

PAPER-FREE TRADE FOR SMALLHOLDER FARMERS

A PILOT STUDY OF A COFFEE ASSOCIATION
IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC

Sununtar Setboonsarng and Chris May

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Paper-Free Trade for Smallholder Farmers

A Pilot Study of a Coffee Association in the Lao People's Democratic Republic

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CONTENTS

TABLES AND FIGURE	iv
ACKNOWLEDGMENTS	v
ABBREVIATIONS	vi
ABSTRACT	vii
1 INTRODUCTION	1
2 BACKGROUND OF THE STUDY	1
2.1 Paper-Free Trading and Regional Cooperation in Agriculture in the Greater Mekong Subregion	1
2.2 Coffee Production and Marketing in the Lao People’s Democratic Republic	2
3 THE PILOT STUDY	3
3.1 Pilot Activity 1: Evaluation of Existing Documentation Process	4
3.2 Pilot Activity 2: Training Resources and Approaches	6
3.3 Project Outcomes	6
4 POTENTIAL ROLE OF THE AGRICULTURE INFORMATION NETWORK SYSTEM	7
5 LESSONS LEARNED FROM THE PAPER-FREE TRADE PILOT STUDY ON SMALLHOLDER COFFEE PRODUCERS IN THE LAO PEOPLE’S DEMOCRATIC REPUBLIC	8
6 CONCLUSIONS	9
APPENDIX 1: LAO PDR COFFEE PAPER-FREE TRADE PILOT STUDY WORK SCHEDULE (AUGUST 2011)	12
APPENDIX 2: RELATIONSHIP BETWEEN SOFTWARE AS A SERVICE AND FLOW OF GOODS	13
REFERENCES	14

TABLES AND FIGURE

TABLES

Potential Benefits of the Software as a Service	5
Appendix 1: Lao PDR Coffee Paper-Free Trade Pilot Study Work Schedule (August 2011)	12

FIGURE

Appendix 2: Relationship between Software as a Service and Flow of Goods	13
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ABBREVIATIONS

ADB	- Asian Development Bank
AGPC	- Association des Groupements de Producteurs de Café du Plateau de Bolovens (Bolaven Plateau Coffee Producers Association)
AINS	- GMS Agriculture Information Network Service
CASP	- Core Agriculture Support Program
CPC	- Bolaven Plateau Coffee Producers Cooperative
EU	- European Union
GMS	- Greater Mekong Subregion
IT	- information technology
LCEA	- Lao Coffee Export Association
Lao PDR	- Lao People's Democratic Republic
MAF	- Ministry of Agriculture and Forestry (Lao PDR)
SaaS	- software as a service
WGA	- GMS Working Group on Agriculture

ABSTRACT

Intraregional trade stands to gain from the considerable efficiencies to be derived from paper-free cross-border trading—reduced document transmission costs and finance and communications charges, fewer errors, and faster transactions. To assess the challenges and opportunities of paper-free trading for small and medium enterprises in developing countries and determine its impact on such enterprises, a pilot study involving the Association of Coffee Producer Groups (AGPC) in the Lao People’s Democratic Republic was done. A cloud-based software as a service (SaaS) designed to facilitate paper-free trade in coffee exports to Europe was pilot tested. By adopting paper-free trading, AGPC complied with new European Union regulations requiring it to present key trade data before shipping coffee to Europe, and thus reduced its trade documentation costs. According to the study, the document-handling efficiencies produced direct savings in time and money for AGPC of about \$200 per consignment. This demonstrates to governments and small businesses the wider benefits of online information transfer and provides impetus for streamlining cross-border trade document approval.

1 INTRODUCTION

Advances in telecommunications and transportation systems have intensified global trade. The internet, in particular, has changed the way business is done and is allowing producers from remote corners of the globe to participate profitably in international markets. Thanks to digitized paper documents, which have made trade transactions between countries less costly and less time consuming, small businesses can leapfrog into equal footing with the big players.

Electronic transmission of information in paper-free trade promotes transparency, a necessity in developing countries, where legal structures are often less well developed. Value-added features, such as automatic tracking of goods and monitoring of document processing, also foster transparency. Paper-free systems generally have built-in mechanisms that ensure the security of transactions. Moreover, standardized templates reduce errors in document entries, and electronic storage and transmittal makes it easier and cheaper to archive and retrieve information about each trade transaction. Cargo, therefore, clears customs more quickly and is less likely to be delivered late or incorrectly. For small and perishable goods, more can be saved, as transaction cost is only a fraction of the value of the goods (UNECE 2006).

However, paper-free trade is not without its drawbacks. Among the concerns is online protection against fraud and cybercrime. The risks are greater for small businesses, with few resources to mount effective software defenses against malicious e-mail and web links. In remote areas, small businesses may not even have reliable internet access and may not be computer literate. Language—the software is usually in English—can also pose a challenge. Programs are often customized to fit the needs of the participants in the electronic trade and the goods involved, so training and resources may be required for software modification before online systems can be used. This can be costly, in terms of time and money (Dubovec 2006). Without support from the government, development donors, or the private sector, small businesses are unlikely to move from paper-based to electronic transactions.

