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# AGRIBUSINESS REGULATION AND INSTITUTIONS (AGRI) INDEX



**JANUARY 2015**

This report was produced for the United States Agency for International Development by the USAID/Enabling Agricultural Trade (EAT) project, implemented by Firtrac Inc.

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## ABOUT THE ENABLING AGRICULTURAL TRADE PROJECT

The Enabling Agricultural Trade (EAT) project, funded by the United States Agency for International Development (USAID) and implemented by Fintrac Inc., supports the US Government's global efforts to create conditions for agricultural growth. USAID established USAID-EAT based on substantial academic and field experience suggesting that a sound legal, regulatory, and institutional environment is a prerequisite to economic growth in the agricultural sector. USAID-EAT offers a suite of targeted and customizable analytical tools to support startup and growth of businesses across the agricultural sector.

### **DISCLAIMER**

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## ACRONYMS

<b>ADR</b>	Alternative Dispute Resolution
<b>AgBEE</b>	Agribusiness Enabling Environment
<b>AgCLIR</b>	Agribusiness Commercial Legal and Institutional Reform Diagnostic
<b>AGRI</b>	Agribusiness Regulation and Institutions Index
<b>BNDA</b>	Mali's Agriculture Development Bank ( <i>La Banque Nationale de Développement Agricole</i> )
<b>COMESA</b>	Common Market for Eastern and Southern Africa
<b>EAT</b>	USAID's Enabling Agricultural Trade project
<b>EBA</b>	World Bank's Enabling the Business of Agriculture project
<b>ECOWAS</b>	Economic Community of West African States
<b>EU</b>	European Union
<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>GDP</b>	Gross Domestic Product
<b>IFC</b>	International Finance Corporation (member of the World Bank Group)
<b>LLC</b>	Limited Liability Company
<b>MoA</b>	Ministry of Agriculture
<b>M&amp;E</b>	Monitoring and Evaluation
<b>NBER</b>	National Bureau of Economic Research (US)
<b>NSC</b>	National Seed Committee
<b>OHADA</b>	Uniform Act Organizing Securities ( <i>Acte Uniforme portant Organisation des Suretés</i> )
<b>RCCM</b>	Company and Collateral Registry, in Senegal and Mali ( <i>Registre de Commerce et du Crédit Mobilier</i> )
<b>REACH</b>	EU Regulation on the Registration, Evaluation, Authorization, and Restriction of Chemicals
<b>SMEs</b>	Small- to medium-sized business enterprises
<b>SP</b>	Sole Proprietor
<b>US</b>	United States of America
<b>USAID</b>	United States Agency for International Development
<b>WRS</b>	Warehouse Receipts System

# CONTENTS

<b>EXECUTIVE SUMMARY</b>	<b>1</b>
<b>KEY FINDINGS</b>	<b>3</b>
<b>INTRODUCTION</b>	<b>5</b>
<b>TOPIC 1: TRADING AGRICULTURAL GOODS</b>	<b>11</b>
<b>TOPIC 2: OBTAINING SEED</b>	<b>17</b>
<b>TOPIC 3: OBTAINING FERTILIZER</b>	<b>27</b>
<b>TOPIC 4: ACCESSING RURAL LAND</b>	<b>31</b>
<b>TOPIC 5: ACCESSING FINANCE</b>	<b>37</b>
<b>TOPIC 6: STARTING AND OPERATING A FARM</b>	<b>44</b>
<b>TOPIC 7: ENABLING CONTRACT FARMING</b>	<b>49</b>
<b>CONCLUSION</b>	<b>55</b>
<b>ANNEXES</b>	<b>57</b>
<b>SOURCES</b>	<b>58</b>
<b>ACKNOWLEDGEMENTS</b>	<b>60</b>

## LIST OF CHARTS AND TABLES

<b>TABLE 1:</b> AGRI Topics and Indicators	7
<b>CHART 1:</b> Developing a Reform Model	8
<b>CHART 2:</b> Time And Cost to Export an Agricultural Commodity	12
<b>CHART 3:</b> Number Of Documents to Export An Agricultural Commodity	12
<b>CHART 4:</b> Exports – More Documents = More Time And Cost	13
<b>CHART 5:</b> Time and Cost to Import Seed	
<b>CHART 6:</b> Obtaining Import Permits –Wide Time Variation	14
<b>CHART 7:</b> Time for Each Step to Import Seed to Senegal, Including Document Preparation	15
<b>CHART 8:</b> Time and Cost to Register a Seed Variety	18
<b>TABLE 2:</b> Gazette Time by Country	21
<b>TABLE 3:</b> Seed Variety Registration Procedures	22
<b>CHART 9:</b> One Year Longer to Register a New Seed Variety in Nepal Than in Bangladesh	24
<b>CHART 10:</b> Time and Cost to Obtain Licenses and Permits for a Seed Supplier	25
<b>CHART 11:</b> Breakdown of Costs By Seed Business License in Kenya and Uganda	25
<b>CHART 12:</b> Time and Cost to Obtain Fertilizer Supplier Licenses	28
<b>CHART 13:</b> Four of 10 AGRI Countries Require a Business License to Import Fertilizer	28
<b>CHART 14:</b> Time and Cost to Transfer Rural Land	32
<b>CHART 15:</b> Time to Transfer Land	33
<b>CHART 16:</b> Registering Transfer of Title in Ghana	35
<b>CHART 17:</b> Registering Transfer of Title in the Netherlands	35
<b>CHART 18:</b> Agricultural Collateral Index (of 10)	38
<b>CHART 19:</b> Legal Frameworks and Lender Practices – A Large Gap Remains	39
<b>CHART 20:</b> Movable Collateral Registry Index (of 11)	40
<b>CHART 21:</b> Time and Cost to Start a Farm	45
<b>CHART 22:</b> Six Out of 10 AGRI Countries Do Not Have Business Registration Services for Fams in All Regions	46
<b>CHART 23:</b> In Ghana, Submitting Business Registration Requests Ans Obtaining a Certificate from the Capital City Adds Two Weeks to the Process	46
<b>CHART 24:</b> Farm Licenses And Permits – A Substantial Time and Cost Factor for Start-Up Farms in Bangladesh, Kenya, Netherlands, Thailand, Uganda, And Zambia	47
<b>CHART 25:</b> Starting A Farm In Kenya – 14 Procedures, 129 Days, 41% Per Capita GDP	48
<b>CHART 26:</b> Contracts Index Scores (of Seven)	50
<b>CHART 27:</b> ADR Index Scores (of Eight)	53

# EXECUTIVE SUMMARY

The 2008 global food crisis underscored the urgent need for governments and development partners to strengthen the resiliency of countries' food and agricultural systems. Efficient and effective administration of the legal and regulatory framework makes it easier to do business in the agricultural sector and increases the sector's resiliency in the face of shocks. Yet to date, no cross-country comparable data on the efficiency or effectiveness of government administration have been available for policymakers to use as part of their agricultural sector reform efforts. To meet this need, USAID commissioned the development of the **Agribusiness Regulation and Institutions (AGRI) Index**, a tool to provide clear and easy-to-understand metrics on the ease of doing business in the agricultural sector across countries and over time. This tool is intended to guide policymakers in improving elements of the legal, regulatory, and institutional system in critical areas of the agricultural economy, such as access to land, seed, fertilizer, finance, and international trade.

**The AGRI Index is the first cross-country benchmarking tool to quantify the legal, regulatory, and institutional barriers faced by agribusinesses in a consistent manner, allowing for comparisons to be drawn between countries and within a country over time.**

## KEY TOPICS

1. Trading Agricultural Goods
2. Obtaining Seed
3. Obtaining Fertilizer
4. Accessing Rural Land
5. Accessing Finance
6. Starting and Operating a Farm
7. Enabling Contract Farming

## ABOUT THE AGRI INDEX

The AGRI Index uses a small and carefully selected set of indicators to measure the time and cost associated with the regulations and administrative procedures that affect the startup and growth of agribusinesses. The AGRI Index is comprised of seven key topic areas that capture crucial stages in the lifecycle of an agribusiness and span a range of actors along the value chain, from input providers to agricultural exporters. This effort is funded by the US Agency for International Development (USAID) and implemented by Fintrac Inc., through the Enabling Agricultural Trade (EAT) project.

The AGRI Index draws upon a considerable body of empirical evidence demonstrating that government regulation is an important determinant of economic growth,<sup>1</sup> affecting rates of entrepreneurship,<sup>2</sup> trade,<sup>3</sup> and investment.<sup>4</sup> Drawing inspiration from the World Bank Group's *Doing Business* report, the AGRI Index focuses on identifying barriers to doing business in the agricultural sector that can be addressed through discrete legal, regulatory, or administrative change. **In most of the countries surveyed, this is the first time such an inventory has been attempted, a critical milestone in its own right.**<sup>5</sup>

## WHY AGRIBUSINESS?

The 2008 global food crisis highlighted the challenges of ensuring adequate, affordable, and accessible food for all people at all times. Looking to the future, governments and global leaders are faced with the prospect of feeding a growing and more-affluent global population that is expected to increase to 9 billion people by 2050. Meeting these needs will mean connecting farmers to local and international markets, and scaling up the use of key technologies to increase agricultural production while reducing waste and losses. The role of government in this process is central to the AGRI Index.

<sup>1</sup> See for example: Antonio Ciccone and Elias Papaioannou, "Red tape and delayed entry," *European Central Bank Working Paper Series 758* (2007).

<sup>2</sup> Silvia Ardagna and Annamaria Lusardi, "Explaining International Differences in Entrepreneurship: The Role of Individual Characteristics and Regulatory Constraints," *National Bureau of Economic Research Working Paper 14012* (2009).

<sup>3</sup> Andrei Levchenko, "Institutional Quality and International Trade," *International Monetary Fund Working Paper 04/231* (2006).

<sup>4</sup> Jamal Ibrahim Haidar, "Investor protections and economic growth," *Economics Letters 103.1* (2009).

<sup>5</sup> More information on the AGRI Index development and methodology is included in Annex I.

Unique among industries, agriculture employs a large percentage of the work force in developing nations and produces the food, fuel, and fiber that sustain human life. Because of the sheer necessity of these goods, governments treat the regulation of food and agriculture differently than any other sector. This report explores ways that agribusiness regulation can be improved to help reach equilibrium between producer and consumer needs, and between the public good of regulatory control versus the private costs of compliance. Recognizing the fundamental role that agricultural commodities play in everyday life underscores the importance of enabling innovation, technology, and trade in the food and agricultural sector.

