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Technical Report 84

SOLS22 (Stage 2): Cocoa Marketing Study

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Table of Contents

Abbreviations

Abbreviation	Description
ADB	Asian Development Bank
ANZ	Australia and New Zealand Banking Group
BIF	Business Investment Facility
BSP	Bank of the South Pacific
CEMA	Commodities Export Marketing Authority
CIF	Cost, Insurance and Freight (the price quoted includes the cost of the merchandise, packing, insurance and freight to a specified destination)
FOB	Free On Board (the price quoted for merchandise placed on board a carrier at the point of shipment)
ICE	International Commodities Exchange
IFC	International Finance Corporation (World Bank Group)
MCB	Malaysian Cocoa Board
PHAMA	Pacific Horticultural and Agricultural Market Access
POB	Pan Oceanic Bank
R&R	Reject and replace
RDP	Rural Development Program
SBD	Solomon Islands Dollar
SEF	Supplementary Equity Facility
USD	United States dollar
UV	Ultraviolet

Executive Summary

The ultimate objective of this second consultancy mission is to improve the income of the cocoa growers in Solomon Islands. The first mission was conducted in June/July 2014 (see Pacific Horticultural and Agricultural Market Access Program (PHAMA) Technical Report 73, which provided extensive explanations on the operations of the international cocoa trade).

As described in the body of this current report, there are three interlocked "clusters" of issues facing the cocoa export sector in Solomon Islands that lead to the current low returns from growing cocoa in Solomon Islands and the lack of enthusiasm for cultivating the crop in the islands, despite a rising international market price. These interlocked "clusters" of issues are proposed as follows:

- **Low farm gate prices:** Cocoa exporters in Solomon Islands must gain improved knowledge and understanding of the international cocoa trade and use this to negotiate improved cocoa export prices with international cocoa buyers. Forceful negotiation cannot achieve much when the product being offered is something of a distressed parcel – as is the present case with much of the cocoa from Solomon Islands that is being sold at discounted prices into the cocoa processing market; however, forceful negotiation can bring a real price improvement **if** the product is sought after and **if** the product on offer is a product of quality for which there are a number of potentially interested buyers. The quality of the export cocoa needs to be improved and in particular the smoke taint must be eliminated.
- **Liquidity of cocoa exporters:** This needs to be dramatically increased to provide the exporters with adequate cash resources to buy cocoa when it is offered to them and allow them to be more discriminating in terms of cocoa quality assessments and in their buying (and selling) decisions. Shortage of working capital is a major constraint to the operations of all independent cocoa exporters. Hopefully the recently launched second phase of the Rural Development Program (RDP II) can assist in this regard. All cocoa exporters should give serious consideration to making an application for funding from RDP II.
- **Current technology of cocoa drying**: There is an urgent and pressing need for improvements in the existing cocoa drying technology and in the stock of cocoa dryers currently in Solomon Islands. This is necessary to reduce the chances of smoke taint to the cocoa beans. Care to the product and the drying process should lead to improvements in the quality of cocoa from Solomon Islands (and thus the export prices achieved). There may be an opportunity to develop a design of an assisted sun dryer for those locations in Solomon Islands where such drying is feasible. Both these activities were highlighted in the prior report as needing to be given the highest possible priority. Consultancy work on both these topics (supported by PHAMA) is due to start in the very near future; it remains the key to improving the revenue to cocoa exporters and thus cocoa producers.

It is clear that, at present, nearly all cocoa farmers are poorly motivated to care for their cocoa trees to even a reasonable standard or to invest in improvements to their cocoa farms. Replanting old fields that now have declining yields is, presently, a true rarity in Solomon Islands. This needs to change, but that will only happen when the farmers see that cocoa planting is a worthwhile economic activity and a worthwhile long-term investment. Many cocoa farmers simply harvest the pods that happen to become available, probably do insufficient harvesting rounds in a given cocoa year and thus do not maximise their potential production (or returns). It is perhaps a rational response to the low prices received by most cocoa growers, but this also needs to change. Better export market prices for better quality beans is one route to achieve better rewards to cocoa growers.

Substantial donor and Solomon Islands Government funds have been made available to the cocoa sector in Solomon Islands over recent years. Significant improvements in the sector are actually still being awaited but are needed in the near future to avoid the risk of donor fatigue. Good measures of progress would be:

- A reduction in the percentage of cocoa exports that are smoke tainted
- A reduced price discount/differential against International Commodities Exchange (ICE) London Cocoa Market prices
- An improved cocoa price paid to farmers.

During this input, a training workshop (on international cocoa trading mechanisms and how they relate to Solomon Islands cocoa) was delivered for industry, public and banking sector participants. The outline of this workshop is provided in Appendix A. This was followed by a series of one-on-one discussions and consultations with exporters

and other stakeholders to provide more detailed understanding on how to improve understanding of cocoa market negotiations, quality improvements required and potential supporting finance options.

A number of detailed recommendations are discussed in the body of this report and are summarised below:

- Over the next six months, PHAMA should aim for, and encourage, the Commodities Export Marketing Authority (CEMA) to increase its relevance to cocoa exporters by:
    - Enhancing the CEMA website
    - Ensuring the creation of an enterprise-wide email system and file server for CEMA
    - Dissemination by CEMA of daily closing cocoa prices of nearby position on the London ICE Cocoa Market to all licensed cocoa exporters on a daily basis
    - Dissemination by CEMA of relevant information on the international cocoa trade
    - Support for CEMA to seek (and internally record) more details on price bases of cocoa export contracts from cocoa exporters
    - Starting assessment of levels of smoke in cocoa export parcels as part of the CEMA quality control procedures.
- Support should be continued to help cocoa exporters understand the international cocoa trade, in particular in price negotiations with their buyers, and to appreciate that there is market demand for well fermented, well dried cocoa beans in the South-East Asian and Australasian regions.
- Cocoa processors drying cocoa should be encouraged to first think whether the prevailing weather conditions would permit their cocoa to dry in the sun ***before*** resorting to the use of an artificial wood-fired dryer.
- PHAMA should complete the planned study of the suggested design (Appendix C) of an assisted sun dryer for use in drying cocoa in certain areas of the country.
- PHAMA should also complete a study for improving the current range of wood-fired cocoa dryers and trial proposed modifications; a substantial reduction of levels of smoke taint of export cocoa beans seems highly unlikely with the current stock of dryers.
- PHAMA should continue to hold any further work on preparation of cocoa quality materials until the above two studies have been successfully completed, so as to ensure that the correct messages on appropriate drying technologies can be included.
- Stakeholders should be actively encouraged to apply to RDP's Supplementary Equity Facility and Agricultural Partnership elements of RDP II for funding. Applications may require some business support; in such cases, the assistance of the Business Investment Facility service is to be recommended.
- PHAMA should continue to promote and facilitate discussion on the creation of trade finance facilities, including potential inclusion of Solomon Islands cocoa in a multi-crop regional Risk Share Facility through engagement with International Finance Corporation (IFC) (and commercial banks).

It is to be hoped that all these recommendations can be implemented with urgency. Some can be completed with little or no investment. Appendix B presents some timelines for completion of these activities.

1.0 Introduction

The visit that is the subject of this report was undertaken from 22 May to 5 June 2015 and was the second visit by the cocoa marketing specialist to Solomon Islands. On completion of the previous visit some 10 months ago, the specialist prepared a detailed report (Pacific Horticultural and Agricultural Market Access Program (PHAMA) Technical Report 73) that outlined the operations of the international cocoa trade and the cocoa marketing situation in Solomon Islands. That report made a substantial number of recommendations and highlighted the many difficulties faced by the cocoa exporters and cocoa intermediaries in the country. This present report builds on the contents and recommendations in the previous report on cocoa marketing in Solomon Islands.

Cocoa from Solomon Islands has a very poor international quality reputation, and a very high percentage of export parcels are characterised as having a 'smoke taint' (thus rendering the beans largely unusable by mainstream chocolate makers or indeed artisan chocolate companies). In light of this, almost all the cocoa exported from Solomon Islands is destined for the cocoa processors in Indonesia, Malaysia or Singapore, where it is frequently subjected to further processes (called de-odourisation) that remove all flavour from the cocoa butters to produce a bland product known as de-odourised cocoa butter. This is often sold at a discount compared to pure prime pressed cocoa butters that have good cocoa flavours. The prices for Solomon Island cocoas in the international cocoa trade are accordingly low, with some parcels being classified as 'distressed' (really meaning unwanted) by buyers and priced accordingly. This is most unfortunate, as the cocoa from Solomon Islands is well-fermented and of decent fat content, moisture level and bean size. Such cocoas are in substantial demand in the region, as long as a smoke taint is absent.

The current visit started with a Cocoa Market Training workshop on 26 May 2015 that was attended by some 23 people from the cocoa industry, donor organisations and commercial banks operating in Solomon Islands. The basic framework of the workshop is included in Appendix A. This Workshop was followed by meetings with the Commodities Export Marketing Authority (CEMA) and confidential one-to-one meetings with cocoa exporters. These latter conversations were very open, frank and revealing. Due to the confidential nature of the discussions, it would clearly be inappropriate to attribute any points that arose to any particular exporter. However, a number of important points were raised by several exporters and so are highlighted in this current Report.

It appeared that little has changed in the pricing and market structures of the cocoa sector in Solomon Islands since the completion of PHAMA's initial input, despite an improvement in the international cocoa price in the interim period. This is most disappointing.

2.0 Improving the Service Delivery of the Commodities Export Marketing Authority (CEMA)

2.1 Enhancing the Cocoa Activities of CEMA

During the previous Mission on this topic and the current Mission, a number of cocoa exporters expressed some dissatisfaction with the current type and level of services offered by CEMA in return for the tonnage levy payment made by the exporter on every tonne of cocoa exported. This is most unfortunate, as there is a clear and important need for CEMA to provide reliable market information, quality control and laboratory analytical services on cocoa (as has been recently been supported by PHAMA in establishment of a cocoa quality testing laboratory in CEMA). However, these comments also indicate the need for CEMA to enhance the services provided and adopt a more proactive and professional approach to assisting cocoa exporters, while remaining within their mandate. The recommendations that follow have been agreed with CEMA management and implementation of many of the proposals has already been completed or is underway.

It was agreed with CEMA management that in future CEMA should provide relevant information to the cocoa export community on the cocoa sector in a consistent and timely manner and act as a 'shop window' to promote cocoa exports from Solomon Islands. The information to be provided could, or perhaps should, include (but not be limited to): London closing market prices, wet and dry cocoa bean prices at key locations within Solomon Islands, background information on the cocoa industry in Solomon Islands, shipping schedules, contact details of all licensed cocoa exporters, downloadable CEMA forms, and CEMA staff and management structure with responsibilities, etc. It is proposed that this information be provided through a new purpose-designed CEMA website. Estimates for design, hosting and maintenance of such a website should be sought from experienced web designers in Solomon Islands or elsewhere. In time, this information could be expanded to also include information on the other export products for which CEMA has a mandate.

A model of the information that could be made available on a revamped CEMA website and the manner in which it could be presented is provided by the website of the Malaysian Cocoa Board (MCB) (see www.koko.gov.my). A number of the functions of MCB are aligned with those of CEMA – namely: to improve quality; to regulate cocoa marketing activities; and to collect and disseminate information. However, there are some additional functions of MCB that are broader than those for which CEMA is allocated responsibility in the field of cocoa.

