in West-Papua has a promising outlook. First, the availability of the Papua Kerifat bean gives an opportunity to deliver and export high-quality cocoa. Second, initiatives in previous years have yielded successful cocoa projects. And

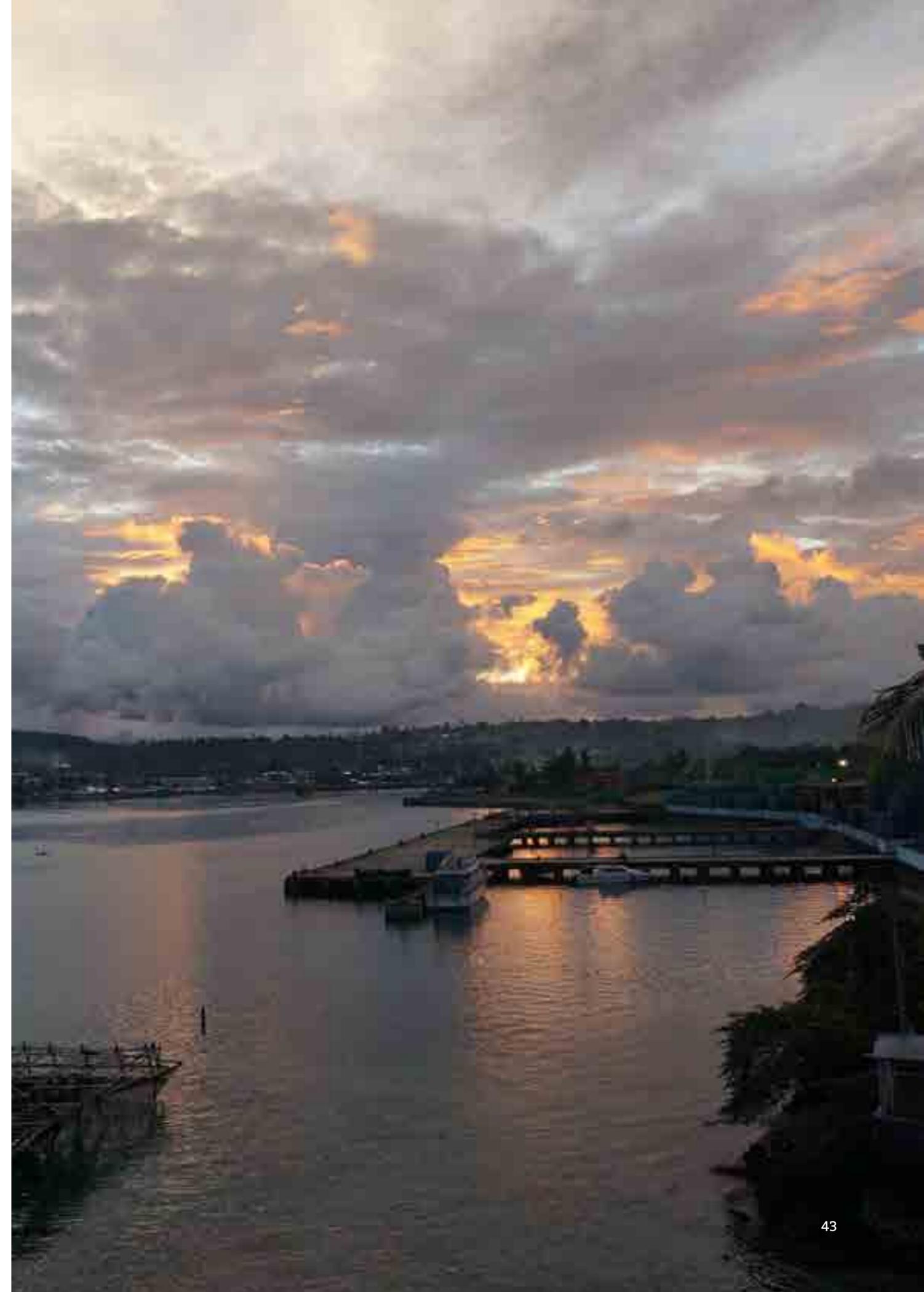
Cocoa could be a facilitator to solve many Papuan societal problems, like the lack of a stable income and self-reliance. The crop could provide social, ecological but also economic sustainability in the region.

third, both the local Papuans, as well as the international community, are open to the further development of the cocoa sector.

However, the cocoa sector in West-Papua faces a lot of common challenges. In all three regions that have been investigated for this research, a few challenges keep coming up. First, there is no governmental support for the provision of the right materials or proper agricultural education and knowledge sharing. Second, pests are a major cause of failed crops, and cause farmers to switch to other—often easier—crops. Third, markets are often not transparent, and dominated by a few buyers, giving the farmers a dire position in the market. And fourth, the cultural factors often inhibit entrepreneurship for Papuans in both rural and urban areas.

In contrast to the difficulties, West-Papua provides a lot of opportunities for international investments. The PATO cooperation, for one, is set out to build a strong partnership between cocoa farmers in the vast region of Sentani. This is done with support from the Netherlands, in order to increase both the quantity as well as the quality of the beans. Ransiki, on the other hand, provides an investment opportunity of a different kind. The abandoned cocoa plantation offers the infrastructure and acres of land to build up an intensive large scale cocoa farm. And finally, Manokwari and the Northern shore of the Vogelkop consists of mainly pristine territory with minimal cocoa production, that would be perfectly suitable to scale up.

In conclusion, the cocoa sector in West-Papua is still in its early development stages, with a lot of potential. Cocoa could be a facilitator to solve many Papuan societal problems, like the lack of a stable income and self-reliance. The crop could provide social, ecological but also economic sustainability in the region, but alas, many difficulties and complexities inhibit the large potential of the cocoa sector in West-Papua.





First results and implementations

After sharing the first outcomes of our research with two key stakeholders, being an investment company in cocoa and Iko Zijlstra, the PATO cooperation's Dutch founder, the impact of our project immediately started to take shape. These parties focus on Ransiki and the Sentani region, respectively

Ransiki

Through one of the SDSP's contacts in Indonesia, we were put into contact with an investor who is potentially interested in cocoa-related investments in the East of Indonesia. Sharing our input with respect to what we saw on the ground in Ransiki and the West-Papua region overall was one of the signals that confirmed the potential of the Ransiki region towards the investor. Although the specifics of this engagement remain confidential, talks are currently underway to reinvigorate the Ransiki region and to potentially restart the abandoned cocoa plantation in a capacity similar to the period before its bankruptcy.

Sentani

After our return to the Netherlands, we presented our recommendations to Iko Zijlstra, the Dutch founder and patron of the PATO cooperation. The insights we gave to the cooperation have re-energized the positive outlook of the PATO cooperation, and some of our ideas will see implementation in the short to medium term already. The main ideas of interest to the cooperation at this stage are working in groups and taking the coordination role that is currently sorely lacking in the Sentani region. These ideas will undoubtedly have a positive effect for the cooperation as an organisation, but more importantly also the local Papuan cocoa farmers of which its membership is comprised.

In order to set the first step, we have researched these difficulties, and identified the opportunities. In addition we have put together five concepts of ideas that could reinvigorate the cocoa sector of West-Papua.



4 Appendix

Contact information of all cooperating parties

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“Seeing how the local Papuans made a subsistence living by providing the primary resources that make our lives possible changed my outlook on my personal life in the Netherlands.”



“During this project, I not only brought knowledge and skills with me, but also learned the valuable lesson that sharing is central to human nature.”