To elicit such support, the feasibility of electronic trade had to be assessed and its benefits, particularly for small and medium enterprise in developing countries, demonstrated. A pilot study was therefore done in 2011. The cloud-based software as a service (SaaS), designed to facilitate paper-free trade, was pilot tested among the members of an organization of smallholder farmers in the Lao People's Democratic Republic (Lao PDR) that exports coffee to Europe.

2 BACKGROUND OF THE STUDY

2.1 Paper-Free Trading and Regional Cooperation in Agriculture in the Greater Mekong Subregion

Regional cooperation in agriculture in the Greater Mekong Subregion (GMS) is facilitated by its Working Group on Agriculture (WGA), which was formed in 2002 with a mission “to help reduce poverty in the GMS through partnerships with rural communities to promote agricultural trade, food security, and sustainable livelihoods.” The WGA is guided in this task by the regional cooperation strategy known as the GMS Core Agriculture Support Program (CASP), now in its second phase (CASP II).

Under CASP II, the GMS is to be “recognized as a leading producer of safe food, using climate-friendly agricultural practices, and integrated into global markets through GMS transport corridors” (ADB 2012, p. iii). This CASP II vision rests on three strategic pillars: (i) building global competitiveness by introducing information and communications technology and harmonized certification systems to promote food safety and modernize agricultural trade; (ii) promoting climate-friendly agriculture through a market-based strategy to ensure food security while rewarding farmers for their ecosystem services; and (iii) promoting agriculture as a leader in providing clean renewable rural energy through efficient use of biomass for bioenergy while ensuring food security.

At the ninth WGA Meeting in July 2012, representatives of the GMS countries agreed to promote cross-border paper-free trade under the first strategic pillar (food safety and agricultural trade modernization) to improve competitiveness in the region. Discussions with the Ministry of Agriculture and Forestry (MAF) of the Lao PDR resulted in an agreement to pilot test paper-free trade among the smallholder coffee producers belonging to the Association of Coffee Producer Groups (AGPC)¹ in Pakse Province. The lessons from the pilot study would then be shared with all the other GMS countries and would support broader activities under the GMS Agriculture Information Network Service (AINS),² an online platform promoting the exchange of agriculture-related information among the countries in the subregion.

2.2 Coffee Production and Marketing in the Lao People’s Democratic Republic

The importance of coffee to the economy of the Lao PDR, particularly to the smallholder farmers, made it the crop of choice for the pilot study. Coffee, mostly grown by poor smallholder farmers, makes up about 80% of the country’s agricultural exports. Recent developments, such as the consolidation of the Lao PDR’s new export markets in the European Union (EU) and improvements in the quality of its coffee, have earned a good name abroad for Lao PDR coffee. As a result, the local coffee industry has significantly expanded, with more land, generally pristine, being devoted to coffee production. In particular, the cool climate in the upper elevations and the red volcanic soils in the south are suitable for the growing of high-quality coffee (Winston et al. 2005). But while the coffee sector is promising, it is still young and fragile. Competition is tough; other countries in the region, such as Indonesia and Viet Nam, are also major coffee exporters.³ Any barriers imposed by international trade policy on the country’s coffee exports could hurt the budding industry and the livelihood of smallholder coffee farmers. However, the successful adoption of innovative technologies, such as paper-free trade, by smallholder associations could make the Lao PDR’s coffee industry more competitive in export markets.

To export coffee, producers in the Lao PDR must comply with the trading standards followed by other customs authorities worldwide. Accurate data on all export goods must be sent to countries of target markets before the goods are loaded at the port of dispatch. Normally, AGPC sends paper documents by courier to these countries.

¹ AGPC was upgraded into a cooperative on 4 March 2014 and is now known as the Bolaven Plateau Coffee Producers Cooperative (CPC), but this paper refers to it as “AGPC.”

² Established in 2006, AINS, through its website, aims to contribute to the “enhanced growth performance of the agriculture sector in the GMS through increased investments and enhanced cross-border trade transactions among GMS countries and with various regions of the globe.”

³ In 2011, Indonesia’s green coffee exports were valued at \$1.03 billion and Viet Nam’s at about \$2.75 billion (making green coffee Viet Nam’s top export crop). In comparison, the Lao PDR exported \$72.5 million worth (www.FaoStat.fao.org).