Agriculture is different than other industries, and that difference matters when discussing the regulatory and administrative framework that governs agricultural businesses of all sizes. The AGRI Index identifies key issues that must be addressed in local legal, regulatory, and institutional environments to promote agriculture that is economically productive, contributes to environmental sustainability, and ensures a safe and reliable food supply for all.

### **AGRI COUNTRIES**

- » Bangladesh
- » Ghana
- » Kenya
- » Mali
- » Nepal
- » Netherlands
- » Senegal
- » Thailand
- » Uganda
- » Zambia

### **SETTING THE AGENDA FOR ACTION**

The AGRI Index identifies concrete steps that can be taken to reduce the time and cost of regulatory compliance and improve the competitiveness of the agricultural sector. AGRI data highlight common issues of administrative inefficiency, high compliance costs, lack of adequate legal protections, and ineffective application of the law. Importantly, AGRI data provide governments and donors with the opportunity to learn how similar processes are regulated in other economies, creating a unique platform to share good practices between governments. This data is also intended to fill USAID's immediate need for comparable metrics on the enabling environment for agriculture in order to support global program design and monitoring and evaluation, complementing efforts to monitor global investments such as those under the US Government's New Alliance for Food Security and Nutrition.

The AGRI Index provides data that can be used for a wide range of purposes by a variety of key audiences. First, policymakers and other donors can use AGRI data to identify priorities for reforming the agribusiness enabling environment and to engage stakeholders in the reform process. Policymakers and practitioners can apply lessons learned from other countries to their own country's legal, regulatory, and institutional system. Investors and agribusinesses can also use the data to navigate the complex—and at times opaque—web of regulatory requirements that apply to their business. Finally, researchers can use AGRI data to explore a wide array of questions on the relationship between the enabling environment and agricultural growth.

Positive reforms in the areas measured by the AGRI Index are expected to make starting and operating an agribusiness easier and more profitable, thereby contributing to lower production costs, deeper input markets, streamlined trade processes, and reduced regulatory compliance costs. These factors will contribute to higher rural household incomes, improved food security, and ultimately, greater economic growth.

## KEY FINDINGS

### **1. COMPLEX AND UNPREDICTABLE REGULATORY REQUIREMENTS INCREASE COSTS AND REDUCE INCENTIVES FOR AGRIBUSINESSES TO BECOME LEGITIMATE, COMPETITIVE ENTERPRISES.**

There is an immediate need for simpler and more efficient regulations governing the agricultural sector: Reducing the time, cost, and complexity of regulatory requirements allow agribusinesses to focus on their core activities and provides greater incentive to invest in the sector. Yet too often, requirements are costly or take weeks or even months to complete, becoming unnecessary—or disproportionate—elements of agribusiness cost structures. For instance, licenses for fertilizer suppliers in the bottom half of AGRI countries took nearly 20 times longer to obtain than in the top half, and cost nearly 10 times more on average.

**Farmers often find it difficult to identify the full set of regulatory requirements and government authorities that regulate farm operations due to the involvement of multiple government agencies. A Ministry of Agriculture official in Zambia described the challenge well: “[Even I] have a difficult time figuring out all the licenses required” by the Ministry of Agriculture, much less the array of requirements imposed by other national and local agencies.**

Opaque and unpredictable requirements add to the regulatory burden. In 6 of 10 AGRI countries, farmers seeking to formalize their business in order to grow and access new markets find it difficult to identify the full spectrum of regulatory requirements and to navigate the bureaucracy, due to the involvement of many different government agencies at both the national and local levels. Consistent and streamlined regulatory procedures, in contrast, enable agribusinesses to operate more efficiently. In benchmark countries such as the Netherlands, for instance, regulatory requirements for seed and fertilizer suppliers are robust but are also straightforward, clear, and limited in number; an approach that

minimizes the burden for agribusinesses while satisfying overarching public policy objectives. In all cases, the public interest in regulating firms' activities must be weighed against the costs imposed on agribusinesses, which may not be well understood.

### **2. POORLY DELINEATED LEGAL AUTHORITY AND LACK OF COORDINATION BETWEEN AGENCIES CREATES UNCERTAINTY AND INCREASES THE COMPLIANCE BURDEN FOR AGRIBUSINESSES.**

Overlapping roles among regulatory authorities lead to confusion, extraneous requirements, and a waste of resources. In Kenya, the AGRI team identified eight agencies involved in overseeing international trade of agricultural goods. Many of those agencies have overlapping responsibilities during the clearance process, which substantially increases the time and cost required to trade agricultural products across national borders. Specific delegations of regulatory authority tend to appreciably reduce the regulatory burden for businesses operating in the agricultural sector: Ghana provides a useful example of this: a new seed and fertilizer law clearly assigns regulatory oversight of seed and fertilizer; removing previously overlapping mandates involving two separate offices within the Ministry of Agriculture. As a result, all procedures related to seed and fertilizer in Ghana are implemented by the same office and the number of procedures for suppliers of those products has been reduced to only two—the fewest among AGRI countries.

### **3. IMPLEMENTING INSTITUTIONS LACK CAPACITY TO ENFORCE REGULATORY REQUIREMENTS.**

Government institutions tasked with administering specific elements of the legal and regulatory framework for the agricultural sector are hamstrung by a lack of internal capacity to do so. This increases the time and cost required for agribusinesses to comply with regulatory requirements.<sup>6</sup> For example, contributors in Zambia reported that the land registry lacks sufficient information technology (IT) infrastructure and trained staff, leading to delays of up to two months to obtain a new land title, even after all administrative steps to complete the transfer have been completed.

<sup>6</sup> There are various types of organizational “capacities,” including competence (staff with sufficient technical knowledge and appropriate skillsets); capability (ability to deploy competencies effectively and utilize new technologies); and capacity (adequate number of staff, office locations, facilities, equipment, and resources). Elements of limitations in each of these institutional capacity areas were observed and reported by contributors during the course of the AGRI assessments. Source: Vincent, 2008. “Differentiating Competence, Capability and Capacity.” <http://www.innovationthatwork.com/images/pdf/June08newstr.pdf>.

For any country, the hallmarks of a successful legal and regulatory framework include institutions with sufficient numbers of well-trained staff, adequate facilities and equipment, and appropriate systems and practices that allow real-time information sharing and efficient service delivery. In the Netherlands, for instance, land registry records are fully electronic and are online; as a result, many of the requirements for transferring title to rural land can be completed in a matter of minutes.

At the same time, a country's legal and regulatory framework is often designed without pragmatically evaluating the government's capacity to actually and fully implement and administer such a system. Where governments do not have that capacity, the regulation needs to be changed lest it become an impediment to doing business. For example, a common constraint to registering a new seed variety in AGRI countries is that the body responsible for approving new seed (the national seed committee) rarely meets because it has no budget. The repercussions of an inadequate administrative system include (a) unpredictable delays for businesses seeking to complete routine administrative procedures; (b) undermining the government's reputation for enforcing rules; and (c) creating a culture of mistrust between the government and private sector.

Thailand provides a success story. Reforms to streamline the business registration process were coupled with the creation of "one-stop shops" for handling all required procedures.

#### **4. ABSENCE OF A FUNCTIONING LEGAL AND REGULATORY FRAMEWORK MAY LOWER THE TIME AND COST OF OPERATING AN AGRIBUSINESS IN THE SHORT RUN, BUT CREATES OPERATIONAL UNCERTAINTY IN THE LONG RUN.**

In countries that have no legal framework, or lack regulations or executive directives to assign enforcement responsibilities to specific government institutions, the time and cost measured by AGRI may appear to be lower than in countries with functional and efficient regulatory schemes. But this is misleading; shortfalls in regulatory schemes constrain agribusinesses by introducing significant uncertainty about the scope and applicability of regulatory requirements—and thus deterring long-term investment and growth.

A recent example from Mali illustrates this problem. Mali acceded to a regional seed agreement in 2009 and has since introduced new business licenses for seed suppliers. The licensing requirements are simple and require minimal time and cost to complete. However, AGRI contributors report that the new licenses do not correspond to any enforcement or control of seed quality. In this case, AGRI results reflect the nascent, incomplete development of Mali's legal and regulatory framework.

By design, AGRI data provide comparative results from other countries that identify similar regulatory shortfalls, and suggest examples of effective systems and approaches that could be adopted.

# INTRODUCTION

**The AGRI Index provides objective metrics for assessing the quality of a nation’s agribusiness enabling environment (AgBEE) and its impact on agricultural growth. This effort is funded by USAID and implemented by Fintrac Inc. under the USAID-EAT project. The AGRI Index uses a small and carefully selected set of indicators that measure the time and cost associated with the regulations and administrative procedures involved in starting up and operating an agribusinesses. The scope of the AGRI Index is based on a considerable body of evidence on the effects of regulatory and administrative performance on agribusiness operations and economic growth. The USAID-EAT project created the AGRI Index based on the hypothesis that a well-designed legal and regulatory framework, supported by efficient administrative procedures, is a necessary precursor to a productive agricultural sector. Taken together, AGRI indicators provide a snapshot of the AgBEE in a given country at a given time, and provide a clear and consistent basis for comparing countries.**

***Government policies, laws, regulations, and institutions heavily influence agribusinesses’ ability to do business. Governments that can achieve policy objectives while minimizing the cost of private sector compliance can help create a competitive business environment and a dynamic agricultural sector.***

## PURPOSE OF THE AGRI INDEX

The AGRI Index can be used in numerous ways to help governments and donors increase agricultural sector growth by improving the legal, regulatory, and institutional environment. AGRI data have the power to build awareness and increase discussion on key issues, establishing the starting point on the path to reform. AGRI:

1. Identifies constraints in the AgBEE in a systematic and quantitative way across countries.
2. Ranks the ease of doing business in the agricultural sector across countries by measuring the time and cost for compliance with regulatory requirements. Establishes benchmarks for government performance by measuring the same set of indicators across countries, including two leading agricultural economies, the Netherlands and Thailand. This highlights good practices and allows policymakers and donors to compare different approaches to governance of the agricultural sector.
3. Points to administrative reforms that benefit small-to-medium sized agribusinesses by making commercialization more feasible for smallholder farmers.
4. Raises the profile of the enabling environment for agriculture. Generates competition and incentives for reform by highlighting where countries do well—and where they do poorly—compared with their neighbors and with benchmark countries.
5. Synthesizes technical issues into concrete, quantifiable data that are easy to understand and use by a variety of audiences.
6. Provides a guide to help entrepreneurs and investors navigate a complex landscape. Catalogues each step in the process to start a farm, for instance, or to obtain all licenses and permissions to operate as a seed company—information that often does not exist elsewhere in one location.