2.2 CEMA Email Facility and Network for Employee Business Usage

CEMA employees often use their personal email addresses to receive business emails and there is no central CEMA network facility across the organisation giving employees access to the internet, nor is there a file server for storage of all historic CEMA data on an enterprise-wide basis. This gives an unprofessional impression to those both inside and outside Solomon Islands and risks catastrophic loss of valuable historic data. Efforts should focus in the first instance on restoring the official web address (cema@solomon.com.sb) or alternatively creating a new one. This is expected to improve the organisation of CEMA, as well as the image of Solomon Islands and its cocoa industry to those both outside and inside the country. It was noted that CEMA already has a file server that is used by their Accounts Department that could perhaps be expanded to become an enterprise-wide facility.

2.3 Daily Closing Prices on the London Cocoa Market

Every cocoa export contract from Solomon Islands overtly (or sometimes covertly – because the buyer does not disclose it) uses the price of the London International Commodities Exchange (ICE) Cocoa Market as a price basis for making an offer to buy cocoa from a cocoa exporter in Solomon Islands. Currently, a modest number of cocoa export contracts do specify the London market position and the discount (or, in a very few cases, the premium) in relation to the London market, against which the price has been calculated. The market position used in these trades is almost always that of the next position (called the *first* or *nearby* position), which at the time of the visit was that of July 2015 – until that position expired on 15 July 2015; the price basis will then move to September 2015, then December 2015, then March 2016, then May 2016, then the July 2016 position and so on. Cocoa exporters in Solomon Islands (and South-East Asia and the Pacific in general) have a small advantage in the simplification of the process of trading cocoa in comparison to many other cocoa producing areas (especially those in West Africa and South America), in that the London market is actually closed when nearly every export sale of cocoa from Solomon Islands is being negotiated and agreed. Cocoa purchases will then be completed on

the basis of the closing price on the previous day. This fact eliminates the need for a cocoa exporter to be continually watching the moving market in London in real time and gives the opportunity to negotiate against a single static price – namely the market closing price for the relevant nearby position on the previous day. It is relatively easy for any cocoa exporter to seek out the market closing price for themselves for that nearby position, but it was agreed that the Chief Produce Inspection Officer (a position currently occupied by Patterson Siliota) would seek out and circulate the closing price of the nearby position on the previous trading day on the London market by email to every licensed cocoa exporting company in Solomon Islands – using the email address included in their licence application. A number of CEMA staff are now aware of the most appropriate market website(s) that can provide the necessary information for circulation in this way. There is a small but ongoing cost to sending this information to the registered cocoa exporters by SMS message and so it was decided to send the data by email in the interest of economy. This will be kept under review over the coming months; in due time SMS messaging may become the norm, as opposed to circulation by email.

2.4 Collecting and Disseminating Information on the International Cocoa Industry

A large number of agencies and organisations provide a substantial volume of valuable (and not so valuable) cocoa market information – often free of charge. Trawling through this huge volume of text can be a very time-consuming and somewhat depressing task on a daily basis, especially as there will very rarely be any specific information on the cocoa industry in Solomon Islands or even probably other Pacific cocoa producers. It is therefore proposed that the Chief Produce Inspector (currently a position held by Paterson Siliota) and George Tuke (Statistics Officer in the Commodities Development and Extension Division of CEMA) be nominated to receive the email 'Daily Cocoa News' prepared and circulated by the London-based Federation of Cocoa Commerce, which is the widely respected contract preparation and regulatory body for the cocoa trade that also provides this news service to its members and to other interested parties. These news clips can be passed on to cocoa exporters who volunteer their interest in receiving this by email, or a selection could be made and only items of particular interest to the cocoa industry in Solomon Islands could be circulated when received.

2.5 CEMA to Seek More Detail on Price Basis of Cocoa Export Contracts as they are Registered with CEMA

It is the established practice in the international cocoa trade for the price of a cocoa sale to be arrived at after consideration by buyer and seller of the ruling "market price for cocoa" for a particular traded position on the London market (usually used in South-East Asia) or the New York cocoa market (much less frequently used in South-East Asia), to which a premium is added or a discount deducted. This figure is called a differential and varies through time and for a particular growth and a particular shipment period. For example, Ghana cocoa (often called the gold standard of cocoas) has in recent history been traded on a differential **premium** to the London market in the range of £150 to £250 per tonne (basis CIF, North European ports) – that is to say that this sum is added to the price of the relevant London market position. Some less sought after cocoas trade at a discount (sometimes quite substantial) to the relevant London market price, while some specialist plantation grade 'Fine or Flavour' cocoa beans can trade at a significantly higher differential premium to that usually achieved for Ghana beans. For any particular type of cocoa, the differential varies with the perceived supply and demand for that particular type of cocoa, but this variation is normally much more modest and less dramatic than the variation in levels of the "market price of cocoa' as measured by the trades on the London Market. This situation is described in much more detail in the report of the previous Mission to Solomon Islands on cocoa marketing (PHAMA TR73). In a modest number of cases, cocoa export contracts agreed by cocoa exporters in Solomon Islands do refer to the contract price in that manner. For example, the price clause might be written as being "London July 2015 less £103 FOB Honiara". It is important for the exporter to watch the price of the London market as well as the level of the differential offered, but it is equally important for CEMA to record the information on this price calculation in their contract registry. It is therefore suggested that CEMA add a further three columns to the cocoa contract registry that is maintained by CEMA to record more detail on the price basis of contracts. Over time, this will build up data that can identify trends and enable improved conversations with cocoa exporters on the price basis of their export contracts. It is suggested that CEMA add the following new column fields/headings to their database:

1) London trading month basis (as specified in contract)
2) Closing price for that trading month on previous day
3) Discount or premium against that trading month (as specified in the contract).

After a few months' experience of simply recording this information when offered by the exporters, CEMA should then begin to press all cocoa exporters to provide such details and ultimately make the provision of it obligatory on all cocoa export contracts. In the early days, it may be necessary for cocoa exporters to formally request this information from their overseas buyers. In this way, it is hoped that within some 6 months or so (ideally by 31 January 2016), such information will be routinely provided by cocoa exporters to CEMA for every contract. It might be possible to include a rule in the next round of cocoa export licences (in early 2016) to specify this requirement. Provision of this information will indicate that genuine conversations will have occurred between every cocoa exporter in Solomon Islands and their international buyers on the price basis of every export contract. In future, sanctions could be considered for any cocoa exporter who is unwilling or unable to provide such information to CEMA in a timely way.

Such conversations on the price basis and negotiations on the level of differential are entirely normal in the cocoa trade elsewhere in the cocoa world, but it seems that such conversations do not always occur in the cocoa export trade in Solomon Islands.

2.6 Assessment of Levels of Smoke Taint in Solomon Islands Cocoa Exports

For a number of years, external observers have regularly reported high levels of smoke taint in both laboratory samples and export shipments of cocoa from Solomon Islands. This has given general cocoa exports from Solomon Islands a poor (or very poor) international reputation; it is reported that buyers are surprised when a shipment of cocoa from Solomon Islands is not heavily tainted with smoke. The presence of a smoke taint substantially reduces the value of the cocoa shipment to the buyer and thus reduces the export price of the beans as well as the market's interest in even buying cocoa from Solomon Islands. More seriously, however, the presence of a smoke taint consigns such parcels of cocoa into the hands of cocoa processors who have the in-house ability to remove (by de-odourisation) obnoxious taints in cocoa butters. This process removes all flavour, including the desirable chocolate flavours. The resultant product would be sold as de-odourised cocoa butter – often at a discounted price compared to standard (so-called pure prime pressed) cocoa butters. This is particularly unfortunate because there is a significant demand (at a higher differential and on occasions even at a premium) for taint-free well-fermented cocoa beans in South-East Asia and Australasia – a market that potentially could be satisfied in part by fermented and well-dried cocoas from Solomon Islands.

CEMA should introduce a system of assessment of the level of smoke taint in the cocoa shipments when they are completing their normal quality control procedures prior to export. This was recommended at the time of the prior Mission but is yet to be implemented by CEMA. For completeness, the recommended action from that first Mission is reiterated here for emphasis of the need for action in establishing such an assessment for all export consignments.

Unfortunately, there is no industry-recognised methodology for assessment of levels of smoke taint in cocoa beans. Elaborate and technologically advanced analytical equipment is available that might even be able to identify the species of trees of the wood used in the fire that was used to dry the smoke-contaminated cocoa beans. This would hardly be helpful information, even if funds and the necessary skills were readily available to CEMA to purchase and operate such advanced equipment. A simple test (as described below) should be added to the quality control procedures in the new CEMA laboratory, with records being kept purely for informal statistical use by CEMA. At this stage, it is not suggested that the certificates issued to the exporter by CEMA following their control of quality of export shipments should have this information added to them. A separate record should be kept as a tally of the tonnage of cocoa that is free of smoke taint and the tonnage that is contaminated with a smoke taint. In due time, it may be possible to advise and support exporters if these tests reveal that they continually deliver cocoa with high levels of smoke taint in the beans used for quality control by CEMA.

The presence of a smoke taint in parcels of cocoa beans can be assessed by grinding a small sample of randomly selected cocoa beans (including the shell) from the bean samples that CEMA will use for the cut test. The shell is included as this will be the first part of the bean to pick up the smoke taint. These beans should be ground in a domestic blender using short bursts of a few seconds, up to a total of 15–20 seconds. The resulting mixture should then be sniffed and scored by a panel of (say 3) operators that will develop experience of this work. Obviously no member of this panel should be a smoker. Each operator would score his/her perception of the level of smoke taint and the results would then be averaged. Scoring should be 1, 3 and 5, where 5 presents a high degree of smoke contamination, 3 has a modest level and 1 is clear of any smoke taint. The preparation of a reference sample of the ground beans for each level of smoke taint would be very helpful to ensure consistency

between operators and through time. If these reference samples were kept in a sealed container that is opened infrequently, it is hoped that they would retain their level of smoke taint for a full cocoa season, after which replacement samples would need to be selected. It is accepted that this is a very subjective test, but the totality of the information provided could be of future benefit. Some testing and preparatory work would be required to get the right balance on this scale of smoke taints and it will be very important for only a small number of CEMA staff to carry out this work, so as to ensure as much consistency as possible in scoring the level of this defect. The cost of introducing this additional test will be minimal and so no additional funding would be required. The objective of this proposal is for CEMA, over time, to build an annotated database that tracks the incidence of smoke taints in cocoa exported from Solomon Islands.

3.0 Confidential Discussions with Cocoa Exporters from Solomon Islands

3.1 Background

For the 2015 cocoa season in Solomon Islands (the calendar year), there are 6 active cocoa exporters, although 12 have been registered as holders of a cocoa export licence – a reduction by 5 on the number in 2014. As of June 2015, not all of those who are licensed have yet exported cocoa. Following the Cocoa Market Training Workshop conducted at the start of this Mission, a number of one-to-one confidential meetings were held with nearly all the active cocoa exporters in Solomon Islands, at the exporters' premises. These conversations were very open, frank and revealing. Due to the confidential nature of the discussions, it would clearly be inappropriate to attribute any points that arose to any particular exporter. However, a number of important points were raised by several exporters and so are discussed without attribution in the paragraphs that follow.