The change made in 2011 in the regulations governing exports to EU countries was bound to affect the Lao PDR's small coffee producers. Key trade data now have to be sent to the EU in paper-free electronic format before goods are shipped. Exporters that do not comply are fined and their goods receive a "Do Not Load" classification, resulting in delays, additional charges, and lost sales. To facilitate the implementation of the new regulation, the EU, in partnership with Microsoft (Global Azure Partner), engaged an information technology (IT) organization to develop SaaS. This cloud application provides stakeholders in the export supply chain across the globe with a paper-free (electronic) way of complying with new legislative requirements for cross-border trade, thus helping to make trading faster, cheaper, and greener.

3 THE PILOT STUDY

With MAF endorsement, the pilot study was carried out with the AGPC, representing the largest organized group of smallholder coffee producers in the Lao PDR. The AGPC is pro-poor and promotes sustainable production methods. It was formed in 2006 to improve the quality of coffee beans from smallholders and the livelihood of its members—2,662 poor households from 53 producer groups. In 2010, AGPC exported 25 containers of green bean coffee, mostly to the EU. Quality improvements and organic and fair-trade certification have helped propel Lao PDR coffee into the high-end markets globally, where it now sells at premium prices. Armed with innovative technologies like those demonstrated in the pilot study, small enterprises can now reap the benefits of globalization.

The design of the pilot study was a collaborative effort between the MAF, the Lao Coffee Export Association (LCEA), and AGPC. The first activity was a business process analysis of the existing procedures and document trail for the export of coffee. A comparative analysis of these processes before and after SaaS was made to demonstrate the benefits and relevance of paper-free electronic trading both to users and to potential donors. Each step in the process was identified, together with the associated documents and the persons and agencies involved. The descriptive analysis provided the baseline for a comparative assessment of the overall benefits of adopting the SaaS. For AGPC, this analysis was important, as it highlighted constraints and bottlenecks in the process that meant unnecessary costs.

The training of AGPC staff in the use of the SaaS (Appendix 1) was central to the study. The consultant worked with AGPC staff to document the AGPC coffee export trail, gave AGPC staff a detailed description of the SaaS application to paper-free export transactions, and reviewed the contents of online trade templates from the SaaS. The consultant also provided hands-on training in person to AGPC staff and an IT organization provided online training via Skype to introduce the SaaS trade process step by step to participants—from sellers (exporters) to buyers (customers), including online registration—and to familiarize them with the relevant templates for exporters and sellers (AGPC details and their products). Agents in the supply chain, including the freight forwarder (TEC Logistics), the shipping company (Hapag-Lloyd), and the buyer (CafeMa), were likewise acquainted with the paper-free SaaS system and its use. Follow-up sessions with a hands-on demonstration of SaaS were also provided at the offices of TEC Logistics and Hapag-Lloyd in Bangkok. AGPC staff could practice using SaaS through the IT organization's online training option, free of charge, for a limited period.

A memorandum of understanding signed between AGPC and the IT organization committed the two parties to work together, and export transaction fees were waived for AGPC until April 2012.

AGPC was thus able to learn how to use the system by completing a number of export trades at zero cost over several months.

3.1 Pilot Activity 1: Evaluation of Existing Documentation Process

Under the paper-based system, there are two levels of documentation for coffee exports from the Lao PDR: (i) documentation that covers the contract between the buyer and the seller, and transport and shipping arrangements (which can be captured by the SaaS); and (ii) certification covering origin, customs clearance, phytosanitary standards, and taxes paid.

These documents are gathered from the various government departments and are then sent by courier to the importer or buyer. The cost of this transaction, plus the costs of other document processing (transport to various offices and staff time spent dispatching documents) for each shipment, is estimated at around \$80, a cost that exporters can save under SaaS, as the original documents can be uploaded as .PDF files into the trade (sellers and buyers) templates and transmitted securely with the help of cloud-based technologies.

The process of obtaining certificates of origin, as well as phytosanitary and quality certificates, requires staff visits to government offices. Delays are inevitable and undisclosed fees amounting to about \$150 per export shipment have to be paid. While online issuance of certificates may still entail fees, it would save at least 2 days of AGPC staff time and related costs of at least \$160.

In electronic format, the certificates are easily transferred to the various customs departments and buyers at no extra cost. With the SaaS, they can be transferred as .PDF file attachments to the sellers' documents. In the current system, the process of obtaining these clearance certificates is highly bureaucratic and provides a source of revenue for the government agencies or ministries that issue different certificates, including the Ministry of Trade and Commerce, the Ministry of Science and Technology, MAF, and the Customs Department, which calculates the coffee tax. Issuing all of these certificates electronically will bring down the transaction costs of exporters.

Expected benefits of SaaS use. Under SaaS, the exporters will not have to wait a considerable amount of time for documents to reach the buyers and the customs clearance authorities. Shipments can be released faster and payments made right after a freight-on-board notification with the bill of lading is posted via the cloud (see process diagram in Appendix 2). SaaS will improve efficiency, reduce time consumption and cost in cross-border trade, and also bring the public services closer to the business communities. In the region, similar outcomes are promoted by the Pan-Asian E-Commerce Alliance, which brings together 11 organizations from Asian economies committed to realizing seamless electronic cross-border trade transactions. Traders that tap a member's resources can expect ready acceptance of cross-border approvals and certification policy in one stop.