Ultimately, the AGRI Index is a comprehensive framework for comparing countries’ performance on key elements of the enabling environment for agriculture, identifying reform priorities for the agricultural sector, and tracking the progress of reforms over time.

## SMALLHOLDER FARMERS AND AGRI

Improving the productivity and incomes of smallholder farmers is a key objective of USAID, other donors, and the governments of the countries included in the AGRI Index. For good reason: improving the lot of smallholder farmers translates into greater food security, reduced poverty, and increased economic growth.

The AGRI Index directly addresses smallholder farmers' urgent need for improved access to seed, fertilizer, land, and finance; constraints which are common across all actors in the agricultural sector. AGRI surveys measure the activities of small- to medium-sized enterprises (SMEs), which, like smallholder farms, are often family-owned and operated. SMEs are the smallest comparable unit in each country that interacts with the legal and regulatory framework, permitting stakeholders to consistently measure the time and cost to complete a regulatory requirement in each country and to compare the results across countries and over time.

We believe that data on administrative efficiency from the perspective of small- and medium-sized agribusinesses offer substantial insights for donors and governments interested in making commercialization feasible for smallholder farmers. USAID, through the Feed the Future initiative, enables smallholder farmers to transition to commercial agriculture. A critical part of this process is supporting smallholder formalization, which increases access to government services, land, finance, and contracts.

### DEVELOPMENT OF THE AGRI INDEX

The AGRI Index was developed in stages. In 2012, the AGRI team created a data-gathering survey tool and conducted pilot testing in Bangladesh, Kenya, Nepal, Uganda, and Zambia. USAID selected those five countries from the group of focus countries in the US Government's Feed the Future initiative, based on USAID's need for data on the business environment for agriculture in those countries. A diverse selection of countries also allowed for comparisons across geographic regions and among legal traditions. Findings were presented in an initial report to USAID in November 2012 that detailed the lessons learned in designing the AGRI surveys and methodology and shared preliminary data from the five pilot countries.<sup>7</sup>

Based on insights and lessons learned from the first phase of surveying and data collection, the AGRI Index indicators were refined in early 2013.<sup>8</sup> In consultation with USAID, five additional countries were selected to be included in the study: three Feed the Future countries (Ghana, Mali, and Senegal) and two "benchmark" countries (the Netherlands and Thailand). The added countries were surveyed in 2013 and 2014.

The Netherlands and Thailand were selected as benchmarks from a pool of countries deemed to have particularly dynamic agricultural sectors. Thailand was selected based on the competitiveness of its agricultural sector across a wide range of staple and high value agricultural goods while still facing constraints unique to developing economies.<sup>9</sup> The Netherlands was selected based on its superior reputation as an agricultural powerhouse with a sophisticated system for regulating the agricultural economy.<sup>10</sup> These two countries provided the opportunity to assess the applicability of AGRI indicators in countries that are global leaders in agricultural production and exports while also providing valuable legal, regulatory, and institutional models for less developed economies. Finally, if the Netherlands and Thailand results on AGRI indicators were found to be superior, the two countries' scores could be used to establish benchmarks against which other countries could be measured.

<sup>7</sup> USAID-EAT project. *Agribusiness Regulation and Institutions (AGRI) Index: Pilot Report*. November 2012. <http://eatproject.org/docs/USAID-EAT%20AGRI%20Pilot%20Report.pdf>.

<sup>8</sup> A discussion of revisions to AGRI indicators over the course of the study can be found in Annex 1: Methodology and Data Notes.

<sup>9</sup> Thailand is a major agricultural producer and exporter. In 2011, Thailand was the world's largest rice exporter (> 10 million MT), the second-largest rubber exporter, and 24th in the world in seed exports (third among Asian countries). Sources: FAOStat, International Seed Federation.

<sup>10</sup> The Netherlands is the second-largest agricultural exporter in the world (by value), second only to the United States.

## METHODOLOGY<sup>11</sup>

### Indicator Selection

The AGRI scope and methodology were inspired by the World Bank's global *Doing Business* report and were specifically adapted for the agricultural sector. Initial indicators were drawn from the core topics covered in USAID's Agribusiness Commercial Legal and Institutional Reform (AgCLIR) diagnostics.<sup>12</sup> Indicator development included extensive input from international agricultural and legal experts and feedback from hundreds of contributors during pilot testing in 2012.

### TYPES OF INDICATORS

**Time and Motion:** Captures the time, cost, and procedures for fulfilling regulatory requirements involved in operating an agribusiness.

**Legal Framework:** Assesses objective characteristics of a country's legal and regulatory framework.

AGRI indicators were developed to meet strict criteria. First, indicators were selected to be highly relevant to the agricultural sector, focusing on regulatory issues that have the greatest impact on the operations of small and large agribusinesses alike.<sup>13</sup> Second, each indicator was designed to provide information that is simple, discrete, and actionable, giving policymakers and other stakeholders clear guidance on what actions can best improve their country's score through legal, regulatory, or administrative reforms. Third, indicators were constructed to produce data that are comparable across countries and that can be scored in a consistent manner, allowing stakeholders to track the impact of reform over time and to generate pressure for reform by making comparisons with other countries.

**TABLE 1: AGRI TOPICS AND INDICATORS<sup>14</sup>**

TOPIC	INDICATORS
<b>Trading Agricultural Goods</b>	(1) Process to export a widely-traded agricultural commodity, (2) Process to import hybrid seed, (3) Index on phytosanitary system, and (4) Index on trade facilitation
<b>Obtaining Seed</b>	(1) Process to register a new staple grain seed variety, and (2) Process to obtain licenses and permits for a seed supplier
<b>Obtaining Fertilizer</b>	(1) Process to obtain licenses and permits for a fertilizer supplier, and (2) Index on legal framework for fertilizer industry
<b>Accessing Rural Land</b>	(1) Process to transfer rights to rural land, (2) Index on access to property registration information, and (3) Index on legal rights to obtain, register, and utilize a long-term leasehold interest in land
<b>Accessing Finance</b>	(1) Index on types of agricultural collateral permitted by law, (2) Index on access to and functioning of registries for movable collateral, and (3) Index on legal framework for warehouse receipts systems
<b>Starting and Operating a Farm</b>	(1) Process to register a mid-sized staple grain farm and obtain all necessary licenses and permits required for farm operations and (2) Index on access to business registration information
<b>Enabling Contract Farming</b>	(1) Index on legal framework for contract farming, (2) Index on grades and standards for agricultural goods, and (3) Index on alternative and expedited dispute resolution mechanisms

<sup>11</sup> More information on the AGRI Index methodology is provided in Annex 1: Methodology and Data Notes.

<sup>12</sup> USAID's AgCLIR diagnostic assesses the root causes of systemic constraints to agribusiness operations using an analytical framework that focuses on the legal framework, implementing institutions, supporting institutions, and social and market dynamics.

<sup>13</sup> The AGRI team focused on seven core topics that are common constraints to agricultural growth in Feed the Future countries. This scope was not intended to be comprehensive. Other critical topics to consider in future AgBEE benchmarking efforts include food safety, environment, and livestock.

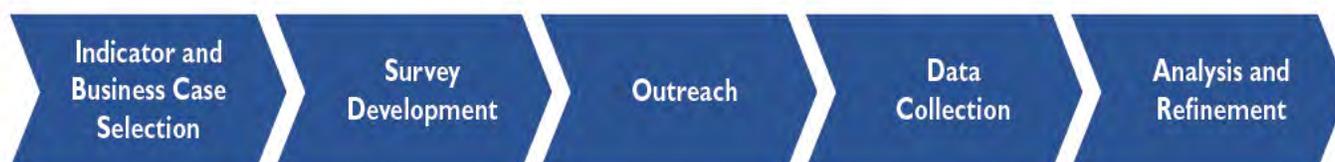
<sup>14</sup> This report provides analysis on most, but not all, indicators that make up the AGRI Index. The analysis focuses on the seven "time and motion" indicators that measure the time, cost, and number of required procedures to complete an administrative process. Analysis of the Accessing Finance and Enabling Contract Farming topics focuses on strength of legal framework indicators because these two topics do not have time and motion indicators (instead, indicator scores are based on responses to Yes/No questions about the strength of the legal framework).

Ultimately, AGRI indicators are meant to “measure what matters.” By design, the AGRI Index does not measure all aspects of the AgBEE. Instead, AGRI focuses on seven core topics (see Table 1 on previous page), and breaks down those topics into a subset of key quantifiable and actionable indicators. This subset of indicators should be understood as meaningful and relevant proxies for the AgBEE in a country, and is not intended to be a catch-all index for agricultural development. In turn, the AgBEE is only one component of a complex, multi-faceted process of agricultural development and economic growth.

## Survey Methodology

The AGRI team constructed short written surveys of less than 10 pages for each of the seven topic areas. Those surveys utilized standard business case scenarios that covered a range of small- to medium-sized agribusinesses along the value chain, including suppliers of seed and fertilizer; farms located in a peri-rural<sup>15</sup> setting; and market agents trading agricultural products internationally. In each survey, the case scenario specified characteristics about the agribusiness such as size, location, number of employees, annual turnover, and types of activities. By using standard business cases and consistent assumptions, responses could be averaged across contributors and data compared across countries.<sup>16</sup>

### CHART 1: DEVELOPING A REFORM MODEL



Finally, the AGRI team utilized a key informant methodology to collect data from leading agricultural and legal experts and major institutions in each country. The team surveyed a diverse group of contributors, including agribusinesses, business and farmers’ associations, chambers of commerce, freight forwarders, professional service providers (e.g. lawyers, bankers, and accountants), and government officials. Contributors were identified by desk research as well as by local consultants and partners. Primary data were collected through written surveys and semi-structured interviews.

## Benchmarking

A primary focus of the AGRI Index is to measure key indicators in a set of countries deemed to have particularly dynamic agricultural sectors, against which other countries can compare the performance and the structure of their legal, regulatory, and institutional systems. As noted above, the Netherlands and Thailand were selected as benchmark countries, because they represent exemplars of leading developed and emerging agricultural economies.

## Scoring and Ranking

Once data collection was completed, final data for each AGRI topic were scored according to guidelines developed by the AGRI team. Scoring guidelines were developed to consistently classify responses and to maintain consistency across all countries.<sup>17</sup>

### Time and motion indicators

Scoring for time and motion indicators is straightforward. Standard definitions of “time,” “cost,” and “procedures” are included in each blank AGRI survey and are provided in the box below. Indicator results are achieved by summing up the total time, cost, and number of procedures required to complete a process such as transferring rural land, or exporting an agricultural product. When ranking countries, equal weight is given to each of the three components.