3.2 Understanding of the Operations of the International Cocoa Market

In the previous mission report, reference was made to the shockingly poor understanding of the operations of the international cocoa trade and of the critical importance of the London market price for the nearby position to the cocoa exporters in Solomon Islands. This poor understanding was further confirmed during the Cocoa Market Training Workshop that was held on 26 May 2015, and it was re-confirmed during the subsequent individual discussions with the cocoa exporters. As a result of the workshop and the subsequent individual discussions, the concept of a cocoa market differential for cocoa from an origin (including Solomon Islands) that is below or above the ruling London market price is now much more clearly understood by many (perhaps most, possibly all) of the currently active cocoa exporters. There seems to now be a realisation that the previous day's London market Closing Price for the nearby trading position has an important impact on the profitability of their business as a cocoa exporter – the price offered by every one of their potential buyers will be based on this. It is also clearer to many of the cocoa exporters that they must discuss the price basis of any contract (i.e. the relation of the price offered to the ruling London price – the so-called differential) with their buyers before the price is agreed, rather than accepting a simple price announcement by the buyer who says that their offer is a 'fair market' price for the day. True negotiations on price between all exporters and all their buyers may be some way away in some cases, but progress has definitely been made on exporters' understanding of the operations of the international cocoa trade. In future, CEMA will be circulating the closing price of the previous day in the London market to all licensed cocoa exporters and may support the local press in publishing this information. Progress towards getting better prices to exporters (and thus to cocoa growers) will now depend on the price negotiating skills of the individual exporters and their ability to use the information, now available on a daily basis, in price discussions with their buyer. Hopefully, the cocoa exporters will be able to negotiate improved (i.e. lower) levels of differential discount for their cocoas, but clearly the quality of the cocoa on offer will also have a major influence. CEMA will also be better able to watch the trend in differentials for Solomon Islands cocoas in relation to the London market price.

3.3 Quality and Prices of Cocoa Exported from Solomon Islands

As a result of the discussions during the visit, there is also an increased realisation among the cocoa exporters in Solomon Islands that the smoke taint, so characteristic of a such a high percentage of the cocoa exported from this origin, has a substantial effect on the reputation of cocoa from Solomon Islands and therefore the type of (and the expectations of) end buyers interested in their cocoas, as well as on the prices achieved for their produce in relation to the London Market price. Nearly all the cocoa exported from Solomon Islands ends up in the cocoa processing industries of Indonesia, Malaysia and Singapore, where this smoke taint means that it is either blended off (at an additional cost due to the complexity of doing this) or processed further by deodourisation (also at additional cost and with a 2–3% loss of cocoa butter content). All the cocoa in the country is potentially of good quality when it is harvested, but the (sometimes appalling) post-harvest treatment turns much of this cocoa of potentially good quality into distressed parcels that are only saleable at discounted prices. This is especially unfortunate as a very high percentage of the cocoa exported from Solomon Islands has good bean size, good fat content and correct moisture content, as well as being well-fermented. Well-fermented cocoas are in high demand from South-East Asian and Australasian users but locally produced tonnages are in short supply. Cocoa is transported (at substantial additional expense) from West Africa to satisfy this demand in the region. A very small percentage of the cocoa from Solomon Islands is well fermented **and** sun dried **and** is then exported at a differential above the ruling London Market price. The buyers of such cocoa are presently the artisan chocolate

makers in Australia and New Zealand. This demonstrates that, with care in preparation, cocoa from Solomon Islands can achieve significantly improved prices. For one such recent export, the price received by the farmers was double the price being paid to nearby farmers for exports to the traditional end buyers in the cocoa processing industries. However, achieving this on a broader scale across the industry will require significant and large scale change in drying techniques and post-harvest handling in the value chain.

3.4 Financial Resources Available to Cocoa Exporters to Buy Cocoa

All those cocoa exporters who participated in the confidential face-to-face discussions indicated that the shortage of adequate operating capital is a **major** constraint to the smooth and cost effective operation of their businesses and of the internal cocoa market in Solomon Islands. Given the reported frequent delays in settlement of invoices by buyers, it is easy to see why the availability of sufficient finance to buy cocoa is a very real constraint for nearly all the cocoa exporters in the country. Two examples highlight the issue of cash flow needs of cocoa exporters: a 15 tonne (1 container) contract was shipped on 29 May 2015 at price of £1,640 per tonne, giving a contract value of £24,600 (some SBD291,500 at the mid-market exchange rate on the day of £1 = SBD0.0844). A further example (in which the tonnage involved has been extrapolated for illustrative purposes) is even more troublesome: envisage another exporter shipping a 15 tonne container of quality sun-dried cocoa sold at a premium price of 10% over the relevant London market (£2,125 for July 2015 on 29 May 2015). This would be at a price of £2,337.50 per tonne or a total of £35,062 for a full container, which converts to a total of some SBD415,500 – again at the mid-market exchange rate on the day. In both these examples, the price used is the somewhat higher export price than the buying price of the beans, but it is nevertheless clear that the financial resources needed to achieve the export of a single container are very considerable for the (usually) poorly capitalised cocoa exporters in Solomon Islands.

None of the current sources of funds is able to provide adequate cash resources in a timely way for the activities of cocoa export. Improved arrangements are necessary as it is ultimately the cocoa grower who suffers from the inadequacies of the internal cocoa supply chain.

3.5 Exporters' Ability to Negotiate Pricing with International Buyers

Until very recently, all cocoa exporters in Solomon Islands have been price takers and often have been provided with very little information on how the offer price has been calculated or on the price basis on which the offer has been made to them. This seems to have been particularly the case in contracts with the trading house that is the major buyer of Solomon Islands cocoa. In these cases, it is reported that the exporter may have been simply told the level of the price he will receive and has had very little (or no) scope for discussion or for negotiation around the price offer or the time by which that parcel of cocoa has to be delivered. This is clearly a most unsatisfactory situation but may go some way towards explaining the lack of movement in the internal farm gate cocoa prices in Solomon Islands over time – they appear to rarely move and in no way reflect movement in the London market price for cocoa. This lack of any price negotiation is beginning to change but, sadly, only slowly. The Cocoa Market Training Workshop held on 26 May 2015 in Honiara was described by many participants as 'very useful' and, together with the later one-to-one discussions with individual exporters, should have given the majority of them adequate knowledge of the operations of the international cocoa trade to enable them to undertake more forceful negotiations with potential trade buyers. It is hoped that more knowledgeable (and forceful) negotiations might now become the operational norm. The provision by CEMA of the closing price of the previous day for the nearby (first) position in the London Cocoa Market to all licensed cocoa exporters on a daily basis will be of great benefit in such price negotiations.

3.6 Summary of the Needs of Cocoa Exporters in Solomon Islands

These are as follows (not necessarily in order of importance):

- Improved understanding of the practical operations of the cocoa market
- Better price information
- Ready availability of operational cash to buy cocoa in a timely manner
- Improved ability to negotiate prices with potential buyers of Solomon Islands cocoa
- Ready availability of cocoa of better quality without taint of smoke.

4.0 Improving Quality Through Better Drying

4.1 Cocoa Drying in Solomon Islands: Improvements to Technology Needed

There is no doubt that the source of the frequent reports of smoky taints in Solomon Islands cocoas (to an estimated level of some 30% of bags according to some observers) is the artificial wood-fired dryers of various designs, of various ages and in varied states of repair that are in almost universal use in Solomon Islands. It appears that, especially in the early stages of drying cocoa just after fermentation, cocoa beans are especially susceptible to picking up foreign odours– including smoke taints. The artificial wood-fired dryers used in Solomon Islands are often, perhaps even usually, poorly maintained, and in any case may well not have been constructed to design parameters that would minimise the risk of smoke contamination to the drying cocoa beans. Improving these dryers is an absolutely crucial step towards improving the quality of cocoa exports from Solomon Islands and thus the revenue to cocoa growers. Urgent action is needed.

It is an accepted fact that sun drying produces cocoa of the best flavour quality. Sun dried cocoa is therefore sought after by chocolate manufacturers around the world for liquor production – for which premium prices are often achievable, provided the beans have also been well fermented. At certain locations in Solomon Islands and at certain times during the cocoa harvest, it is perfectly possible to dry cocoa effectively in the sun. However, it is also true that in some parts of Solomon Islands and/or in situations of poor weather (heavy rain, heavy cloud cover), effectively drying cocoa uncovered in the sun down to the requisite 6.5 to 7.5% moisture content may well not be achievable in a short enough time to prevent external (and/or internal) moulds developing on the drying beans.

Some observers report that many operators in Solomon Islands believe in using a wood-fired artificial dryer as a first resort and give little, or no, consideration as to whether sun drying might actually be feasible in the weather conditions expected in that location at that particular time. This is particularly unfortunate as cocoa that is well dried in the sun (and of course well fermented) can currently be sold into the market at a premium price. Those about to dry cocoa should be encouraged to first think whether the prevailing weather conditions would permit their cocoa to dry in the sun ***before*** using an artificial wood-fired dryer.

Dry, seasoned wood is becoming less easily available and is becoming ever more expensive in Solomon Islands. In times past, wood supplies were plentiful and cheap, but collection and transport or purchase of suitable wood is becoming a major cost to cocoa producers that ferment and dry their cocoa, as well as to the intermediaries that buy, ferment and dry wet cocoa beans. The thermal efficiency of wood-fired cocoa dryers is thus becoming a much more important cost consideration for cocoa growers and other intermediaries.

In the report of the previous consultancy Mission on cocoa marketing in mid-2014, completed as part of SOLS22 Stage 1, it was strongly recommended that:

"…work is undertaken to investigate the costs, the thermal efficiency and other design features, and the operating norms of the standard cocoa dryer and mini-dryer presently in widespread use in Solomon Islands. It may be that new design features can reduce the capital cost, or the amount of wood consumed, or the operating costs and the chances of smoke contamination."

A PHAMA activity is still urgently needed to examine designs, materials and thermal efficiency, as well as identify features to reduce the risk of smoke contamination etc. of the cocoa dryers in current use or recommended for use in Solomon Islands and in neighbouring countries. This work could lead to recommendations for modifications of the existing designs to improve the parameters of use. The study should also undertake trials of an assisted sun dryer. It is understood that a consultancy input to examine these aspects and trial assisted sun driers will be contracted under PHAMA very shortly. In that regard, comments on technical input regarding the proposed trials are provided below.

4.2 Some Details of the Work to Improve Technologies for Artificial Drying of Cocoa Currently in Use in Solomon Islands

The proposed drier trial is a very important investigation. Success will give the cocoa exporters (and thus the cocoa farmers of Solomon Islands, as well as in the surrounding cocoa producing countries) improved chances to compete in the production of quality cocoa beans on the world cocoa stage. It could thereby be the key to

achieving greatly improved revenues to the cocoa sector, or not. Some details of this proposed investigation are presented here as the basis for the Tasking Note – although no budget or time estimates for the work required are included here.

Over recent decades, a very considerable number of studies of, and with, equipment to artificially dry cocoa beans (and also other crops) have been undertaken – much of them in the Pacific Region, in particular in Papua New Guinea. Some of these investigations have been published (McDonald, Lass and Lopez, 1981; Hollywood, Brown and Toreu, 1996) or are in the so-called grey literature. However, a substantial volume of this work has been of a practical nature – often being undertaken on a trial and error basis, with the successes and failures being poorly documented, if at all. This is very unfortunate. It means that improvement to current designs will be somewhat harder to achieve than might have otherwise been the case. It is therefore of great importance that detailed records of the successes and failures of these currently proposed investigations should be recorded and, ideally, published in some form on their completion. A potentially simple solution could be to post the results of these investigations on the relaunched CEMA website that is referred to earlier in this report.

Recommendations and notes for these investigations:

1) For the wood-fired dryers, these investigations must review the published literature (including the so-called grey literature) and tally the measurements recorded together with the good, average, poor and bad design features of as many of the current and historic wood-fired cocoa dryer models as possible. This should include a critical review of those dryers currently recommended for use in Solomon Islands and, perhaps, elsewhere in the region.