The SaaS is not expected to and will not resolve the issue of staff time and travel costs associated with the current clearance certification and document exchange systems of government agencies. What SaaS does is to allow traders in the supply chain to manage all data and documents related to the logistics of the complete trade. Key areas where the SaaS will save money and time,⁴ as identified by AGPC, are in the document exchange process, when key documents covering the details of the trade (selling and buying details) and the movement of coffee can be immediately posted via the web (cloud-based). These documents need to be completed only once, possibly with

⁴ AGPC estimates savings of about \$150 and 1 day of staff time for each consignment.

additional information, such as the certificate of origin and other certificates, attached as a .PDF file to the originals of the seller and buyer documents.

Potential Benefits of the Software as a Service

Export Documents Required	Current process to facilitate export (time and money costs in parentheses)	Document Transfer Method	
		Before SaaS	With SaaS
Contract (sales details)	Via internet and telephone (1 day, \$40)	E-mail, courier document (1 document costing \$60-\$80)	SaaS (log in and enter or update data in template, 5-10 minutes)
Invoice and packing list	Via internet and telephone (0.5 day estimate, \$20)	E-mail, courier cost included above	SaaS (as above)
Shipping advice, etc.	Via internet and telephone (0.5 day estimate, \$20)	E-mail, courier cost included above	SaaS (as above)
Bill of lading	Via internet and telephone (from shipping company to agent and forwarded by AGPC)	E-mail and courier document transfer (2 documents, each costing \$60-\$80)	SaaS (as above or sent as attachment) using electronically secure signature
Certificate of compliance with phytosanitary standards	*Trip to government office, complete documents (0.5 day)	Courier cost included above	Trip to office, complete documents via SaaS as PDF attachments (0.5 day)
Certificate of origin	*Trip to office, complete documents (0.5 day)	Courier cost included above	Trip to office, complete documents via SaaS as PDF attachments (0.5 day)
Certificate of quality	*Trip to office, complete documents (time as above)	Courier cost included above	Trip to office, complete documents via SaaS as PDF attachments (0.5 day)
Organic and fair-trade certification	*On file	Courier cost included above	Trip to office, complete documents via SaaS as PDF attachment (0.5 day)
Export tax	Trip to office, complete documents (0.5 day)	Local transaction	Not needed for EU
Customs (border)	Trip to border, complete documents (1 day)	Attached to container	Not needed for EU
Transport clearance (border)	*Trip to border, complete documents (time as above)	Attached to container	Not needed for EU
Estimated total time input	4 days (repeat trips to government offices are common but not estimated here)		2 days

AGPC = Bolaven Plateau Coffee Producers Association (now the Bolaven Plateau Coffee Producers Cooperative), EU = European Union, SaaS = software as a service.

* Overlapping tasks.

Source: Authors' calculations based on pilot study.

In the future, when all certificates are issued electronically by the government agencies responsible, as they are in many countries, there will be additional cost savings to the exporter. Until that time, however, certificates of origin, as well as phytosanitary and quality certificates, will require staff visits to government offices, with the attendant delays and undisclosed fees discussed on the

previous page. In electronic format, these certificates are easily transferred to the various customs departments and buyers at no extra cost.

3.2 Pilot Activity 2: Training Resources and Approaches

Most farmers in the GMS are smallholders. Technology offers them opportunities to expand their markets. Paper-free systems, in particular, substantially reduce the cost of trade transactions. As SaaS is designed to accommodate trading in other products besides coffee, its use in the GMS will streamline cross-border transactions and increase their frequency in the subregion, thereby enhancing regional cooperation through trade. Hence, facilitating the spread of the paper-free systems in the subregion makes training in the use of SaaS a key part of the pilot study.

Online training. The AGPC staff trainees included export and marketing managers, who can do business in English. For AGPC staff as a whole, a workshop was conducted by the export manager and the project consultant to demonstrate the online system and how it would benefit AGPC. A training-of-trainers approach is also possible, as the AGPC trainees could eventually train other exporters in the agriculture sector to use the SaaS. The online training service allowed AGPC to engage directly with the developers and managers of the SaaS and helped build what is likely to be a long-term working relationship.

The training also enabled AGPC to see exactly how the system works and what information is required at various stages of the trading process. Live training can be paused at any time for questions. The simulation of actual trades is also possible, but is more easily done after the seller and buyer registrations have been completed. Thus, once the initial training is complete, AGPC (the seller) is able to register in the online system and provide details about other agencies involved in the movement of its goods (supply chain). Needless to say, English language proficiency and hands-on experience in the handling of export documents are prerequisites for understanding the overall benefits of the SaaS.