<sup>15</sup> For purposes of the AGRI Index, “peri-rural” means a rural area with low population density, but within 100km of and with relatively easy access to a main commercial center.

<sup>16</sup> Country case studies can be found in Annex 2, which includes all blank survey questionnaires.

<sup>17</sup> All scoring guidelines are provided in Annex 2.

## **Legal rights indicators**

Legal rights indicators contain Yes/No questions about whether a country's legal, regulatory, and institutional framework is conducive to agribusiness operations. Most legal rights indicator questions are scored and averaged in a simple, straightforward manner, where a response of "Yes" is positive and "No" is negative. However, due to the structure of the survey questions, where this is not the case, scoring rules were developed.

## **Limitations**

There are several tradeoffs and limitations to benchmarking tools such as the AGRI Index that should be taken into consideration. In continuing to scale comparator tools such as AGRI, awareness of such tradeoffs can help policymakers and donors get the most from benchmark data.

First, informality prevails across developing countries' agricultural sectors, limiting the ability to generalize about the impact of the legal, regulatory, and institutional environment on agribusiness performance to the entire agricultural sector. The AGRI Index focuses on small- and medium-sized, commercially oriented agribusinesses that operate in the formal sector and interact with the existing regulatory framework. The AGRI Index cannot directly measure the role of the legal and regulatory environment on an informal business, because informal operators are partially or wholly outside such a system. Instead, the AGRI Index focuses on identifying and measuring common ways that the legal and regulatory framework can inhibit or incentivize agribusinesses to operate formally, because reforms that do so tend to improve the ability of agribusinesses to operate efficiently and profitably (e.g. land reform, improved availability of quality inputs, and increased access to finance).

Second, AGRI indicators can identify where barriers exist, but not necessarily why they exist. Benchmarking tools such as the AGRI Index serve as the first step in a larger reform process by pointing to where countries perform comparatively better or worse than their neighbors. By measuring and comparing the time, cost, and procedures to complete regulatory requirements, stakeholders can make logical but limited inferences about the quality of the underlying regulations and institutions. To design effective follow-on technical assistance, planners should incorporate deep root-cause analysis of the constraints initially identified by benchmarking data.<sup>18</sup>

Third, AGRI data should not always be interpreted to imply that faster and less expensive processes are better. This would oversimplify the complex and adaptive nature of the business environment. Benchmarking tools such as AGRI yield high-level country scores that allow stakeholders to compare the relative efficiency and effectiveness of administrative procedures. In the aggregate, lower time and cost to complete an administrative process reflect more efficient government administration, and likewise higher legal index scores tend to indicate a stronger legal framework. This correlation does not hold true in every instance, however, and where it does not, we attempt to provide necessary context based on AGRI data and point to where deeper analysis is required. Exceptions to the rule may be more common in developing countries and in the agricultural sector in particular, where implementing a legal and regulatory framework remains a challenge.

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<sup>18</sup> Deeper root-cause analysis such as USAID's CLIR methodology (commercial, legal, and institutional reform) employed by AgCLIR assessments can illuminate the complex dynamics of interactions between legal frameworks, delegation of legal authority, regulatory requirements, implementing institutions, civil society, and other factors (e.g., macroeconomic stability, infrastructure quality, labor skills, and government initiatives of a non-regulatory nature that distort the agricultural sector). Such analysis is an important and complementary part of any technical assistance package

## STRUCTURE OF THE ANALYSIS

This report discusses key findings and cross-cutting themes from 10 countries. Comparisons between countries and implications are discussed for each topic area. The analysis highlights good practices, identifies common constraints to agribusinesses, and explores different regulatory approaches taken by governments to form a platform for learning, policy advocacy, tracking progress, and other uses described throughout this report.

### MEASURING TIME AND COST

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Time and motion indicators measure the time, cost, and number of required procedures to complete an administrative process.

- » **Time:** The time it takes to complete a procedure in practice, measured in calendar days, from the date of initial request until a document or approval is received. Unpredictable or high-variable procedures are designated using a range of time from low to high, e.g. “30–60 days” to complete a procedure. The minimum time to complete a procedure is one day unless otherwise noted.
- » **Cost:** Official fees and taxes (not including bribes) measured in local currency and compared across countries using GDP per capita. Includes professional service fees, if such services are required by law in order to complete the procedure.
- » **Procedure:** A distinct interaction between an agribusiness or its representative and an external party; internal business processes are not measured.

The following sections present findings and comparisons from the 10 countries in the AGRI Index dataset, organized by topic. Each chapter provides a summary chart and key findings for select indicators. The full dataset, which includes all indicators, can be found in Annex 3 of this report.

# TOPIC I: TRADING AGRICULTURAL GOODS

The perishable nature of agricultural goods makes efficient trade processes a necessity. Yet controls unique to agricultural trade (such as sanitary and phytosanitary (SPS) inspections and tests to ensure that goods conform to quality and health standards) add significant and often unpredictable costs and delays to moving agricultural products across borders. Research shows that border-related delays significantly increase the cost of trade in the same manner as import/export duties and taxes. These costs and delays in turn reduce the volume of trade.<sup>19</sup> Fewer requirements, improved coordination between government agencies, reduced inspection and wait times, better physical infrastructure, and the use of electronic systems can all contribute to a faster and more reliable system for agricultural trade.

- » Countries that require more documents to export increase the time and cost to export.
- » Seed import permits are particularly difficult to obtain. The situation is most time-consuming in Senegal and Thailand, where it takes two to three weeks to obtain an import permit.
- » International best practices in trade facilitation, exemplified by the Netherlands, include streamlining processes by strengthening IT systems, eliminating duplicative documents, coordinating physical inspections, and accurately evaluating the risk of each consignment.

This topic measures the time and cost to obtain documents and to complete government-mandated border controls (customs clearance), two key components of the trade process.<sup>20</sup> These two components were chosen because they represent readily identifiable areas that governments directly control and can make more efficient. To make the data comparable across countries, AGRI uses business case studies; the standardized assumptions for this topic are listed in the box to the right.<sup>21</sup>

## EXPORT RANKING

1. Netherlands
2. Thailand
3. Mali
4. Ghana
5. Senegal
6. Bangladesh
7. Uganda
8. Nepal
9. Kenya

## IMPORT RANKING

1. Netherlands
2. Ghana
3. Nepal
4. Thailand
5. Bangladesh
6. Mali
7. Senegal
8. Kenya

## CASE STUDY TRADE SHIPMENTS

### Export Product:

Most widely-traded commodity (e.g. staple grains, nuts)

### Import product:

Hybrid seed (staple grain)

**Consignment:** Standard, non-refrigerated 40-foot container

**Value:** US\$20,000

### Origin/Destination:

Main trading partner

**Company:** Private LLC, majority domestically-owned

**Carrier:** Logistics or freight forwarding company providing point-to-point service to many international destinations

<sup>19</sup> Hummels, David. "Time as a Barrier to Trade." Purdue University, 2001. <http://www.krannert.purdue.edu/faculty/hummelsd/research/time3b.pdf>.

<sup>20</sup> This analysis is unlike the *Doing Business* Trading Across Borders indicator, which also measures (1) inland transport and (2) port and terminal handling during the import/export process. As noted, this choice of scope is intended to focus on the areas of the trade process that governments have the most direct control over and can make more efficient. For more information, see the Revisions section of Annex 1: Methodology.

<sup>21</sup> In addition to indicators measuring the export and import process, the Trading Agricultural Goods survey includes short Yes/No index questions about elements of the phytosanitary system and about trade facilitation. The Phytosanitary (SPS) Index and Trade Facilitation Index are not profiled in the body of this report. Data for these topics can be found in Annex 2.

## WHERE IS IT EASIEST TO TRADE?<sup>22</sup>

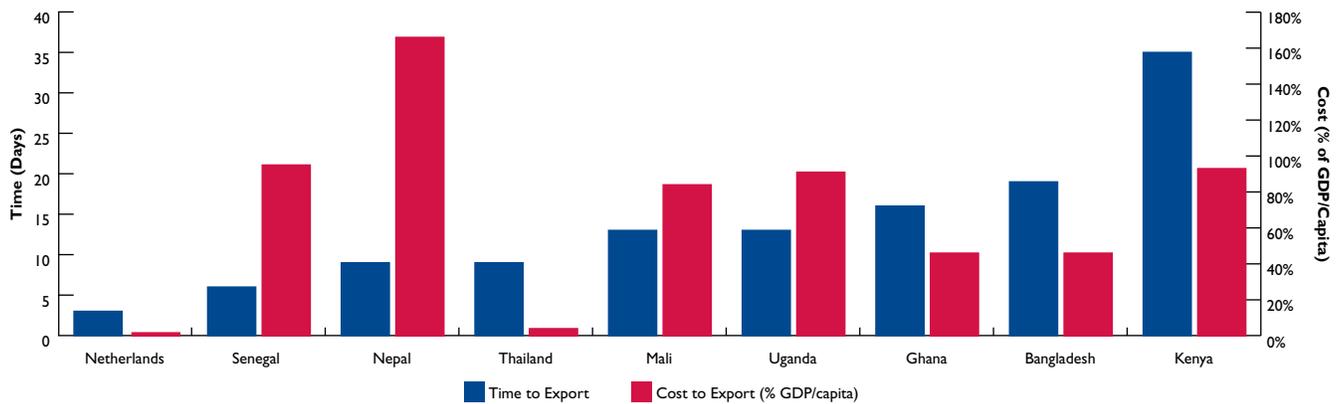
AGRI countries with the most efficient export and import processes have single window trade systems, streamlined trade processes, and adequate physical and information technology (IT) infrastructure.<sup>23</sup> As expected, the Netherlands and Thailand have the most efficient export processes among AGRI countries, requiring on average 20% fewer documents and 30% less time to export than the other countries. Notably, export costs in these two benchmark countries are far below the AGRI average of 70% of GDP per capita: export costs amount to only 1% in the Netherlands and 4% in Thailand.

As with exporting, Netherlands and Thailand are the easiest AGRI countries in which to import hybrid seed. A key element of the efficient import process in the Netherlands is that only one physical inspection of the seed shipment takes place and all relevant inspectors are present (e.g., Customs and Plant Protection). This helps to reduce customs clearance times to less than four hours on average. Thailand has the second-lowest cost to import hybrid seed—only US\$231, or 4% of GDP per capita.