2) The relative dimensions of the various parts of any cocoa dryer are of vital importance in the effectiveness of that dryer. This applies to the mini-dryer, the Kukum dryer and equally to any new dryer design (including that of an assisted sun dryer). The crucial dimensions of a wood-fired dryer include those of the firebox/furnace (width, length), the drying chamber (height, width, depth) and the flue/chimney (width of aperture and height above the bed of drying cocoa), as well as the relationship of these dimensions to each other. These must be examined in a structured and rigorous manner. Their relationship to each other will affect the:

    a) Temperature gradient across the bed of drying cocoa and thus the frequency, and extent, of ‘cold patches’ on the edge and corners of the layer of drying cocoa beans; this can lead to ineffective drying of some beans and creates the risk of mould development on the beans that are drying in these ‘cold patches’

    b) Drying rate of the cocoa, which must not be too fast (as this can cause case hardening of the drying beans) or too slow (as this risks the development of surface and/or internal mould on the beans)

    c) Thermal efficiency of the combustion process (and thus the quantity of wood consumed – an increasingly expensive resource)

    d) Risk of smoke contamination of the drying cocoa; flue gases need an uninterrupted passage from the firebox/furnace, along the firebox/furnace and then up the chimney

    The height of the chimney also needs to be sufficient to avoid any of the exhaust gases being blown back over the drying cocoa beans, even in windy conditions.

3) As an example of the above inter-relationships, there is public data (www.firesnflames.co.uk) that suggests that in the case of a circular chimney, the cross sectional area of the drying tube (firebox) should be no more than 10 times the cross sectional area of the opening of the chimney in order to ensure the smooth passage of smoke up the chimney. In one set of measurements made on an unidentified cocoa dryer in Solomon Islands (Pelomo, M., 2014 *pers. comm.*), the radius of the firebox was 50.6 cm and the radius of the chimney was 8.0 cm and thus the cross sectional area of the opening of the firebox was 8044 sq cm and of the chimney was 201.06 sq cm; unfortunately, this is a ratio of 40 to 1 as opposed to the recommended 10 to 1. It is therefore a cause for concern that the relationship of these parameters in this particular dryer might actually encourage the passage of smoke up through the drying cocoa beans. The design of the current dryers in use in Solomon Islands merits further study as part of this review of cocoa dying technology.

4) In light of the above information, the selected consultant(s) should examine in detail a number of easily accessible examples of the mini-dryer and the Kukum drier that have been in active operational use for a known number of years in Solomon Islands (probably mostly/all on Guadalcanal) to take measurements similar to those above and chronicle any structural/design successes and failures, together with the

maintenance needs and records in this sample of dryers; this information is important and will guide the conduct of the next steps in the investigation and may indicate that modifications (perhaps major ones) to the design of the mini-dryer and Kukum dryer would improve their performance.

5) If major or minor modifications are needed, then revised designs incorporating the desired changes should be created and trial models constructed for detailed examination at one or more fairly accessible locations in Solomon Islands in which sun drying is a particular challenge due to the climatic conditions.

6) For every 'model' of cocoa dryer that is in serious contention, throughout the period during which the cocoa beans are drying (until the moisture content reaches between 6.5% and 7.5%), regular measurements (ideally continuously or alternatively every two hours) of the following parameters must be made:

   a) Ambient temperature with maximum and minimum temperatures

   b) Ambient relative humidity

   c) Moisture content of the drying beans on the dryer prior to turning the beans; this should be done at a number of specific, designated points on the drying floor – including those areas at risk of being cold spots

   d) Temperature in the centre of the layer of drying beans – at set points as above

   e) Ambient weather conditions (rainfall, wind strength, sunshine hours, etc.) at each trial site throughout the trials.

7) On completion of drying, CEMA should test of levels of smoke taint in the dried cocoa samples (using the methodology described earlier in the report).

8) Full analysis of this dataset will identify the most effective design(s) of dryer. Detailed costings of the new design(s) should then be made; wherever possible, the use of the maximum quantity of easily available and lower cost (but durable) local raw materials should be incorporated and their costs included in the calculations for these designs.

9) Sample dryers to these newly modified designs should then be constructed and subjected to a regime of normal commercial usage over a cocoa season (or substantial part of it) to identify and iron out any operational difficulties that may be encountered. For instance, it has been noted that the sliding roofs of some designs of Kukum dryer became hard/very hard for one person to move; this would be a required modification to the design that only became clear in usage.

10) At the completion of these investigations, the extension material that is under development (through PHAMA engagement) should be revised accordingly and be issued.

11) A full report of the investigations and the results should be prepared (including as far as possible the detailed measurements made and the graphs of performance); it is suggested that this could be posted on the re-launched CEMA website once the investigations are broadly completed. It is also possible that this work might generate a publication in a reputable specialist journal.

4.3 Trials of a Design of an Assisted Sun Dryer for Cocoa

As indicated earlier, cocoa of excellent quality usable by chocolate manufacturers for liquor production can be produced by drying cocoa in the sun, although it is accepted that sun drying of cocoa down to between 6.5 and 7.5% moisture content may well be impossible in some locations at some periods during the Solomon Islands cocoa season. The assessment of improved drying technologies should (in addition to reviewing alternative designs of wood-fired artificial dryers to define improvements) also trial a design of an assisted sun dryer as part of the consultancy input. At a number of sites in the Dominican Republic, there are rows of these dryers that have been in operational use for some years and have produced liquor-quality cocoa beans in substantial tonnages. The dimensions of this design of assisted sun dryer should be mimicked on a trial basis in Solomon Islands; a drawing of it is presented in Appendix C. This drawing was included in the report of the previous consultancy Mission.

In the Dominican Republic (as in Solomon Islands), the weather conditions at the time of the major cocoa harvest are quite often unfavourable to fully drying cocoa in the open sun to achieve the desired 6.5–7.5% moisture content of the beans before surface or internal moulds develop on/in the beans. In view of this, a design of assisted sun dryer was developed in the Dominican Republic.

These assisted sun dryers in the Dominican Republic are constructed with metal angle iron and tubing. They often, but not always, use (long-lasting but expensive) UV-resistant polyethylene sheeting of 200 microns thickness over a metal frame and metal sheeting as two tables on which the cocoa is laid out to dry. There is a gap between the two tables to allow passage of a wheelbarrow. Some of these materials may well be too costly for use in Solomon Islands on a routine basis. Consequently, in the financial analysis to accompany these trials, it might be assumed that the polyethylene sheeting will not be UV-resistant and so will require regular replacement. If these trials are technically successful and show that these dryers can effectively dry cocoa on Guadalcanal, then as many locally available materials as possible should be incorporated into the design to reduce the cost and complications of importing materials, while keeping to the dimensions specified in these drawings. It is important to note that the use of angle iron provides a very good anchor for the plastic sheeting, which is bolted tightly between the two faces of the metal. Wood may not give such a tight fit and so it is possible that the plastic sheeting may tear more readily when in use.

It is suggested that prototypes of assisted sun dryers should be constructed at three trial sites – ideally ones that have good security and are subjected to three different climatic conditions. These might conveniently all be located on Guadalcanal for ease of management of the study. It would be helpful if these trial sites were selected in locations with some degree of shelter against the possibility of severe wind damage – so, for example, locating these trial dryers on exposed hillsides should be avoided. It is **essential** that fresh fermented beans that have undergone the same fermentation regime be used in each one of these trials to reduce any inherent variation that might arise from the differences in the degree of fermentation and the freshness of the beans. This might complicate the logistics but is an important requirement to ensure valid comparisons across the three trial sites.

For every ‘model’ of assisted sun dryer for cocoa that is in serious contention, the following parameters should be recorded (either continuously or alternatively every two hours):

a) Ambient temperature with maximum and minimum temperatures

b) Ambient relative humidity

c) Temperature in the centre of the layer of drying beans

d) Moisture content of the drying beans prior to turning them; this should be done at a number of specific, marked points on the drying floor – including those areas at risk of being cold spots

e) Ambient weather conditions (rainfall, wind strength, sunshine hours, etc.) at each trial site throughout the trials.

There are a number of important design features of this assisted sun dryer that ***must*** be replicated in the construction of the trial dryers in Solomon Islands. These include:

- It is **crucially important** to orientate each assisted sun dryer so that the vent at the top is on the side opposite to the prevailing wind (that is to say, on the **leeward** side of the dryer), so that the passage of the wind over the peak in the roof of the dryer draws the moist air out of the structure through the gap of some 0.42 m at the top. There must be areas without polyethylene covering of about 1.0 metre from the ground on both sides of the dryer at the base so that ambient air of lower humidity is drawn into the chamber of the dryer at ground level, is drawn through the drying cocoa on the drying floor, picking up moisture as it goes, and then exits through the vent at the top. This moist air is drawn out through the gap at the top by the venturi effect and this will not happen efficiently if the dryer is wrongly sited.
- The overall width of the structure of the assisted sun dryer should be 5.47 metres and the overall height should be 2.30 metres from floor to the central apex of the roof. These dimensions give a convenient volume of air inside the structure of the dryer, giving good conditions for drying the beans effectively in a few days in good weather conditions and somewhat longer under conditions of cloud cover. The width and height of these structures should **not** be amended, as these dimensions have been proven to produce good results.
- The length, however, can be varied by constructing such dryers in a number of ‘sections’ that can be multiplied up to suit the requirements. There is no physical limit to the length of such assisted sun dryers (some are over 40.0 metres in length in the Dominican Republic) other than any constraints imposed by the site. It might be convenient to make the length of each ‘section’ suited to be a multiple of the width of the plastic sheeting to avoid having to cut the plastic sheets.
- The drying beds must be positioned in close proximity to the walls of the dryer so that the air is pulled through the drying cocoa beans on the drying floor rather than through any gap that could present an area of lower resistance to the passage of air and so might well be favoured.

- The drying floors of this assisted sun dryer should be constructed at a height from the ground that would be convenient to local workers for turning the drying beans as well as for loading and unloading the dryer with cocoa.
- In the Dominican Republic, 2 metres has been found to be a convenient width for the drying floors (one on each side of the main passage). This permits the drying beans to be turned frequently with wooden rakes. On occasions, the cocoa drying tables have been constructed of aluminium or steel mesh, but it is thought that this would be an expensive option in Solomon Islands, where wood may well be the favoured material; if wood is used, then a small gap must be left between the wooden slats or a very substantial number of holes should be drilled in the wood of the drying floor.
- A passage of 1.2 m between the two cocoa drying floors seems adequate in the Dominican Republic to allow space for the passage of a normal wheelbarrow and for turning the drying beans.
- Drying beans must be turned regularly using a blunt ended wooden rake to give the best conditions for effective drying. The intervals between these turns will have to be defined by the local conditions. It is suggested that this should start with raking the beans once per hour in full sun.
- As in all cocoa sun drying systems, the layer of cocoa beans on the drying tables should be no more than 5.0 cm deep when wet (Wood and Lass, 1985); a thinner layer of drying beans risks ‘case hardening’ of the shell of the drying beans with poor drying in the centre of the bean, while a thicker layer risks inadequate drying of some of the beans with the resultant chance for them to develop external or internal moulds.
- Gaps should be left at intervals along the edges of the drying floor facing the passage to speed the unloading of the dried cocoa beans into wheelbarrows.
- The ends of the dryer should be fitted with spring loaded doors that are covered in the same plastic sheeting as the roof, with the width of the door being slightly wider than the central passage through the dryer.
- Wet cocoa beans can be added onto the drying floors at different times in the drying cycle, although dividers should be placed on the drying floors to separate batches of beans added at different times.

Footnote: *The term “assisted sun dryer” is preferred to that of “solar dryer”, as the latter term has evolved in recent years to mean a dryer that generates electricity for export from the site where it is located.*

4.4 Planned Cocoa Quality Awareness Materials

The planned cocoa quality awareness materials begun by PHAMA in 2014 should not be completed until these dryer trials can confirm cost effective and appropriate designs for usage in Solomon Islands for the current combined sun / wood-fired driers (such as the mini-drier), the Kukum dryer (or a modification of these) and the assisted sun dryer.