Time zones. A minor constraint on the scheduling of training was the time-zone difference between Ireland and Asia. For AGPC, the training began at 3 p.m. Lao PDR time, which was 9 a.m. Dublin time. In future training sessions, the materials should include a series of videos to supplement both online and face-to-face trainings, as well as to address the difference in time zones.

3.3 Project Outcomes

The AGPC training in the use of the SaaS resulted in direct savings in office and staff costs equal to 2 days, valued at \$80, and savings of \$120–\$160 from not requiring document transfers by courier on at least two occasions. Making changes in transaction data electronically saved staff time and money. Moreover, the pilot study enabled discussions with other groups working on related projects. For one, AGPC proposed to the World Bank team on the Trade Development Facility Project, which supported the removal of constraints on cross-border trade and aimed for transparency in the government system of issuing and charging for export certificates, that a fee be charged for each service to improve transparency. Another project, this one involving the setting up of a national single window for the Lao PDR, included the development of software for the online registration of phytosanitary certificates. The system is in place but was not in operation at the time of the study because of limited internet capacity.

In summary, the following benefits and potential cost savings can be derived through the use of the SaaS (details are found in the table):

- The SaaS provides a database that allows transaction data to be reviewed and revised without additional costs. In a manual system, if changes are required, documents must be rewritten and resent, incurring additional costs.
- Following the training provided during the pilot study, AGPC had direct savings in office and staff costs equal to 2 days, valued at \$80, and savings of \$120–\$160 from not having to transmit two documents by courier.
- The overall savings for each shipment of one or more containers amount to \$200–\$240.
- AGPC makes at least five export shipments a year to the EU, and could make more shipments as its production base grows. In 2012, AGPC saved between \$1,000 and \$1,200, a significant amount for this small-business entity.

The study also provided a summary of the regulatory requirements of the EU Import Control System; and a short description of the SaaS along with key contact points was prepared and sent to the LCEA for dissemination to its members. All LCEA members were informed on how to access the SaaS for paper-free trade.

4 POTENTIAL ROLE OF THE AGRICULTURE INFORMATION NETWORK SYSTEM

The study complemented and supported the goals of AINS, which is focused on (i) enhancing coordination and communication among the GMS countries, (ii) facilitating cross-border agricultural trade and investment, and (iii) establishing AINS and agri-knowledge platforms.

Within the framework of its current services, the AINS website can provide detailed information about trade regulations, including potential paper-free software solutions to meet compliance requirements. This information and the website links may be enough for some exporters. But, as the pilot study showed, to understand the process and get the message across, there is a strong need for hands-on online support and training services. To develop this capacity, AINS should work with private sector service providers (perhaps in partnership to protect intellectual property), to offer and facilitate appropriate training and technical support services in paper-free trading for small and medium-sized exporters in the GMS.

To build awareness of paper-free trading among key stakeholders, AINS should actively communicate the needs of the trading community to governments, and work with and through governments to reach small and medium-sized exporters within the region. This process would engage key agencies (not just agriculture ministries) within and outside governments that are responsible for promoting and supporting trade, in direct exchanges⁵ with AINS to ensure that there is continuing dialogue on the issues, that the message is being heard, and that action is being taken.

⁵ Direct exchanges could involve workshops and meetings, as well as questionnaires.

An important objective of AINS is to facilitate cross-border agricultural trade and investment within the region. It follows, therefore, that once the above functions have been set in place and new capacity has been created for paper-free trade, the role of AINS could be expanded. It could also include the adoption and design of a paper-free system within the GMS, thereby improving the efficiency of trade information exchange within the region, as well as other levels of documentation, such as e-forms of sanitary and phytosanitary certificates and various other e-documents. AINS could also explore opportunities for regional quality standards and product guarantees, particularly those that help smallholder producers gain local and regional market recognition, and promote these standards in the GMS. Participatory guarantee systems are an example of an approach to linking smallholders to markets and providing them with a product logo that can reflect various quality standards. To develop the capacity to fulfill its objectives, AINS will need to adopt a dynamic approach to how it functions and promotes its services. This will require technical support and resources to enhance its capacity and capability to take on a new and expanded role.

5 LESSONS LEARNED FROM THE PAPER-FREE TRADE PILOT STUDY ON SMALLHOLDER COFFEE PRODUCERS IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC

At the time of the study, no government agencies were implementing paper-free trade systems and only a few exporters within the GMS seemed to be aware of the new EU regulation requiring electronic (paper-free) transfer of shipment details before loading. The adoption of SaaS would help small businesses comply with EU requirements.

Implementing similar pilot studies for products that are most important to the country would encourage participation in paper-free trading. This pilot study offers lessons that can help promote the use of SaaS in the GMS, inform the development of SaaS training materials for smallholders, and communicate the advantages of SaaS to stakeholders.