## INDICATOR 1: EXPORTING AN AGRICULTURAL COMMODITY

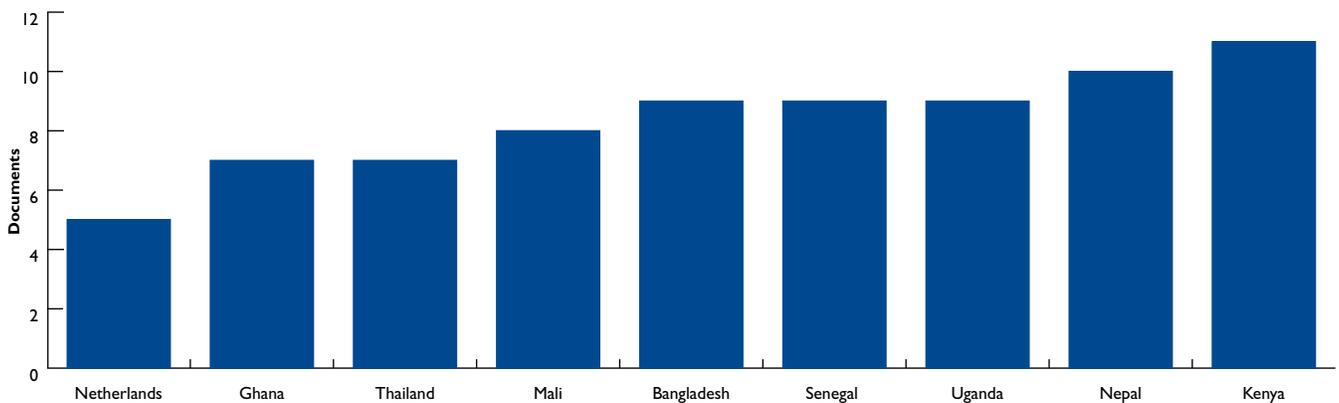
### Time, cost, and documents to export a widely-traded agricultural commodity

**CHART 2: TIME AND COST TO EXPORT AN AGRICULTURAL COMMODITY**



### I. Countries that require more documents to export increase the total time and cost to export.

**CHART 3: NUMBER OF DOCUMENTS TO EXPORT AN AGRICULTURAL COMMODITY**



<sup>22</sup> Import data for Uganda and import and export data for Zambia are not reported because of low survey response rates in initial pilot countries.

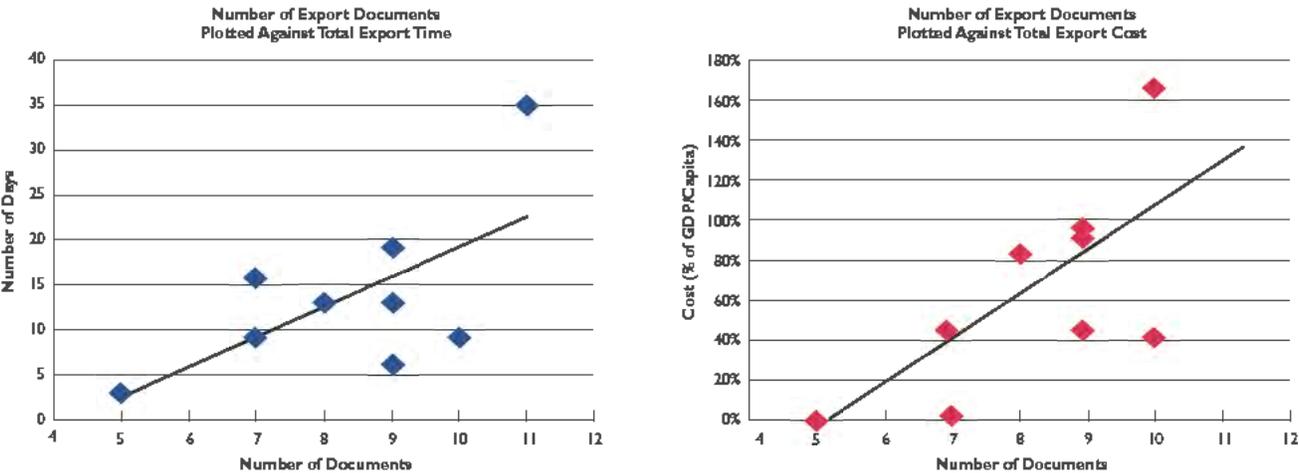
<sup>23</sup> Countries are ranked based on the time, cost, and number of documents required to export or import. Equal weight is given to each component.

Governments typically require a variety of documents to certify the ownership, type, value, quality, and safety of goods moving across borders. Common export documents include a phytosanitary certificate, commercial invoice, packing list, bill of lading, and customs export declaration, which are submitted to Customs at the point of exiting the country.<sup>24</sup> Exporters in AGRI countries submit an average of 8.3 documents per shipment, which take 9.3 days to transact, more time than customs clearance in most AGRI countries. In Kenya, for instance, as many as 11 documents are required to export maize.

Each additional document tends to introduce additional time and cost to the export process because the exporter or its agent must make a separate trip in person to the relevant government office. Excessive documentation can also be an indicator of deeper coordination problems in export management. In Kenya, for example, the large number of documents reflects the involvement of up to eight government agencies in the export of agricultural goods. Depending on the export product, permission may be required from the Kenya Revenue Authority (Customs), Kenya Plant Health Inspectorate Services, Kenya Bureau of Standards, Kenya Port Authority, Pharmacy and Poisons Board, Commodity Board (for tea or coffee), Public Health (for food products), and Kenya Horticultural Crops Development Authority (for horticultural products). Kenyan traders and regulators report that the duplication of regulatory roles increases documentary requirements and frequently delays exports<sup>25</sup>.

Chart 4 below shows the relationship between the total time and cost to export and the number of documents required to export (drawing on charts 2 and 3, respectively). Each additional document tends to increase the total time and cost to export as measured by the AGRI Index.

**CHART 4: EXPORTS – MORE DOCUMENTS = MORE TIME AND COST**



Countries can make exporting easier and more efficient by reducing the number, complexity, and approval time for key trade documents. Among AGRI countries, the Netherlands and Thailand require the fewest documents to export: only five in the Netherlands and seven in Thailand. There are fewer documentary requirements in the Netherlands than any other AGRI country, with no less precision in collecting data or managing risks, because the Dutch electronic trade system has eliminated duplicative data points from various export documents. The Netherlands dramatically decreased processing and compliance time by reducing the number of data points that an exporter must provide by more than 80%.

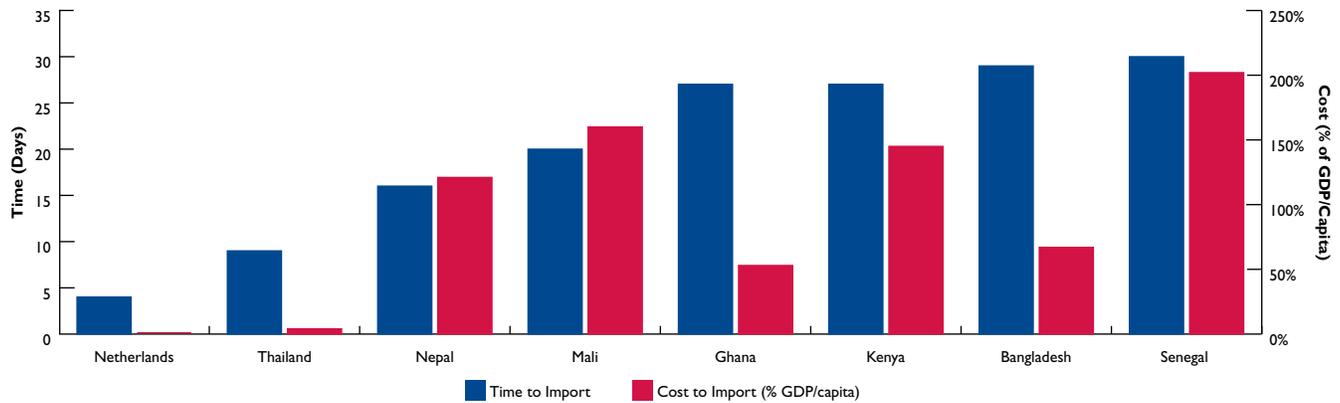
<sup>24</sup> Transport and shipping can also take up to one month. However, AGRI focuses on the documentation and customs clearance stages of international trade because these elements are most directly actionable by governments.

<sup>25</sup> AGRI Kenya data were collected in April 2012. Kenya has since launched an electronic single window trade portal as well as implemented electronic certification of agricultural goods. These reforms are expected to dramatically streamline import and export processes.

## INDICATOR 2: IMPORTING SEED

### Time, cost, and documents to import hybrid seed

**CHART 5: TIME AND COST TO IMPORT SEED<sup>26</sup>**

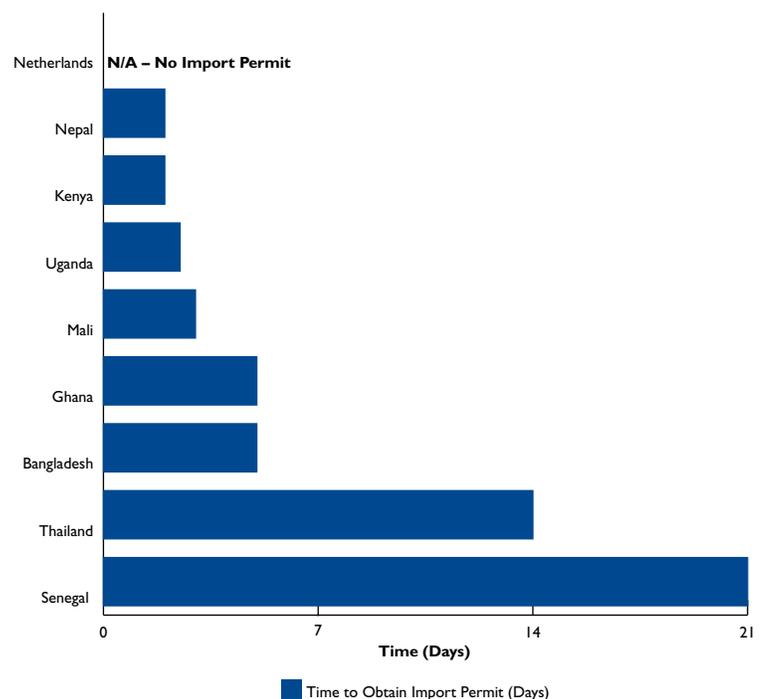


### I. Seed import permits are particularly difficult to obtain. The situation is most time-consuming in Senegal and Thailand, where it takes two to three weeks to obtain an import permit.