5.0 Addressing Liquidity of Solomon Islands Cocoa Exporters

5.1 Current Funding Sources for Cocoa Exporters in Solomon Islands

Discussions with the individual cocoa export houses identified a shortage of working capital to buy cocoa as the greatest (or one of the greatest) problems faced by cocoa exporters in exporting cocoa from Solomon Islands.

Cocoa exporters fund their operations through one or some or all of the following mechanisms:

- **Cash float in their business**: Reportedly, some exporters have built up a meaningful level of cash in their business with which they can buy cocoa on a spot basis.
- **Bank overdraft:** Commonly at 14.5% interest (or higher in some cases). Exporter has to assign acceptable collateral to the lender – usually as real estate to which they have proven title; probably needs to be a substantial building and probably cannot be vacant land. Any loan would probably be only for 50% of value of the collateral offered to the bank.
- **Revolving credit facility**: One or two well-established cocoa exporters have negotiated a revolving credit with a local bank, having initially probably put up real estate as collateral; interest rates as above and charged on a daily basis.
- **Pre-payments**: Short-term interest-free credit from the major buyer of Solomon Islands cocoa; paid on contract exchange to the exporter – usually for one container at a time. Effectively provides funds for exporter to buy cocoa for the **next** container to be shipped to that buyer. Major buyer controls this process very closely through regular phone calls and visits.
- **Credit from farmers**: One export house has access to such limited finance that he can only operate if the farmers supplying him wait for payment for their beans when the end user has settled with the exporter.

Most of the cocoa exporters indicated that none of these sources of funds, either individually or as a mixture, can easily provide adequate resources for their activities or their expansion as cocoa exporters. Improved arrangements are necessary, particularly in order to see any ability to improve flexibility in negotiation direct with markets rather than via middle men, and to provide exporters the ability to purchase larger amounts of bean and so promote increased supply/production.

5.2 Potential Funding from the New Rural Development Program II (RDP II)

This multi-donor program was approved in November 2014, started operations in March 2015 and builds on the success and lessons learned from the recently completed community-driven model of the first Rural Development Program (RDP I). The objective of RDP II is to *"Improve infrastructure and services in rural areas and strengthen the linkages between smallholder farming households and markets"* (Anon, 2015). The end date for the program is February 2020 and expressions of interest are now being received by the Program Managers for the first round of disbursements. The total program cost is USD46.9 million, with contributions from the Solomon Islands Government (USD20.0 million), International Development Association – part of the World Bank Group (USD9.0 million), Australian Government (USD13.3 million) and International Fund for Agricultural Development (USD0.6 million). The program is being implemented jointly by the Solomon Islands Ministry of Development Planning & Aid Coordination and Ministry of Agriculture, which have appointed Program Managers for its day-to-day management.

There are three components to RDP II:

- Provision of community infrastructure and services
- Creation of agricultural partnerships and support
- Day-to-day management of the program.

The intention of the first component is to increase access to infrastructure and services in rural areas through community-led projects. The second component is more likely to be of interest to exporters of cocoa as it aims to *"assist farmers groups to engage in productive partnerships with commercial enterprises via Agribusiness Partnerships"*. Under this heading of support, RDP II also aims to build the capacity of the Ministry of Agriculture to deliver its core functions of regulation, research and sector coordination.

Along the length of the current, somewhat fractured, internal supply chain of cocoa, there would seem to be many opportunities for developing productive partnerships between sellers and buyers in proximate parts of the cocoa chain. These could include new/renewed cocoa fermentation and drying facilities and/or upgraded cocoa preparation and storage facilities or cocoa extension programs. With some creative thinking, there must be many opportunities for efficiency gains in the internal cocoa supply chain that would enhance the quality image of cocoa from Solomon Island to the benefit of cocoa exporters and, thereby, to cocoa growers. Cocoa is supposed to be a high quality food ingredient, but many of the premises in use today along the internal cocoa supply chain in Solomon Islands do not present an image of quality. All too often the facilities are scruffy, operators do not put cocoa onto pallets, cocoa in transit is not covered and becomes rain damaged, the storage sheds are not proofed against rodents and/or may have a leak or two in the roof and are, all in all, less than ideal facilities to handle a food ingredient that has any quality aspirations.

Under RDP I, a Supplementary Equity Facility (SEF) in partnership with a number of local commercial banks provided increased access to finance for a significant number of local businesses (including some cocoa exporters). This line of finance is also available under RDP II and could potentially provide supplementary equity up to SBD200,000 for cocoa exporters. All cocoa exporters are strongly advised to use this facility.

PHAMA has been engaging with the Asian Development Bank (ADB) on examination of potential trade finance mechanisms to support cocoa exports. As part of that work, a concept note has been developed to facilitate discussions with commercial banks and to illustrate the role of RDP II's SEF facility in such mechanisms (Thompson, ADB, 2015). In that work, a 'Cash-backed Trade Line for Pre-Shipment Finance' building on this SEF in RDP II is suggested. This product is designed to be an easy entry point for export clients who need a finance line but do not wish to put up real estate collateral, or have reached their borrowing limits already on existing collateral. It could operate as follows:

1) The cocoa exporter will contribute a fixed sum to be held as a security deposit by the bank, for example SBD100,000.

2) An application will be made to the RDP SEF for a matching amount. Once approved, this is added to the security deposit amount so it is therefore doubled, to SBD200,000 in this example. (RDP managers have reportedly expressed preliminary verbal support for this model.) Note that this RDP contribution could also be by guarantee rather than cash funds.

3) Based on the security deposits held, and usual client due diligence, the bank makes a revolving pre-shipment facility available. Based on the numbers in this example, it is proposed that the facility limit be SBD300,000, which is supported by the SBD200,000 deposit plus additional value attributed to the business enterprise and rolling contracts value. Cocoa contracts and inventory can be pledged to the bank in support of this, with the level of enterprise value.

4) To the extent that it is practical, the facility should fluctuate with contracts. Contract copies should be provided to the bank and the facility documentation include covenant controls regarding funds usage.

5) All export contract receipts will be paid directly to a bank account with the lending bank.

6) All inventory will be pledged to the bank and stock reports be provided on request, to support the enterprise value. Client must have satisfactory stock security systems and a warehouse of quality that should be ideally be licensed.

7) The collateral pledges against the inventory and receivables will be registered on the Secured Transactions registry.

It is further suggested that after an interim trial period the exporter may be offered a higher trading limit, while in due course the goal would be for the exporter to transition to a reliance on inventory and contract collaterals solely, without any cash-backed support.

In discussions held with cocoa exporters in this input, it was stressed that they (and their suppliers) should actively consider the preparation of thoughtful, well-designed funding applications to the Program Managers of RDP II under the various lines of finance. It would clearly be most unfortunate if at the end of RDP II (in the year 2020), none of the facilities along the cocoa supply chain in Solomon Islands or cocoa exporters had benefited from this important injection of funds into rural infrastructure in the country.

However, it is worth noting that, even if such applications are successful, the improved cash flow and benefits offered by such facilities may not fully, or even substantially, resolve the cash flow demands of being a successful cocoa exporter in Solomon Islands, although they could substantially improve the efficiency of an individual

exporter's operations. As stated earlier, a 15 tonne (1 container) contract was shipped on 29 May 2015 at a price of £1,640 per tonne or a contract value of £24,600, which converts to some SBD291,500 at the mid-market exchange rate on the day in question (of £1 = SBD0.0844). The financing needs can severely limit the tonnage that a cocoa exporter can actually buy and process to export, as well as the timing of their purchases.

The submission of a successful application for funding from RDP II (and also for a bank loan) by a cocoa exporter will require a significant effort to prepare, review and even revise company documentation so that the company application can be correctly presented with clarity and in the most favourable light. To facilitate this, some specialist support may be necessary. One organisation that can provide such support is the Pacific Business Investment Facility (BIF) that is supported by the Australian Government (with co-finance from ADB) to fill just such a need. PHAMA has facilitated contact between BIF consultant John Hardin and cocoa exporters to assist with their business planning. BIF has also been consulted in the development of the trade finance concept paper.

5.3 Bank Loans for Cocoa Exporters

There are a range of challenges facing cocoa exporters seeking commercial financing.

Australia and New Zealand Banking Group (ANZ) and **Bank South Pacific (BSP)** have clearly established lending criteria that seem to offer little opportunity for loans to some current cocoa exporters. Unless a cocoa exporter has had a very long-term relationship with one of these banks, there is probably little chance of seasonal or revolving credit and such a loan may only be possible if the exporter was able to offer a building(s), but not vacant land, as collateral. If that were to be possible, they might then be able to borrow up to 50% (or perhaps 60%) of the amount of an independent assessment of the value of that collateral. Some cocoa exporters rent premises and have little, or no, real estate assets to offer as collateral – even if they were comfortable to offer it for such purposes. The exporter would also probably need to have a good track record with an account at that bank, have three years of audited business accounts, have a good trading record (ideally with increasing profits year by year), have a clear business plan, be operating on contracts without R&R (reject and replace) clauses, and have the ability to demonstrate that they could repay the loaned amount and (possibly) accept the use of letters of credit. These prerequisites would be a real constraint to some current cocoa export companies in Solomon Islands.

The Pan Oceanic Bank (POB) has been operating in Solomon Islands for less than two years and is actively trying to build a diverse loan book – at present only with clients on Guadalcanal. It expressed a desire to aggressively offer loans at a variety of levels and for a variety of purposes under the broad title of Start-up Loans Program – to be launched over the coming months. It is possible that a cocoa exporter could obtain a modest loan from POB with potentially somewhat less strict rules on provision of collateral and the other prerequisites (although probably with interest on the total amount loaned, as opposed to calculation of the outstanding balance on a daily basis) than those of other banking operators in Solomon Islands. POB is expected to be offering loans in this program on a flexible basis to borrowers in the SBD25,000–SBD150,000 range at levels of interest – first year 7%, second year 8%, third year 10% for repayment over 5 years. Any loan over SBD100,000 would need to offer the collateral of property, although the detail of the specific arrangements will have to await future detailed announcements from POB. Nevertheless, the size of loan needed to fund just one container of cocoa at current prices is potentially still a major stumbling block to gaining a loan of adequate size to be an active cocoa exporter in Solomon Islands. Any cocoa exporting business that is able and willing to use a letter of credit, and has a good set of historic records (as listed above), would likely be given careful consideration by POB and could receive loan support at the above interest rates for as much as SBD6,500,000. It is very clear that POB wishes to be as disruptive to the banking *status quo* as possible in order to build a loan book as quickly as possible. It may be that some cocoa exporters can take advantage of this short-term window of opportunity, and seeking a loan from POB should not be ruled out.

POB expressed the hope that it would be permitted to participate in the RDP II program of work but has been operating in Solomon Islands for less that the requisite 24 month period specified. Discussions are reportedly currently underway to that end.

5.4 Potential for System of Warehouse Receipts

Some observers have suggested that the creation of a system of warehouse receipts would be of value to the cocoa exporting community in Solomon Islands. In some parts of the cocoa world, such systems have evolved and, with appropriate infrastructure, are operating well, although at a tangible cost to the operators involved.

Under such a system, loans (usually of a relatively short-term nature) are made by financial institutions to exporters on the basis of warrants issued against physical stock of produce (say cocoa) of approved quality that is held in an approved, secure, quality-inspected warehouse facility. A loan is made using this physical stock as collateral, which then enables the exporter to use these funds for further purchases of that commodity. In the case of cocoa, the warehouse can be in a cocoa producing country, although stringent quality controls of the facility would be necessary as cocoa cannot / should not be stored under tropical conditions for prolonged periods due to concerns that the quality may deteriorate quite rapidly (due to being in a high humidity environment, having higher infestation risks and other weather hazards).