Replicability. SaaS is applicable to all traded products, not only agricultural ones. However, as each product or crop may require specific handling procedures, external support may be needed to modify the software to suit the crop. Organizations in the GMS that export to the EU, whether they be smallholder associations or companies, should be already familiar with the export process and have systems in place for completing the required transactions for the transfer of goods. Provided they have internet access and a medium level of computer literacy, the adoption of SaaS should be straightforward for all operators in the subregion.

Internet access. As the pilot study showed, internet access is now advancing in the subregion, even for less developed members. In 2012, internet use by individuals averaged 16.6% for the GMS (excluding Yunnan and Guangxi provinces of the People's Republic of China). In the Lao PDR, growth was significant—from 4% in 2008 to 11% in 2012 (Greene 2013). Internet speed in the Lao PDR averaged 4.0 megabytes per second (mbps), vs. the 10.12 mbps average in the GMS in 2012, but slow connections did not hinder the implementation of the pilot study (Magdirila 2014). The participants were able to secure online access, even in remote areas. Smallholders in other GMS countries should be able to implement the SaaS.

Computer literacy not a constraint. AGPC administrative staff without special training in the use of computers could master the SaaS without any problem, given training time of less than an hour,

the pilot study showed. Participants having the right expectations would facilitate future training and make it more supportive and effective.

Blended approach to training. Training, both face-to-face and online, was done during the pilot study. The AGPC team and the trainers agreed that at times during online (live) training, the technical language and the presenters' Irish English accent were difficult to follow. Two suggestions were made: (i) to slow down the delivery by the presenters and repeat each step to help bridge the challenges faced by trainees who are nonnative English speakers; and (ii) to begin the training with explanations of the key trade terms used. Training videos could also aid the process, as trainees could schedule their training at will and learn at their own pace.

Awareness building. There is a need to build smallholder awareness of the potential of SaaS. One way is to communicate the results of the pilot study to governments, donors, and potential trade partners. The results could also be shared through websites of potential partners, as well as in regional and local forums and events relevant to e-trade. In addition, AINS could be used as a one-stop shop for relevant information on SaaS-related projects of the WGA.

Security and transparency of information. The generally limited use of technology in the business operations of small businesses gives rise to a number of concerns, which must be dealt with. For instance, both AGPC and members of the LCEA raised the issue of security and transparency of information once it is available online. Microsoft Windows Azure cloud computing technology has addressed this concern. Information entered into the system is secure and documents can be viewed only by users who are specifically registered for this purpose. Thus, contract details, such as prices, are protected and can be viewed only by the seller and the buyer. Moreover, the system electronically produces the documentation required to initiate payments for goods (it automatically transmits the bill of lading), but it does not include a facility for making actual payments.

Translations of training documents. Several members of the LCEA requested that the training information be translated into Lao. But as the language of trade with the EU is English, it was eventually agreed that translation would yield little benefit. A summary of the PowerPoint presentation on paper-free trade has nonetheless been made available to the association in case it decides to have the training documents translated.

6 CONCLUSIONS

Electronic trade brings two significant benefits to small businesses: improved efficiency and lower transaction costs. Once paper-free trade systems are in place, these benefits will generate even greater returns with continued use, particularly as the world of business systems moves increasingly toward electronic trade. Paper-free trade promotes transparency of transactions, reduces losses from errors in documentation, and streamlines operating procedures. Overhead costs, which often hinder the growth of small businesses, are minimized. Savings can grow in the future, funding internal investments that in turn increase profitability.

Given the shift from paper trading to paper-free trading, the cost of needed resources and access to technology are common concerns among small businesses and their potential partners. But the location and skills of small farmers do not pose obstacles, as the pilot study demonstrated.

The following are the main conclusions from the pilot study.

Ease of use. Paper-free forms are easy to use. The adoption of a paper-free, cloud-based service for conducting electronic trade is straightforward once the exporter understands the rationale for engaging in the process and has knowledge of the appropriate service solution. With internet access even in remote locations in the GMS and minimal training time required, innovative technology is now available to small farmers in far-flung locations and can significantly improve their livelihood.

Need for external support. As costs are likely to be incurred in the transition from traditional paper-based trade to e-trade, external support, from the government, donors, and business partners, among others, is important. This is particularly true for small players, which lack the resources needed to make the shift. External support will also facilitate the replication of similar pilot studies on small producers of other products. GMS governments looking to operationalize paper-free trade for agri-food products in the subregion would do well to give priority attention to producers of pro-poor and green products.

Future benefits. There is much more to gain from paper-free trade in the future. As the process of documenting exports becomes increasingly paperless, participants in trade will save more money and time, thus justifying the initial investments in training and software cost. For small businesses, paper-free trade levels the playing field and allows them to be on equal footing with big players. With internet access, farmers can reach potential buyers the world over and substantially increase their incomes and overall well-being. Updated on market trends and business information, these small farmers are given the chance to gain more from global trade and see their businesses grow.