Seven of eight AGRI countries require importers to obtain a permit before importing seed, which can take anywhere from two days to obtain in Nepal to as many as 21 days in Senegal. Import permits tend to be particularly time-consuming, expensive, and unpredictable to obtain, compared with other required import documents.<sup>27</sup> This issue is most acute in Thailand and Senegal, where importers wait an average of two and three weeks, respectively, to obtain the import permit. In contrast, the Netherlands requires no import or export permit for seeds.

In Senegal, three government offices must approve each seed import permit, which takes three weeks on average. Approvals are further delayed by capacity constraints at the implementing institutions. For instance, Senegal's Seed Division (DISEM) personnel report that they have neither the funding nor the staff to properly implement the legal and regulatory regime: the entire country's seed sector is regulated by only two staff members.

**CHART 6: OBTAINING IMPORT PERMITS – WIDE TIME VARIATION**

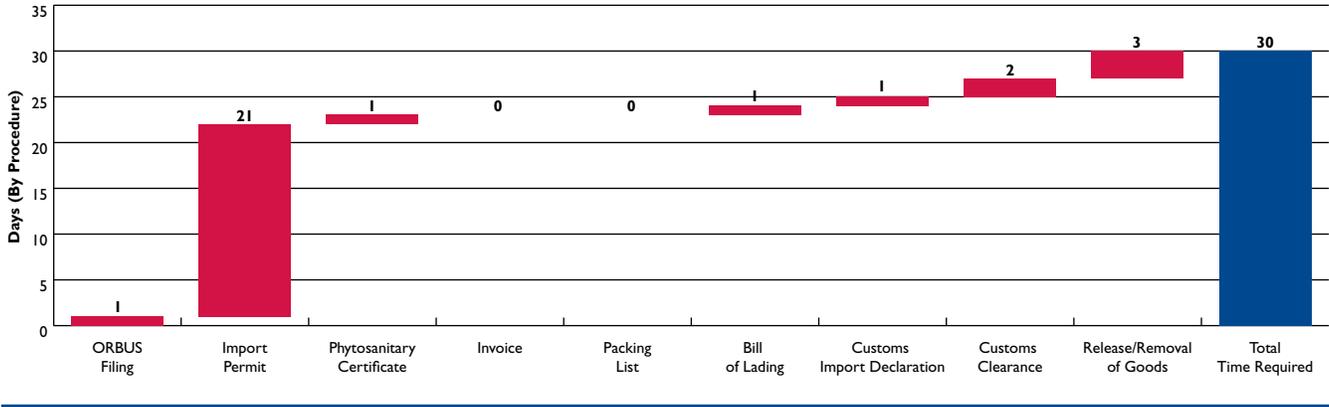


<sup>26</sup> No results for Uganda or Zambia. Insufficient data were collected on the seed import process during pilot testing.

<sup>27</sup> Moreover, governments sometimes restrict the issuance of import or export permits in order to implement temporary or long-term bans on food and agriculture products.

Chart 7 below demonstrates that **obtaining an import permit is the single most cumbersome step in Senegal’s seed import process. If an import permit could be obtained in one week, Senegal would improve from being the slowest AGRI country for importing seed to the fourth fastest.**

**CHART 7: TIME FOR EACH STEP TO IMPORT SEED TO SENEGAL, INCLUDING DOCUMENT PREPARATION**



**2. International best practices for facilitating trade through streamlining processes, exemplified by the Netherlands, include (a) strengthening IT systems, (b) eliminating duplicative documents, (c) coordinating physical inspections, and (d) accurately evaluating—in advance—the risk of each consignment.**

The Netherlands, an AGRI benchmark country, has reduced customs clearance times for seed imports to less than four hours by implementing an electronic trade facilitation system. The system features an online portal; pre-arrival document submission; electronic notifications and payment; automated risk management systems; coordination of inspections; and a post-clearance audit program.<sup>28</sup> (For more information on the Dutch electronic trade system, see the case study on the next page). A key success factor: only one physical inspection of the goods—if needed at all—is conducted, with all relevant agencies present. Other important factors for seed trade include maintaining an up-to-date pest list and differentiating between the levels of risk from different species of plants, some of which pose a greater risk than others. The electronic trade system is also used to build risk profiles of importers and to allow trusted traders (known as “Authorized Economic Operators”) to import goods with a reduced rate of physical inspections.

In most other AGRI countries, comparable facilitation systems have not yet been completed. Nepal and Bangladesh, for example, are currently working to establish the Automated System for Customs Data (ASYCUDA++) and ASYCUDA World systems. Until these systems are in place, border authorities in both countries lack effective risk management systems and are unable to prioritize which consignments to physically inspect. For example, the Birgunj border post in Nepal physically inspects 70% of all shipments (including seed), while in Bangladesh each border post uses its own system or criteria for establishing the risk level of a shipment.<sup>29</sup> Standardizing risk management protocols in Bangladesh and Nepal would reduce the frequency of physical inspections of goods—and therefore reduce the time and cost for clearing the border—without increasing risk.

<sup>28</sup> A post-clearance audit is a way to monitor and improve compliance by confirming that the Customs valuation and classification of a shipment was correct. The audit occurs after Customs has cleared the goods, thus enabling their rapid release. Source: World Customs Organization, 2012. *Guidelines for Post-Clearance Audit (PCA) Volume 1*. <http://www.wcoomd.org/en/topics/enforcement-and-compliance/instruments-and-tools/~/media/0A6E3DCDE47E41F2A71B757596ABAA97.ashx>.

<sup>29</sup> USAID-EAT project, 2014. *South Asia Trade Policy Assessment*.

## CASE STUDY: NETHERLANDS' CLIENT SYSTEM – ELECTRONIC CERTIFICATION FOR AGRICULTURAL TRADE

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The Netherlands is the second largest agricultural exporter in the world, with nearly US\$100 billion in agricultural exports each year. Crucial to handling this high volume of trade are processes and systems that enable goods to move across borders rapidly. The Netherlands has dramatically reduced the time to import and export agricultural goods by implementing an electronic trade management system called CLIENT.<sup>30</sup> CLIENT combines streamlined processes with supporting IT infrastructure, thereby substantially reducing the administrative and logistical requirements that often impede agricultural trade.<sup>31</sup>

**Up to one-third of all European imports and exports pass through the Port of Rotterdam and Amsterdam airport each year.<sup>32</sup>**

Take the case of importing seed—a delicate and perishable product. The CLIENT system facilitates the import process by coordinating the actions of all private and public actors involved in moving and clearing goods. Before a consignment arrives, CLIENT notifies parties of the time and location of the goods' arrival (pre-arrival notification). The system conducts an automated risk assessment to determine if the goods will be selected for inspection, based on criteria such as a risk profile of the country of origin and individual importer. If a physical inspection is deemed necessary, CLIENT will arrange a single, coordinated inspection with all relevant agencies present.

Another key streamlining component of the program: the required processes and documents for certifying import and export of agricultural goods are automated and electronic. Paper documents such as phytosanitary certificates have been replaced by electronic messages that can be directly sent between authorities within a country, between countries, and to the importer or exporter, which improves efficiency and reduces the risk of mistakes and fraud.<sup>33</sup>

As a result of the CLIENT system, shipments of all agricultural goods, including seed, are cleared in less than four hours, significantly less time than it takes in other AGRI countries.

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<sup>30</sup> CLIENT is a Dutch acronym for “Controles op Landbouwgoederen bij Import en Export naar een Nieuwe Toekomst.”

<sup>31</sup> “E-Certification: CLIENT Export.” Netherlands Ministry of Economic Affairs website. <http://www.clientexport.nl/ecertification.html>.

<sup>32</sup> Ibid.

<sup>33</sup> Source: personal communication with Ministry of Economic Affairs (MINEZ).

## TOPIC 2: OBTAINING SEED

Increasing farmer productivity and income depends on access to and availability of affordable, high-quality and high-performing seed.<sup>34</sup> However, many governments control the entry of new varieties into the market, which delays the introduction of new traits and varieties desired by farmers. At the same time, burdensome licensing requirements for seed suppliers can stifle the sector by discouraging new entrants and limiting opportunities for existing companies to expand. Finally, high costs for registering varieties and licensing distributors are passed on to farmers; this creates a cycle of low demand (because of high costs) and limited innovation (because of restricted market opportunities). Evidence suggests that governments which lower registration costs while increasing access to a diverse range of seed varieties spur innovation in the agricultural sector and build a strong foundation for future growth.

- » Harmonizing seed variety registration at a regional level expedites access to new varieties and expands market size.
- » More time and higher cost for registering a seed variety are associated with inefficient processes and institutional capacity constraints.
- » It costs nearly 100% GDP per capita to obtain seed business licenses in East African AGRI countries (Kenya and Uganda), compared with only 15% of GDP per capita in West African AGRI countries (Ghana, Mali, and Senegal).
- » Minimizing the number of requirements, as done reduces the time to obtain seed supplier licenses—from as long seven weeks to a matter of days.

The indicators under the Obtaining Seed topic measure the time and costs associated with registering a new hybrid cereal seed variety and the procedures to obtain the licenses and permits necessary to legally operate as a seed company. These two indicators affect the development of the private seed market and are directly under the control of government authorities.

### SEED VARIETY REGISTRATION RANKING

1. Thailand
2. Zambia
3. Netherlands
4. Kenya
5. Bangladesh
6. Uganda
7. Ghana
8. Nepal
9. Mali

### WHERE IS IT EASIEST FOR SEED SUPPLIERS TO OPERATE?

#### *Seed Variety Registration*<sup>35</sup>

Among AGRI countries, Thailand has the most efficient seed variety registration procedures. Seed variety registration in Thailand is comparatively inexpensive and efficient, taking less than 2 years and 31% of GDP per capita to complete. This allows seed companies to introduce new seeds to the market relatively swiftly.

### CASE STUDY SEED SUPPLIER

**Activities:** Import, wholesale distribution, and retail sales; does not grow or multiply seed

**Type of Seed:** Most widely-traded staple grain

**Location:** Capital city

**Ownership:** Domestic, non-state-owned enterprise

<sup>34</sup> USAID-EAT project, 2011. *Building an Enabling Environment for Seed Policy Brief*.

<sup>35</sup> Note: Senegal receives no score on the seed variety registration indicator. Private companies in Senegal are legally restricted from introducing new seed varieties for commercial purposes: only the national agriculture research organization (ISRA) may do so. Restrictions on seed variety development contribute to the fact that only two new rice varieties have been released in Senegal in the past twenty years. Since companies may not develop new seed varieties for commercial purposes, Senegal received a “no practice” on this indicator; which results in no score.