Solomon Islands currently has little infrastructure to support formal inventory products such as warehouse receipts but does have the advantage of a Secured Transactions Framework and Registry that permits the pledging of items of movable collateral. However, there are no Collateral Management companies in Solomon Islands to provide independent monitoring controls and comfort to the banks for them to provide inventory finance. It seems also that no suitable, secure warehouse facilities exist (or indeed are planned) in Solomon Islands. Unfortunately, at this stage it appears there is limited interest from the banking sector to create such a system in the country. It is therefore likely that the successful operation of such a scheme for some 4–5,000 tonnes of cocoa production in Solomon Islands may well remain a somewhat distant dream for the foreseeable future. However, PHAMA will continue to work with ADB and RDP II to further examine the possibilities and discuss with financial institutions any opportunities to progress an inventory based system.

5.5 Potential for Creation of a Risk Share Facility

Some observers have suggested that a potential solution to the need for cocoa exporters to improve their working capital could lie in the creation of an International Finance Corporation (IFC) driven Risk Share Facility with a collective of commercial banks. This is an established approach where clients (banks in this case) sell a portion of the risk associated with a pool of assets to IFC. These assets typically remain on the client bank's balance sheet, with the risk transfer coming from a partial guarantee provided by IFC to potentially cover (say) 50% of the risk. Such a facility would have to operate across a number of crops and a number of Pacific Region countries and would work in partnership with a modest number of established, regional commercial banks. Cocoa in Solomon Islands is too small a crop alone to justify the involvement of IFC, which has a minimum project size of USD5 million. Any loan to a cocoa exporter from a commercial bank participating in such a Risk Share Facility would have to satisfy the bank's usual requirements for loans, as described above. Such facilities have been operated elsewhere in the Pacific Region, such as in Papua New Guinea. (The characteristics of typical IFC sponsored Risk Sharing Facilities are available at www.ifc.org.) Given that PHAMA is likely to begin operations in Papua New Guinea later this year, there may be opportunity to work closer with IFC on how to share lessons on this facility and perhaps reflect further on the possibility for the creation of such a Facility that includes Solomon Islands cocoa.

6.0 Recommendations and Future Prospects

A number of recommendations for future actions from the cocoa sector and PHAMA are made in the body of this Report. For ease of reference, these are listed below:

- Over next six months, PHAMA should aim for, and encourage, CEMA to increase its relevance to cocoa exporters by:
    - Enhancing the CEMA website
    - Ensuring the creation of an enterprise-wide email system and file server for CEMA
    - Dissemination by CEMA of daily closing cocoa prices of nearby position on the London ICE Cocoa Market to all licensed cocoa exporters on a daily basis
    - Dissemination by CEMA of relevant information on the international cocoa trade
    - Support for CEMA to seek (and internally record) more details on price bases of cocoa export contracts from cocoa exporters
    - Starting assessment of levels of smoke in cocoa export parcels as part of the CEMA quality control procedures.
- Support should be continued to help cocoa exporters understand the international cocoa trade, in particular in price negotiations with their buyers, and to appreciate that there is market demand for well fermented, well dried cocoa beans in the South-East Asian and Australasian regions.
    - In this regard and to further progress this effort (and assuming the availability of funding), it may be helpful if the Consultant was to make a further (and final) visit to continue working with CEMA and the cocoa exporting community in Solomon Islands to further develop their cocoa price negotiation skills. If this was to be agreed at an early date with a donor, then the cost of the air ticket might be minimised by making an early travel booking. It is suggested that such a visit could be made in the second or third quarter of 2016.
- Cocoa processors drying cocoa should be encouraged to first think whether the prevailing weather conditions would permit their cocoa to dry in the sun ***before*** resorting to the use of an artificial wood-fired dryer.
- PHAMA should complete the planned study of the suggested design (Appendix C) of an assisted sun dryer for use in drying cocoa in certain areas of the country.
- PHAMA should also complete a study for improving current range of wood-fired cocoa dryers and trial proposed modifications; a substantial reduction of levels of smoke taint of export cocoa beans seems highly unlikely with the current stock of dryers.
- PHAMA should continue to hold any further work on preparation of cocoa quality materials until the above two studies have been successfully completed, so as to ensure that the correct messages on appropriate drying technologies can be included.
- Stakeholders should be actively encouraged to apply to SEF and Agricultural Partnership elements of RDP II for funding. Applications may require some business support; in such cases, the assistance of the BIF service is to be recommended.
- PHAMA should continue to promote and facilitate discussion on the creation of trade finance facilities, including potential inclusion of Solomon Islands cocoa in a multi-crop regional Risk Share Facility through engagement with IFC (and commercial banks).

It is to be hoped that all these recommendations can all be implemented with urgency. Some can be completed with little or no investment. Appendix B presents some timelines for completion of these activities.

7.0 Conclusion

It is becoming clear that the time is fast approaching when the cocoa sector in Solomon Islands should take charge of its own destiny and must:

- Improve the cocoa quality offering
- Negotiate better prices with existing international buyers
- Find new buyers (with an interest in cocoa of quality)

And thereby:

- Receive better export prices and permit better prices to be passed back to those growing cocoa in Solomon Islands.

Growers need to receive improved prices and start cultivating the crop and cease to merely be harvesters of the few pods on the cocoa trees that, by some miracle, survive through to maturity. To repeat, cocoa from Solomon Islands is mostly well fermented and of good bean size. As such, it could be sought after in the South-East Asia and Australasia regions, if only the smoke taint was to be eliminated.

As described above, there are a number of interlocking constraints on the cocoa exporting sector in Solomon Islands. There are the problems of smoke taint to drying cocoa, of poor liquidity of many cocoa exporters, of weak negotiating ability of exporters on selling prices (at least in part due to the previous two constraints) and of low level of interest by growers due to poor returns from growing cocoa. Without solving (or at least partially solving) each one of the first three constraints, it is very unlikely that substantial progress will be made towards improving the revenue received by the cocoa growers of Solomon Islands and thus increasing their interest in **cultivating** the crop.

Some possible timelines for progress towards this goal are presented in Appendix B. It is suggested that with adequate resourcing and with commitment by the industry and CEMA, meaningful progress could potentially be made by the end of the third quarter of 2016 (or thereabouts) towards the goal of Solomon Islands becoming an exporter of a credible quantities of quality cocoa, as measured by exporters receiving an improved (that is to say reduced) differential price using the basis of the nearby position on the London Market.

If progress towards this goal is limited or very limited by that date, PHAMA will need to re-examine its level of strategic engagement with cocoa.

8.0 References

Anon 2015, Solomon Islands Rural Development Program ll, Explanatory leaflet on RDP ll. RDP ll Project Office, Honiara.

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Thompson, S 2015, Concept Paper on Cocoa Finance. ADB & PHAMA, Department of Foreign Affairs and Trade, Canberra, Australia.

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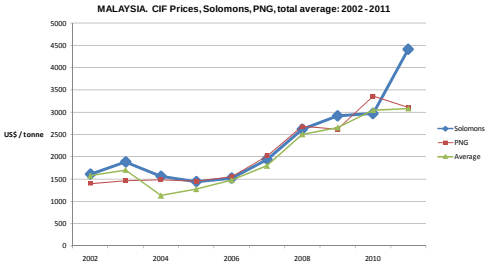
Appendix A

Presentation Made by Consultant at Training Workshop in Honiara on 29 May 2015

“POSITIONING” SOLOMON ISLANDS COCOA IN THE INTERNATIONAL COCOA MARKETS



BY PITAKIA M. PELOMO

POSITIONING (REAL /PERCEPTIVE) OF SI COCOA BEANS IN THE WORLD MARKET REFLECTS ON THE LEVEL OF BENEFITS THAT THE COCOA INDUSTRY EARNS FROM THIS COMMODITY

OVER ALL AIM OF PRESENTATION

- Discuss current "perceived position" of SI cocoa in international trade and markets of SI cocoa
- Identify related constraints, issues and challenges
- Propose development strategies to address these challenges,
- Leading to optimising potential positioning of SI cocoa in the international trade and markets to maximise benefits to the industry and national economy

SCOPE OF THE PRESENTATION

1. Brief outline of the cocoa international market structure, trading and stakeholders
2. Outline of domestic market structure and stakeholders
3. Cocoa Quality Standards (Cocoa and non-cocoa factors)
4. Trading Practices
5. International Pricing and SI Exporters
6. SI "perceived position" in international trade market
7. Key issues and challenges
8. Recommendations
9. Conclusion

1.1 International Cocoa Market Structure and stakeholders

Organisations and Structure

- International cocoa Organisation (ICCO)

1. Cocoa Association of London (CAL)- London
2. Cocoa Merchants Association of America (CMA) – New York
3. Association Francaise du Commerce du Cacao (AFCC)- Paris

Trading Stakeholders

- **Terminal Markets (3)- (LCTM, NYCSCE, AFCC)**
- **Chocolate products manufacturers**
- **Cocoa products processors (grinders)**
- **Cocoa bean traders/ merchants (buy own account)**
- **Cocoa bean brokers (Facilitate trading partners for commission)**
- **Cocoa bean dealers (Buy own account)**
- **Cocoa bean Exporters**

1.2 Key functions and roles of international cocoa market structure and trading stakeholders

Organisational Structures

1.1 Oversee sustainable world trading of cocoa – policies and regulations

1.2 Establish buffer stock

1.3 Determine indicative International prices

1.4 Forum of membership of stakeholders

1.5 Cocoa Associations;-

- **Establish Quality standard and procedures of grading**
- **Establish trading contracts and compliance**
- **Influence trading at respective terminal markets**

Trading stakeholders

- **Terminal Markets- Conducts bidding by traders for cocoa beans and sales**
- **Manufacturers/Grinders- determine cocoa specifications and purchase**
- **Brokers, traders, dealers- accumulate and facilitate trade between manufacturers and exporters**
- **Exporters- Facilitate trade for producers with manufacturers**

1.3 Other key players in cocoa trading

International

- International Quality Assessors
- International Shippers
- Warehouse operators
- International Banks- LCs
- Producer country Marketing Boards
- Producer country national Price Stabilisation bodies
- Market Information companies
- Commodity Speculators

Domestic (Solomon Islands)

- Quality Assurance – CEMA
- Quarantine
- Customs
- SIPA
- Commercial Banks- LCs or Capital
- Domestic Cocoa bean traders
- Cocoa growers and processors
- Extension service providers
- Transport Providers
- Research (R&D)
- Growers
- SIG and Development Partners

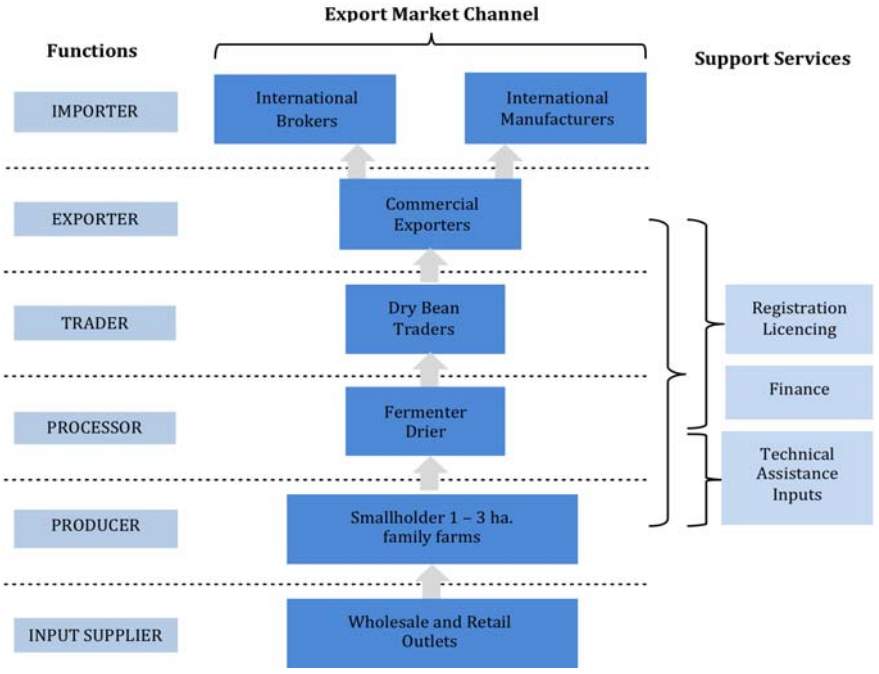
Types of International Cocoa Bean Markets