Awareness building. There is a need to promote awareness of the benefits of paper-free trade for small businesses. Change is often avoided and resisted. Hence, the results of pilot studies on paper-free trade such as this should be communicated widely to stakeholders, such as government agencies, donors, and small and medium-sized exporters throughout the GMS, to promote the replication of the pilot studies, this time for other export commodities in the GMS. Further insights can also be gained into how paper-free trade can be effectively supported among small and medium agribusiness enterprises to enable them to export products to global markets. One platform of communication for interested parties is through the GMS AINS. The AINS, an online site, can provide a framework for building various functions of e-trade. It could become the forum for promoting paper-free trade in the subregion. But it should first adopt a more dynamic, proactive approach to facilitating trade within the region and to markets outside.

Paper-free trade platforms herald a new era of opportunity even for the smallest farmers in the developing world. As the Lao coffee pilot study showed, technology opens up more possibilities for achieving rural growth and development. Expanding the application of paper-free trade to other crops and to poor farmers in the GMS is one important way of realizing the overarching goal of making global agricultural trade inclusive and pro-poor.

FOR FURTHER INFORMATION:

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EU Security Amendment to the Customs Code | Procedures. For goods entering the customs territory of the European Union, pre-arrival declarations must be lodged electronically by the person, and within the timelines (see the guidelines on the import of goods  (163 Kb)  into the customs territory and import scenarios  (278 Kb) ) set out by customs legislation.

The **United Nations Economic and Social Commission for Asia and the Pacific** (www.unescap.org/unnext/) has delivered tools related to implementing improved trade facilitation and, with ADB, has now run four Asia Pacific Trade Facilitation Forums in the region. For more information, contact: www.unescap.org/unnext/

World Bank Lao People's Democratic Republic-Trade Development Facility Project Implementation Status and Results Report, November 2012. Contact: (+856-21) 266 200 Patou Xay, Nehru Road, Vientiane. E-mail: worldbanklaos@worldbank.org

APPENDIX 1: LAO PDR COFFEE PAPER-FREE TRADE PILOT STUDY WORK SCHEDULE (AUGUST 2011)