### Licenses and Permits for Seed Suppliers

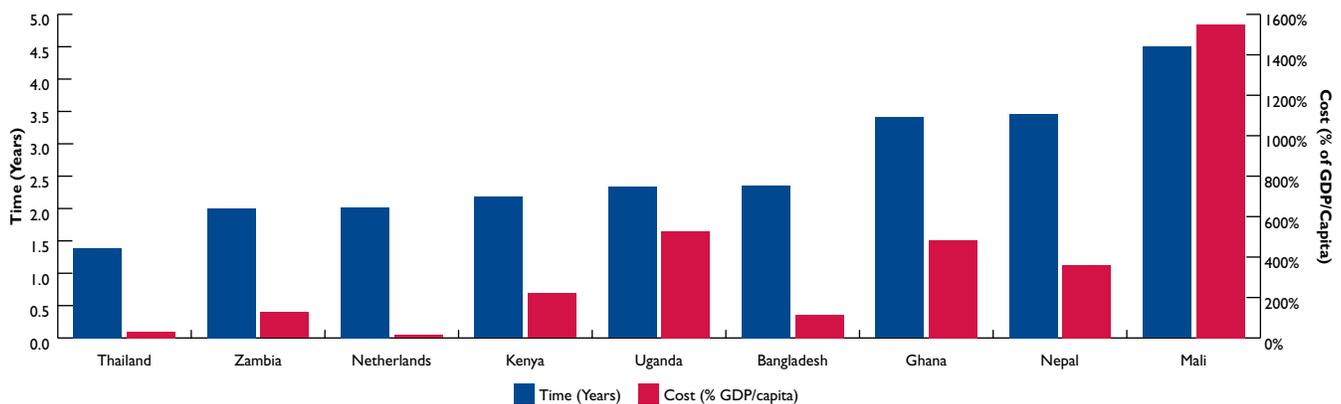
The top three ranked countries—Netherlands, Nepal, and Mali—have the fewest procedures to license a seed company (only two). In the Netherlands, simple and straightforward requirements take as little as two days and cost only 1% of GDP per capita to complete. In comparison, Kenya fared poorly on this indicator: it takes more time, cost, and procedures to establish a seed company in Kenya than in any other AGRI country.

### SEED SUPPLIER LICENSES RANKING

1. Netherlands
2. Nepal
3. Mali
4. Thailand
5. Bangladesh
6. Ghana
7. Zambia
8. Senegal
9. Uganda
10. Kenya

### INDICATOR 1: SEED VARIETY REGISTRATION Time, cost, and procedures to register a new domestic cereal seed variety

CHART 8: TIME AND COST TO REGISTER A SEED VARIETY



### I. Harmonizing seed variety registration at a regional level expedites access to new varieties and expands market size.

Harmonizing seed variety registration policy and procedures at a regional level allows new varieties that are already in use in neighboring countries to enter the domestic market without government-mandated testing or approval. In the Netherlands, for example, seed varieties listed in the EU Common Catalogue (which have already been registered in another EU member state) are automatically approved for sale and may be marketed immediately. Thus, Dutch farmers have immediate access to the new variety without further cost or delay. At the same time, Dutch seed authorities need not duplicate tests and trials already conducted by another country within the region. In practice, the majority of cereal varieties sold in the Netherlands were registered in other EU countries and allowed into the Netherlands with no testing or government assessment.<sup>36</sup>

<sup>36</sup> An estimated 90 percent or more of maize varieties in use in the Netherlands were initially registered in another EU member state. Source: David Gisselquist, personal communication. See the EU Common Catalogue: [http://ec.europa.eu/food/plant/propagation/catalogues/agri2011/index\\_en.htm](http://ec.europa.eu/food/plant/propagation/catalogues/agri2011/index_en.htm).

For countries seeking to emulate the Netherlands, aligning and harmonizing regional seed policy involves extensive negotiation and cooperation among countries, and can take up to 10 years to complete. However, a simpler and more immediate action can be taken: policymakers in a country can unilaterally decide to accept for domestic sale all seed varieties that are already approved in another country. For instance, Uganda could automatically accept all maize varieties that have been approved for sale in Kenya, or vice versa. Uganda need not adopt all of Kenya's seed policies, so long as it accepts the validity of Kenya's variety testing and approval process.

## **2. Lack of clarity in implementing the West African regional seed agreement (ECOWAS) creates uncertainty and adds significant time and cost to registering a new cereal seed variety in Ghana and Mali.**

In addition to the Netherlands, four other AGRI countries are party to regional seed agreements that hold promise of harmonizing variety registration through the creation of a regional variety catalogue. Zambia and Kenya are party to the COMESA seed agreement, while Ghana, Mali, and Senegal have acceded to the ECOWAS seed agreement.<sup>37</sup> Both regional agreements have an approved but not yet functional regional variety catalogue. Once implemented, these regional catalogues should perform the same role as the EU Common Catalogue. For example, the ECOWAS catalogue, for example, will include approved varieties from each member state. All approved varieties will be automatically accepted by every other ECOWAS country.

Because the COMESA and ECOWAS catalogues are not yet in effect, each country relies on its own domestic approval process. Seed companies report that the lack of clarity and incomplete implementation of new seed laws in Ghana and Mali that are intended to align domestic seed policy with the ECOWAS agreement create uncertainty as to which rules apply, and make it difficult register a new seed variety.<sup>38</sup>

Efforts to align Ghana and Mali with ECOWAS seed regulations have not yet been successful in reducing the hurdles for breeders and seed companies. The majority of AGRI countries (8 of 10) require two seasons of field testing, which takes two years on average.<sup>39</sup> In Ghana, however, current practice includes a third season of field testing, while field testing in Mali takes up to four seasons.<sup>40</sup> Each additional season of field testing adds an average of one year to the process and is associated with costs of more than US\$2,000 in each country. In Ghana, the 2010 Plants and Seeds Act is in place but lacks regulations to implement it. As of August 2013, a standard procedure for approving new seed varieties has not been created in Ghana because the technical committees tasked with doing so by the new law have not yet been established. Similarly, Mali passed a new seed law in 2010 that established a national seed committee to oversee variety release. As of April 2014, the committee members have been appointed, but no budget had been allocated and the committee reportedly has not met or released any new varieties.

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<sup>37</sup> COMESA stands for *Common Market for Eastern and Southern Africa*, while ECOWAS is the *Economic Community of West African States*. Together, the two regional economic agreements count 35 African countries as member states.

<sup>38</sup> In Senegal, new cereal varieties intended for commercial use (e.g. rice) are developed by the national agricultural research institute or in partnership with regional research institutions.

<sup>39</sup> Field testing is the longest and most expensive stage of the variety registration process. Testing of new seed varieties typically includes two tests: *Distinctness, Uniformity, and Stability* (DUS) and *Value for Cultivation and Use* (VCU). The DUS test establishes that the seed is indeed a new and distinct variety, while the VCU test (also known as national performance trials) proves that the variety has desirable and value-adding characteristics. One season of DUS testing in a laboratory and two seasons for VCU tests in the field are standard practice. In AGRI countries, one growing season typically translates to one calendar year, although some tropical climates have two or three growing seasons per year.

<sup>40</sup> In Mali, field testing requirements are set by each research institution. In Ghana, after the DUS and VCU tests are completed, test results are submitted to the National Variety Release Technical Committee (NVRTC). The NVRTC conducts an additional season of field testing which includes on-farm evaluations. The breeder must maintain a demonstration plot during this period. Two official visits to the test plots are made by the NVRTC. A technical presentation on the varieties to be proposed for release is made on both occasions.

### **3. Policymakers have a range of choices in managing the introduction of new seed varieties. Many countries regulate the entry of new seed varieties through an official release process, while others demonstrate that government control is not a necessary precondition of a healthy seed market.**

Many countries—including all AGRI countries—regulate the entry of new seed varieties (especially cereals) through an official (governmental) release process. In contrast, the US and India allow the automatic entry of all new seed varieties with no official testing or approval.

Global seed experts hold differing views on the optimal way to manage the introduction of new seed varieties. Some experts maintain that an official variety registration process is crucial to managing the quality of national seed systems while others argue passionately that no registration system is necessary at all. The AGRI team does not take a particular stand on this issue given the success of both systems—those with mandatory registration (e.g., the EU) and those with no registration (e.g., the US). Instead, we advocate for a clear and predictable legal and regulatory regime, and efficient administration of the regime. As demonstrated by AGRI data, variety registration requirements frequently impede farmer access to high performing varieties; in those instances the process should either be overhauled to ensure swift approval of new varieties or should be removed entirely to allow for automatic registration.

All AGRI countries have adopted a similar national protocol for registering varieties of locally-developed cereal seeds.<sup>41</sup> That protocol includes providing application materials, conducting field testing, reviewing technical data, and officially approving the release of the new seed variety.<sup>42</sup> Despite the similarities, the time and cost to register a new seed variety in AGRI countries varies widely. Registration time ranges from 1.39 years in Thailand to 4.5 years in Mali. Registration cost ranges from 20% of GDP per capita in the Netherlands to 1,550% in Mali. In short, it takes twice as long to register a new seed variety in Mali than in the Netherlands and based on per capita GDP, it costs 75 times more.

### **4. More time and higher cost to register a seed variety are associated with inefficient processes and institutional capacity constraints.**

Infrequent meetings of a country's National Seed Committee (NSC) delay the approval of new seed varieties.<sup>43</sup> In African AGRI countries, the NSC meets on average only once per year, which delays the approval of new seed varieties by an average of three months.<sup>44</sup>

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<sup>41</sup> There are exceptions. For instance, Bangladesh only requires official release for varieties of five "notified" crops, which include several major staple crops (rice, wheat, potato, jute, and sugarcane). Additionally, the EU Common catalogue allows seed suppliers in the Netherlands to market most varieties with no testing or approval from the Dutch government. Finally, vegetable seeds are typically treated differently than cereals, and in most AGRI countries are automatically released.

<sup>42</sup> Although the stages of seed variety registration are similar across countries, the actual criteria for approval of a variety (e.g., required performance and characteristics) vary by country.

<sup>43</sup> This committee may go by different names in different countries, such as the "National Variety Release Committee;" however, for consistency, this body is generically referred to in this report the "National Seed Committee." A country's seed law typically defines the membership and responsibilities of its National Seed Committee, but generally the National Seed Committee oversees the approval of new seed varieties. The committee usually consists of senior representatives of the public and private sector, including the Minister of Agriculture, senior government officials, seed scientists, and other experts.