1. BULK
2. FINE OR FLAVOUR
3. SPECIALTY OR BOUTIQUE CHOCOLATE
4. COCOA NICHE MARKETS (Certifications)

- Organic
- Fair Trade
- Rain Forest Alliance/UTZ

- Single Origin
- Product Differentiation

2. Outline of SI Domestic Market Structure (Value Chain) and stakeholders



3.1 WE ARE THE BOSSES OF COCOA PRODUCTS QUALITY SAY THE CONSUMERS

3.2 International Quality Standards of cocoa beans is based on Consumer demands and set by international trade

International Cocoa Assns

Basic standards are set by the Cocoa Trading Associations

- **CAL- London- (European, African, Asia/Pacific)**
- **CMA- USA- Americas (Central, South America and Caribbean)**
- **AFCC- French – (Francophone countries)**

Cocoa Product Manufacturers and traders

Use Basic Standards plus Specifics for their own product lines

- **Additional specifications**
- **Specialties (Boutique market)**
- **Niche Markets- Plus other "non-cocoa quality " demanded by consumers**

3.3 Other Non- cocoa "quality" demanded by consumers

- **Organic**
- **Fair wages and returns to growers**
- **Social welfare of growers (common good)**
- **No child-labour used**
- **No slavery used**
- **Environmentally sustainable farming system**
- **Track and Traceability**
- **Single origin**
- **Established PGS between trading partners**

3.4 Quality Standards are influenced by

Health Factors

- Clean from dirt and germ free
- Free from contamination of non-food items including poisons or poisonous by-products (Food safety)
- Acceptable taste, flavour, smell
- Nutritious
- Improves health and well being – cleverness, memory etc
- Fermented properly
- Free from Mould (afflatoxin-cancer - causing)
- Free of Insect droppings

Commercial Factors

- No foreign mater
- Low moisture content (6-7%)
- High cocoa nib content
- High butter fat content
- No contamination by smoke
- Good brown coloured beans
- Well-fermented and dried
- Acceptable chocolate taste, flavour and smell
- No germinated beans –reduce kernel
- No moulds
- No damage by insects
- Acceptable bean size
- Variety suitable for the particular product line or market

3.5 Basic Quality Standard (CAL)

Refer to CEMA Standards (Defect scores determines First, Second Grades and Sub-standard grade);-

Bean Count (bean size) *moisture content* Fermentation (slaty beans) * moulds (external and internal)* insect damage * germinated beans * flat beans* broken beans* double beans* foreign matters*

Other considerations:

Smoke * contaminations * smell * Colour of beans * shell thickness * Butter fat * uniformity*

3.6 CEMA Inspection Results 2011 and 2012

Average Score (769 contracts of 11,164 MT)

1. Bean Size- 94/100g
2. Moisture – 6.8 %
3. Mould bean – 1 %
4. Slatey Bean – 6%
5. Flat beans – 5%
6. Insect and Germinated –1%

Other indicators not measured by CEMA:

1. Smokiness
2. Acidity
3. Smell
4. Flavour
5. Colour
6. Shell content
7. Butter fat

ALL COCOA EXPORTED MUST BE INSPECTED AND GRADED BY CEMA

3.7 Factors affecting cocoa bean quality

- Variety
- Environment
- Field Practice or Plantation management
- Harvesting
- Fermentation
- Drying
- Storage (storage facility)
- Storage pest Management
- Transportation to market (national)
- Export Storage
- Pre-export management
- Export Packaging
- International shipping
- Duration of voyage to final destination
- Difference of Climatic conditions of export and importing countries

3.8 VARIETY FACTOR (example)

VARIABILITY OF "TRINITARIO VARIETY" IN A PLANTATION (Black Post) showing variation difficulties of maintaining "true-to-variety" plantation.

Note:

- **Amelonado Variety (Forasterio) – Bulk Market**
- **Trinitario /Criollo – Fine or Flavour Market**

- **Trinitario = Criollo type X Forasterio type**

3.9 Main characteristics of Criollo, Forestario, Trinitario

Indicators:	Criollo	Forestario	Trinitario
Pod:			
1. **husk Texture**	Soft	Hard	Mostly hard
2. Pod colour	Red occurs	Green	Variable
Beans:			
3. Av. Per pod	20-30	30 or more	30 or more
4. Colour of Cotyledons	White, ivory or very pale purple	Pale to deep Purple	Variable, white beans rarely occur

3.10 (Red/Pink) Trinitario from Trinitario seeds

3.11 (Green) Trinitario from Trinitario Seeds

3.12 Variations of pod colour and shape on "Trinitario Plot" with seeds sourced from Trinitario trees at Black Post

3.13 Recorded Cocoa varieties in SI

Available at Black Post

- Amelonado Vars (several accessions)
- Amelonado Hybrids-(PA7, Na 33)
- Mixed Amelonado accessions –origins not known
- Sabah Hybrid collections (25)
- Trinitario x Na33
- Trinitario

New Trinitario clones seedlings from PNG

1. Big tree formation
   5 crosses

2. Small Tree formation
   5 crosses

(Planted at St. Martin RTC)

Note:

Farmers also collect unknown varieties from unknown sources and grow in their farms

4. 1 Trading and Contract Options

Trading Options

(a) International

1. Direct with chocolate manufacturers (regular or boutique)
2. Direct with grinders
3. Through Brokers
4. Through Dealers/ merchants

(b) Domestic

5. Exporters

Most SI contract use dealers but few now venturing trading with Chocolate manufacturers and grinders

Contract Options

Contracts usually based on any of the 3 International Associations. Most in Asia/Pacific are variations of the CAL Contracts.

1. Cost, Insurance and Freight (CIF)
2. Cost & Freight (C&F)
3. Cost and Insurance (C&I)
4. Free On Board (FOB)

Most SI export contracts are FOB

4.2 Contract Compliance and benefits

Compliance

- Trading Contract is a legal agreement with financial implications
- Non- compliance can is very costly
- Price, Quantity, Quality, package, shipment time, arbitration
- Opportunity for Participatory Guarantee Scheme (PGS)

Benefits

- Protects both parties by agreed terms
- Creates, builds and maintains trust, confidence, reliability, reputation and long-term trading relationships in mutually beneficial way
- Improvement of pricing
- Understanding and Support during hard times
- Improvement of contract terms
- Developmental interactions

5.Determinants of International Pricing and SI Exporters

World Price/LTMP

- ICCO Buffer Stock level
- Production trend
- Grinding/consumption trend
- Calamities (nature/political stabilities)
- World financial status
- Pest and diseases
- Speculators

International Price for SI Exporter

- Type of contract (Fob/CIF)
- Selling forward/hedging
- Access to working capital or sourcing stock
- Volume and quality
- Strong trading relationship with partner(s)
- Consistent and reliable in meeting terms of contracts
  - Discounts from membership of ICCO (Levy US30/MT)
  - Discount BP75/MT at LTM as non-recognised “Cocoa Source”
  - Cost of freight to the market
  - Import costs

6.1 SI “perceived position” in the international cocoa trade market

- Not clear in the current SE Asian market whose cocoa beans ranged from fermented to non-fermented beans
- SI beans used to blend with other non-fermented beans from other sources
- Determined by brokers and dealers
- Unable to verify or pre-determine
- Discount due to unreliability, in-consistency un-uniform product quality Product
- Smokey
- Low volume
- Discounted prices because of pre-financing arrangements

6.2 Our mixed signals to the market

GOOD



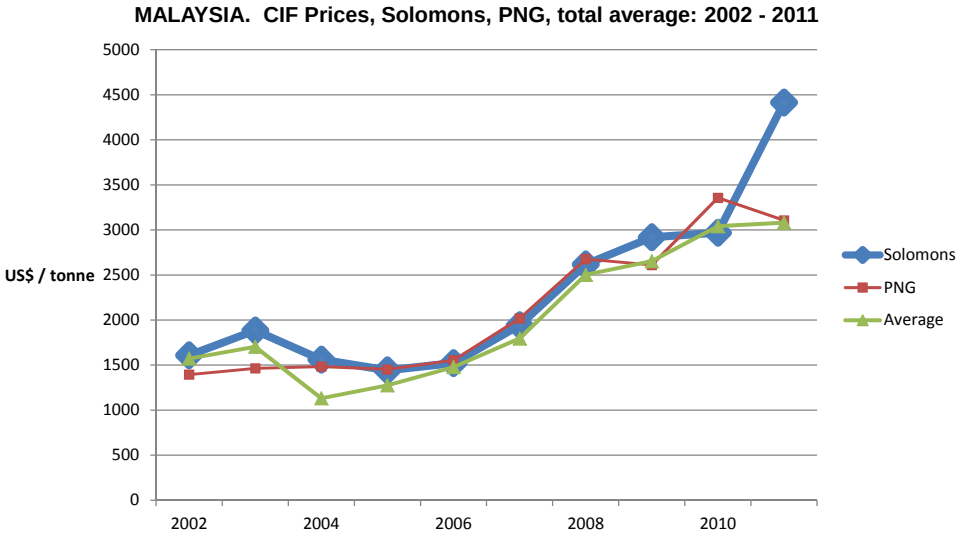

NOT SO GOOD



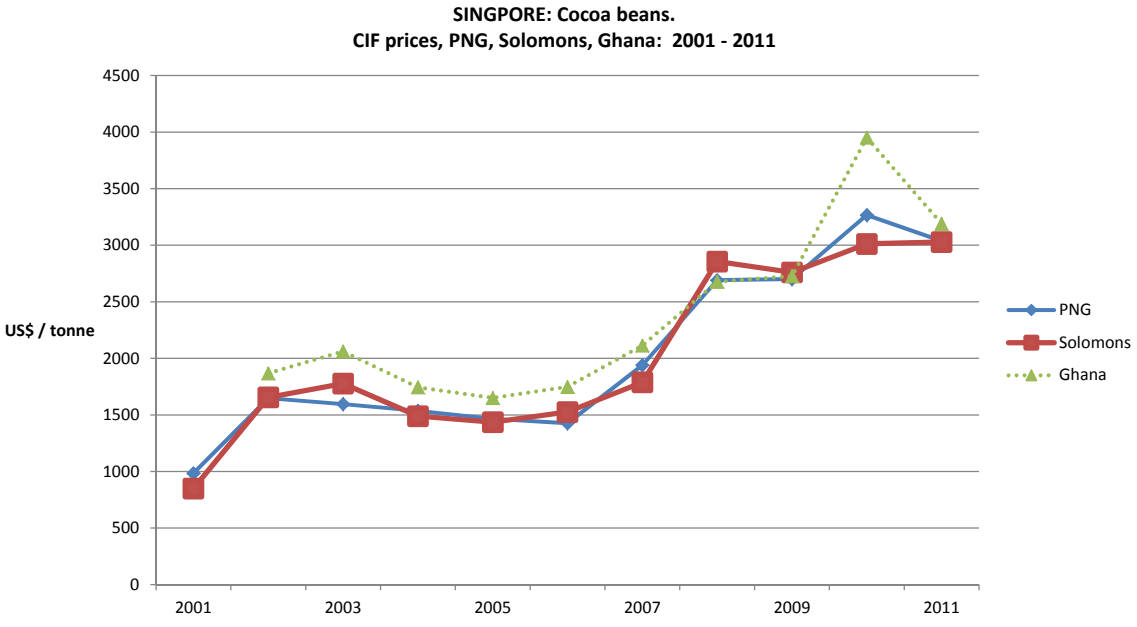

6.3 Some positive strengths of SI cocoa

- SI cocoa is fermented
- Used to receive premium prices in European markets up to 1990s
- Recently acknowledged for being good characteristic flavour in America, Australia and NZ
- Attracts specialty chocolate manufacturers as possible new source in Australia and NZ
- Attract niche markets- Organic, Fair Trade, Certifications, Single origin and product differentiation
- Ventures into direct trade with manufacturers/grinders through PGS partnerships
- SI main crop season (Apr- Jul) opposite to main world producers (Oct-Mar) while SE Asia (Sep/Oct-Dec/Feb)
- Most are organically grown
- No major pests and diseases
- Recent studies showed comparable demand with Papua New Guinea cocoa in the South East Asian markets (Malaysia, Singapore and Indonesia)
- Potential to increase its volume
- Developing track and trace systems
- Opportunities for single origin and product differentiation
- No use of slavery
- No child labour
- Potential branding to attract consumers in USA and Japan (WWII- “Guadalcanal”