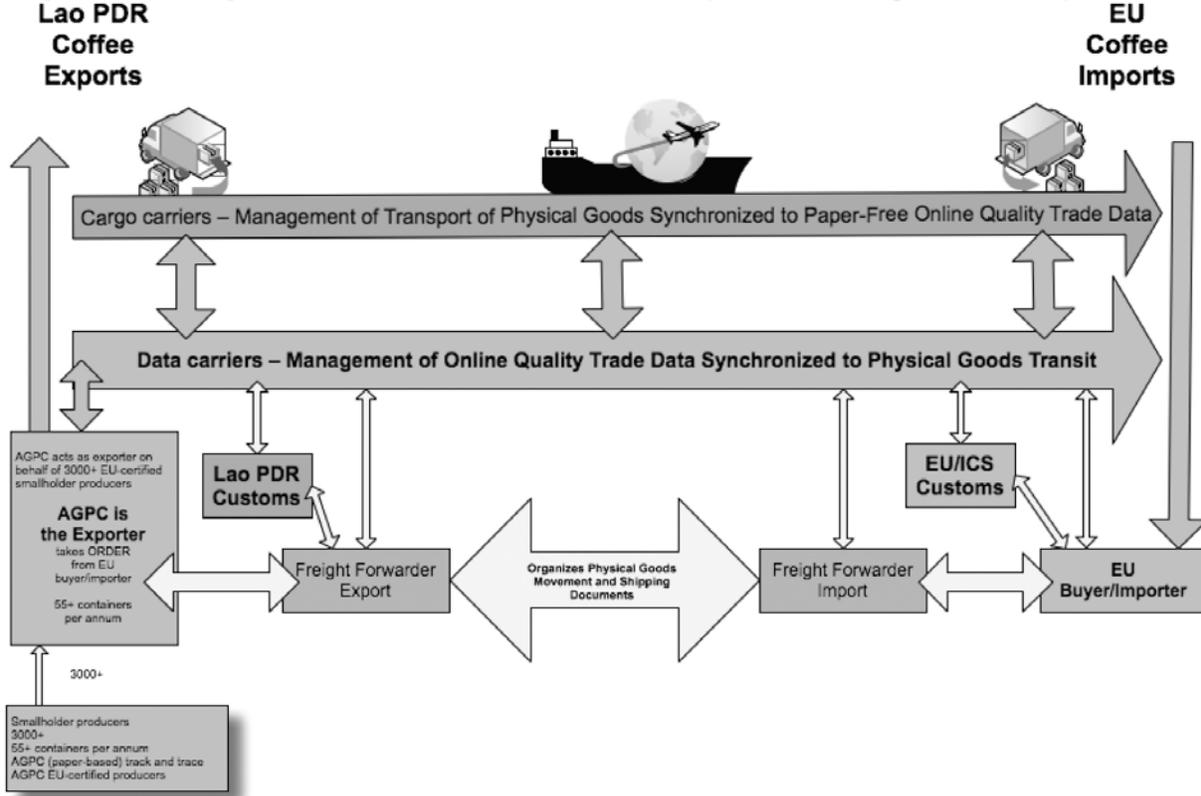
Task	Activities	Schedule
Background preparation	Liaise with Ministry of Agriculture and Forestry, Department of Agriculture: Deputy Director General Phayday Phixaysarakham	Jan 2011 and Mar 2011
1.0 Background research into product and applications to exports of the IT organization	1.1 Review applications for improving trade transactions and process	1 Aug 2011
2.0 Build relationship with the IT organization	2.1 Prepare a concept note that outlines EU ICS requirements and how SaaS (software) can address the requirements of the new regulation 2.2 Introduce idea of pilot study to IT organization and how it will support the project 2.3 Propose MOU to formalize support	2 Aug 2011
3.0 Prepare stakeholders in the Lao PDR (AGPC and the Lao Coffee Export Association)	3.1 Communicate with stakeholders in the Lao PDR to explain purpose of pilot study, gather background data on coffee trading documentation, arrange training schedule with AGPC 3.2 Prepare draft MOU, send to AGPC for approval, and finalize process	3 Aug 2011
4.0 Prepare training materials	4.1 Source training manual and prepare other training materials, plus online codes for accessing live training modules 4.2 Hands-on training on SaaS (experience the process of using SaaS)	3 and 4 Aug 2011
5.0 Introduce pilot study to ADB (Kulwant Singh and Vinoth Vansy)	5.1 Describe the paper-free study and work plan	12 Aug 2011 (Vientiane)
6.0 Introduce pilot study to the Department of Agriculture (Deputy Director General Phayday Phixaysarakham)	6.1 Introduce the paper-free study and work plan and possible options for paper-free phytosanitary and other certifications	12 Aug 2011 (Vientiane)
7.0 Introduce project to Lao Coffee Export Association (Chairman Sinouk Sisombat)	7.1 Provide update on the Lao PDR coffee sector issues 7.2 Give overview of paper-free trade requirements of the EU 7.3 Plan workshop for association members	14 Aug 2011 (Pakse)
8.0 Conduct capacity building for AGPC (export and marketing staff)	8.1 Introduce the paper-free trade and SaaS 8.2 Discuss and confirm training schedule for AGPC staff 8.3 Detail the existing export process: <ul style="list-style-type: none"> • Identify the different parties involved in the supply chain • Prepare a detailed list of all documents required for exporting and the process of their receipt (by whom and how) 	15 Aug 2011 (Pakse)
8.0 Conduct capacity building for AGPC	8.1 Provide hands-on training in application of the SaaS system with trainers	16 Aug 2011 (Pakse)
9.0 Conduct capacity building for AGPC	9.1 Send details of AGPC's registration in the SaaS system to the freight forwarder, shipping company, and buyers and provide details on how they can log in for the service	17 Aug 2011 (Pakse)
10.0 Conduct capacity building for Lao Coffee Export Association	10.1 Hold workshop for AGPC members and government agencies involved in document preparation for exports	18 Aug 2011 (Pakse)
11.0 Review training (with AGPC)	11.1 Identify gaps or issues surrounding the use of the SaaS system and resolve them as required	19 Aug 2011 (Pakse)
12.0 Prepare reports	12.1 Prepare reports for ADB (document training process, lessons learned, ideas for promoting paper-free trade in the GMS countries)	19 Aug 2011 (Pakse)

ADB = Asian Development Bank, AGPC = Bolaven Plateau Coffee Producers Association (now the Bolaven Plateau Coffee Producers Cooperative), EU = European Union, GMS = Greater Mekong Subregion, ICS = Import Control System, IT = information technology, Lao PDR = Lao People's Democratic Republic, MOU = memorandum of understanding, SaaS = software as a service.

Source: Authors' notes.

APPENDIX 2: RELATIONSHIP BETWEEN SOFTWARE AS A SERVICE AND FLOW OF GOODS

[AGPC – Model] - Lao PDR EU-Certified SME Coffee Exports Addressing EU/ICS – Paper-Free



AGPC = Bolaven Plateau Coffee Producers Association (now the Bolaven Plateau Coffee Producers Cooperative), EU = European Union, ICS = Import Control System, Lao PDR = Lao People’s Democratic Republic, SMEs = small and medium-sized enterprises.

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Paper-Free Trade for Smallholder Farmers

A Pilot Study of a Coffee Association in the Lao People's Democratic Republic

This paper describes a pilot study on paper-free trade in coffee exported to Europe by the Lao People's Democratic Republic, using a cloud-based software as a service. The time and money savings obtained by the coffee producer organization in document handling demonstrate to governments and small businesses the wider benefits of online information transfer and provide impetus for streamlining the approval of cross-border trade documents.

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