6.4 Position of Solomon Islands Cocoa in Malaysian markets compared to PNG



6.5 Position of SI cocoa beans to Singapore markets compared to PNG and Ghana beans



7.1 Key Issues, challenges and recommendations

Issues and challenges	Recommendations
1. SI Cocoa Position in world market unknown so benefits to industry not optimised	**1.Need to assess current position of SI cocoa in the international market and improve level to maximise benefits**
2. Current trade and arrangements not expanding and stifling	**2.Explore new markets (bulk and niche) and encourage shorter and more competitive trading path**
3. Quality standards and perception need to be satisfy market demand	**3. Assess relevance of current Quality standard by encouraging Participatory Guarantee Scheme (PGS)**

7.2 Key Issues, challenges and Recommendations (Cont.)

Issues and challenges	Recommendations
4.Growers, processors, traders and exporters not aware or appreciate roles in maintaining good quality	4. **Educated all players on compliance, consistency, reliability supplying demanded quality beans**
5.Smoke and fermentation are key problems	**5. Implement cocoa regulations and provide appropriate support services**
6.No incentives or rewards for efforts at international and domestic trade level	**6.Investigate and establish price differentiation by grade in the international market so that it flows through the domestic market**

7.3 Key issues, challenges and recommendations (Cont.)

Issues and challenges	Recommendations
7. Difficulties in meeting PGS requirements and default or adulterate contracts resulting in termination of relationships	7. **Exporter to strive to meet PGS and contract requirements - encourage to establish "branding" products**
8.Low reputation as trading partner	**8. Build capacity, confidence and motivation to conduct good trading practices**
9.National Competent Authority on quality be recognised in the international trade	**9. Build capacity and reputation of CEMA as the national CA by establishing quality testing facilities and other services to support good trading relationships of partners**

7.4 Key Issues, challenges and recommendations (Cont.)

Issues and challenges	Recommendations
10. Low productivity and volume to meet potential demand	**10. Implement Cocoa Development Plan 2014-2020 with focus on improving productivity**
11.Investment in developing the cocoa industry is too dependant on government and donor partners	**11.Facilitate opportunities and incentives private sector to invest more in developing the cocoa industry**
12. Poor and inefficient domestic marketing services	**12. Improve domestic markets efficiency through leadership of the industry**
13. Poor or lack of infrastructure	**13. Invest in improving related infrastructure by government, private sector and donor partners**

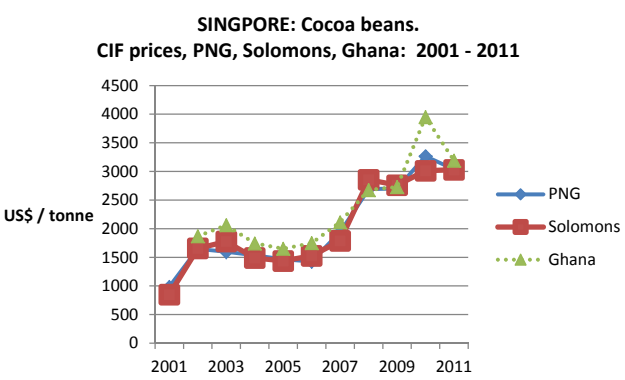
8. Desired intermediate Outcomes

- That cocoa produced increased in volume and recognised in the international cocoa trade and market to be consistent in quality, flavour and taste that it is used more in making chocolate and other cocoa products
- That SI cocoa exporters are recognised as worthy trade partners
- That SI cocoa is recognised for its uniqueness and recognised as a "source of cocoa beans" and positioned higher in the international market to increase the benefits to all the industry stakeholders and economy in Solomon Islands

9. CONCLUSION

- The Market Position of SI cocoa in the international trade is currently not clear, thus not optimising potential returns
- While improvements in quality, trade arrangements, trade partnership relationships, new markets, efficiencies are needed, SI cocoa has potentials to improve its current standing or reputation in the world markets
- To achieve the above, all stakeholders (industry, service providers, international cocoa stakeholders, government and development partners)must work together and invest appropriately into the cocoa industry

10. THANK YOU


SINGPORE: Cocoa beans.
CIF prices, PNG, Solomons, Ghana: 2001 - 2011
US$ / tonne
4500
4000
3500
3000
2500
2000
1500
1000
500
0
2001
2003
2005
2007
2009
2011
PNG
Solomons
Ghana


HEMP
Cnusper
Chocolate
Cnusper Chocolate


70

Appendix B

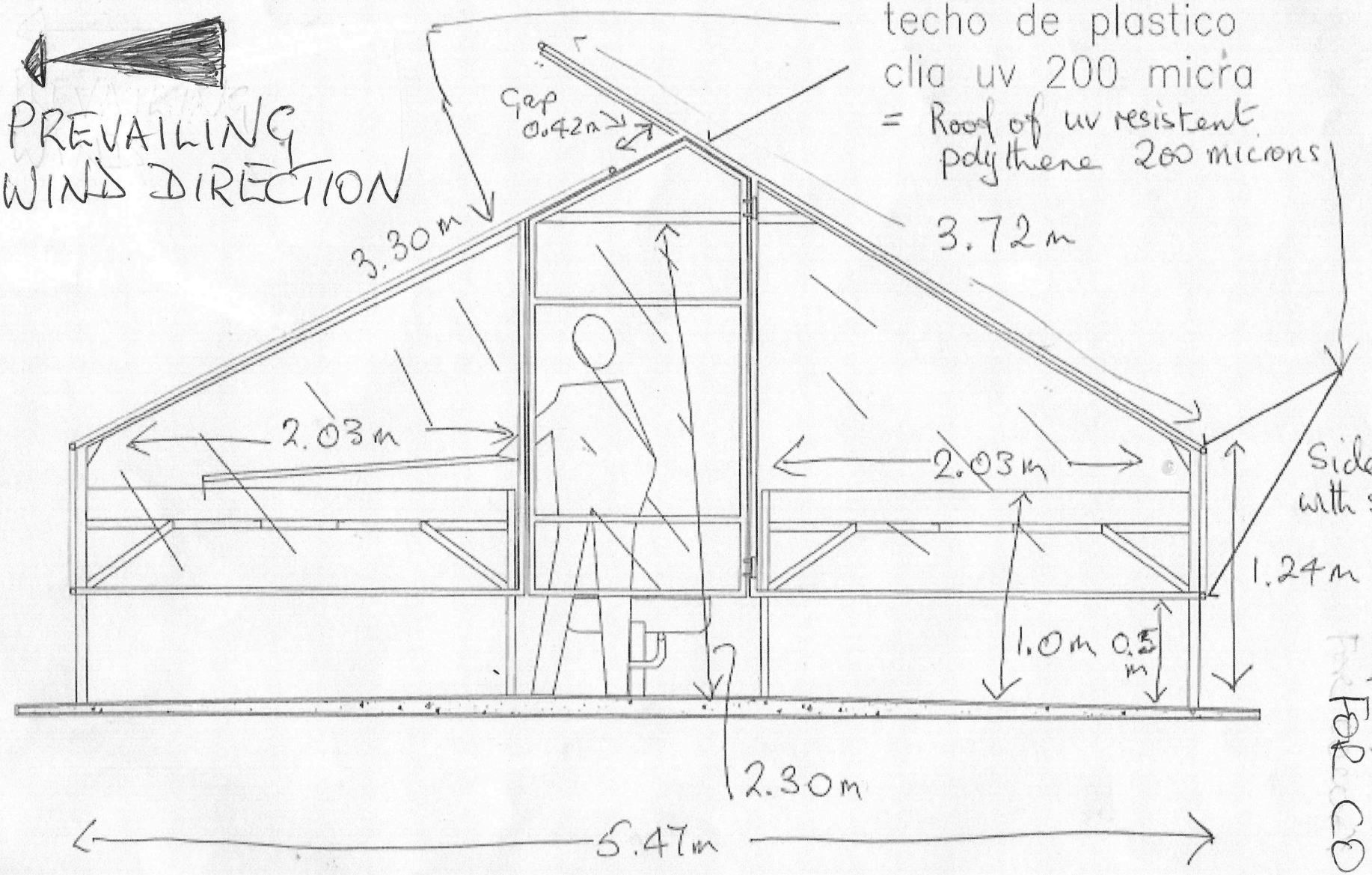
Proposed Timescales for Recommended Key Interventions

FIGURE 2: Some Potential Timelines for Reduction in Cocoa Sector Constraints in Solomon Islands

			2016 COCOA SEASON				2017 COCOA SEASON		
ISSUE	**JULY 15 - SEPT 15**	**OCT 15 - DEC 15**	**JAN 16 - MAR 16**	**APR 16 - JUNE 16**	**JULY 16 - SEPT 16**	**OCT 16 - DEC 16**	**JAN 17 - MAR 17**	**MAR 17 - JUNE 17**	**JUNE 17 - OCT 17**
FARMGATE PRICES									
INFO ON LONDON MARKET PRICES	CEMA/PAPERS	CEMA/PAPERS	CEMA/PAPERS	CEMA/PAPERS	CEMA/PAPERS	CEMA/PAPERS	CEMA/PAPERS	CEMA/PAPERS	CEMA/PAPERS
CEMA PRICES PROBE ABILITY OF COCOA EXPORTERS TO NEGOTIATE PRICE					BETTER DIFFERENTIAL				
EXPORTER LIQUIDITY									
EXPORTERS APPLY FOR & IMPLEMENT RDP PROJECTS									
POSSIBLE BSP/IFC RISK SHARE FACILITY									
EXPORTERS RUNNING 'BETTER' BUSINESSES			BUSINESS PLANS ETC						
COCOA DRYING									
COCOA DRYING REVIEW:BETTER WOOD FIRED ASSISTED SUN, PUBLICITY OF SUN DRYING BENEFITS	→		→	DRYER WORK COMPLETE	IMPLEMENTATION PERIOD FOR RESULTS				
SEEK MARKETS FOR SUN DRIED	→	→	→	→					
CONSULTANCY MISSION									

Appendix C

Schematic of Proposed Assisted Sun Dryer for Trial



ELEVACION FRONTAL

FIGURE 1: DESIGN OF ASSISTED SUN DRYING FACILITY FOR COCOA