<sup>44</sup> The NSC meets even less often in Senegal (not since 2009) and in Ghana. Mali's NSC, established under the 2010 Seed Act, has not yet been established.

Budget constraints and difficulties in convening the NSC members also result in frequent postponement or cancellation of NSC meetings, delaying the approval of new varieties by as much as four months in Uganda. In Ghana, it is common practice for the breeder to pay the per diems and travel allowances to convene NSC members, and even then it takes three months to schedule an NSC meeting.<sup>45</sup> Strategies to address this issue include the following:

- » The NSC should receive an adequate budget to allow for multiple meetings per year in order to maintain a fully functional seed variety release system. Where this is not possible it is recommended that automatic release programs be instituted.
- » NSC meetings should be timed to occur soon after the harvest so there is minimal delay between variety test results and the next meeting. The Netherlands, for instance, sets application and approval deadlines to coincide with the crop cycle to minimize release time.
- » Government functionaries who are unable to meet on a regular basis should not be NSC members. An alternative is to delegate the responsibility for approving new varieties to a technical committee consisting of seed specialists (rather than high-level bureaucrats) with better availability and greater expertise interpreting seed variety performance data.

Also, in many countries, once a new variety has been released it must be published in the national gazette before it can be marketed. This requirement unnecessarily delays the sale of a new variety by as much as one year in Nepal, where the national gazette is published only once per year. This formality should be expedited, such as by making an official announcement online as is done in Thailand and the Netherlands. This would allow seed companies to market new seed varieties rapidly after release by the NSC.

**TABLE 2: GAZETTE TIME BY COUNTRY**

COUNTRY	TIME FOR GAZETTING	NOTES
<b>Thailand</b>	<i>Simultaneous with release</i>	The Department of Agriculture publishes notification of the new variety on its website as well as at the online Government Gazette.
<b>Netherlands</b>	<i>Simultaneous with release</i>	Official release includes listing the variety in the Dutch Register of Varieties website. However, it may take up to two months before the variety is listed in the regional EU Common Catalogue.
<b>Kenya</b>	14 days	Once officially released, the new variety must be gazetted within 14 days.
<b>Bangladesh</b>	30 days	The new variety must be included on the national list of varieties via publication in the monthly official gazette.
<b>Ghana</b>	30 days	Same as Bangladesh.
<b>Nepal</b>	1 year	After the variety is released it must be published in the national gazette, which must be reviewed by the Ministry of Law and may take over a year.

<sup>45</sup> This is not required by law and can cost several thousand dollars. There are no official costs to achieve variety release in Ghana. In practice, however, the breeder covers the allowances to NSC members, and the cost depends on the number of members and their places of residence.

Table 3 below illustrates how the process to register a seed variety differs in Nepal, Ghana, and the Netherlands (an AGRI benchmark country). All three countries follow similar processes for variety registration but in Nepal and Ghana, additional requirements, capacity constraints, and inefficient processes lead to significantly more time and cost to register a new variety than in the Netherlands. In particular, administrative processes related to reviewing application materials, analyzing technical data, and listing in the national gazette are comparatively much faster in the Netherlands than in Ghana or Nepal. In contrast, registering a seed variety in Ghana is delayed by one year of additional field trials, while in Nepal, gazette notification holds up approval by one year after the variety has already been approved.

**TABLE 3: SEED VARIETY REGISTRATION PROCEDURES**

NETHERLANDS	NEPAL	GHANA
<b>Summary</b>		
<i>Variety registration procedures are comparatively fast, and once registered in the Netherlands, a seed variety can be marketed throughout the EU.</i>	<i>Rules and procedures for seed variety registration are not clear or functional, and there is limited capacity for seed testing at the agricultural research center. A long backlog of new varieties currently awaits approval.</i>	<i>A new seed law is in place but lacks regulations to implement the law and make it operational.<sup>46</sup> Standard procedures for variety approval have not been defined, causing delays at each step of the process and additional costs borne by the applicant.</i>
<b>1. Application</b>		
Application deadlines for listing new seed varieties depend on the crop and are typically around February 1. The applicant must provide a seed sample as well as information on the seed variety and its intended use. <b>1 day.</b>	Applicants must submit a seed sample for evaluation. If importing a variety that is already used in another country, the applicant must apply for permission to import a small sample for research purposes. <b>49 days.</b>	Requirements for variety registration are prescribed in regulations which have not yet been enacted. As a result, the procedures remain unclear. Maize and rice variety development is primarily undertaken by national agricultural research institutes and universities, although a few private firms are beginning to introduce new hybrid maize varieties. <b>30 days.</b>
<b>2. Field Testing</b>		
The Netherlands seed agency, Naktuinbouw, may purchase the test results for seed varieties previously released elsewhere in the EU from the other country's national seed agency. <sup>47</sup> <b>640 days.</b>	Delays for field testing result from having to wait until the next cropping cycle and limited capacity at the Nepal Agricultural Research Council (NARC) research stations to conduct trials. <b>730 days.</b>	Field trials take two or more years to complete due to backlogs within the agricultural research institutes that conduct the field testing and a lack of coordination between the research institutes and the Ministry of Food and Agriculture. Applicants pay the transport and lodging costs for inspectors to conduct site visits during field testing (in practice, not by regulation). <b>730 days.</b>

<sup>46</sup> Ghana is party to the ECOWAS regional seed agreement, which is not yet implemented but will allow for automatic entry of varieties that are already approved in ECOWAS member states. This will greatly improve Ghanaian farmers' access to new seed varieties.

<sup>47</sup> Naktuinbouw may purchase DUS test results from a counterparty national seed agency. VCU tests are performed in the Netherlands by private research stations operating under contract with the private sector.

NETHERLANDS	NEPAL	GHANA
<b>3. Technical Review</b>		
Technical review is based on fixed minimum criteria, so a decision is typically reached quickly. <b>5 days.</b>	A Technical Committee composed of agronomists and other scientists evaluates the field trial results and recommends release to the National Seed Board, which takes on average two months. <b>60 days.</b>	Applicants must conduct an additional season of field testing during which the National Variety Release Technical Committee (NVRTC) conducts on-farm evaluations and reviews test results. These steps take on average one year. <b>365 days.</b>
<b>4. Official Approval and Release</b>		
Technical review is based on fixed minimum criteria, so a decision is typically reached quickly. <b>5 days.</b>	A Technical Committee composed of agronomists and other scientists evaluates the field trial results and recommends release to the National Seed Board, which takes on average two months. <b>60 days.</b>	Applicants must conduct an additional season of field testing during which the National Variety Release Technical Committee (NVRTC) conducts on-farm evaluations and reviews test results. These steps take on average one year. <b>365 days.</b>
<b>5. Listing in the National Gazette</b>		
The variety is automatically listed in the Dutch Register of Varieties and the EU Common Catalogue, and can be marketed throughout the EU. <b>Simultaneous with release.</b>	After the variety is released it must be published in the national Gazette, which may take over a year. <b>365 days.</b>	New approved seed varieties must be listed in the monthly national Gazette before sale can be made. <b>30 days.</b>
<b>Total Time: 2.02 years</b> <b>Total Cost: 20% of GDP per capita</b>	<b>Total Time: 3.46 years</b> <b>Total Cost: 361% of GDP per capita</b>	<b>Total Time: 3.41 years</b> <b>Total Cost: 482% of GDP per capita</b>

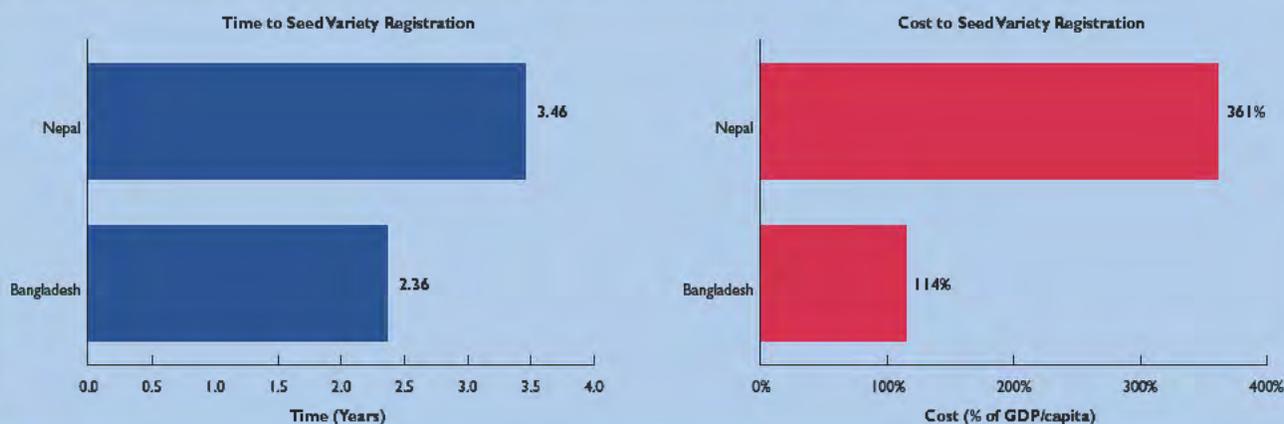
## THE TIME AND COST FOR REGISTERING A SEED VARIETY AFFECTS A SEED COMPANY'S DECISION TO INVEST IN BREEDING PROGRAMS

Lengthy and costly seed variety registration procedures reduce the return on investment for a company seeking to develop proprietary seed varieties or to introduce a variety already in use in another country. Inordinate costs discourage investment and innovation, particularly for crops and countries with small markets. In turn, this restricts the number of seed varieties available to farmers.<sup>48, 49</sup>

Recent research bears this out. For example, in sub-Saharan Africa, too few varieties are available to farmers; the rate of introducing new varieties is very low;<sup>50</sup> and the low rate can be partially attributed to the lengthy time, high cost, and uncertainty created by government controls for registering new varieties.<sup>51</sup> As a consequence, AGRI results show that countries with the longest time and highest cost for registering new seed varieties tend to lack significant private sector involvement in introducing new varieties. The five AGRI countries that ranked lowest on the seed variety registration indicator (Senegal, Mali, Nepal, Ghana, and Uganda) have few companies that invest in introducing new seed varieties, suggesting that burdensome seed variety registration procedures deter companies from investing in or bringing new seed varieties to market.

The link between the variety registration process, the rate of introduction of new varieties, and private investment is further illustrated by data from Bangladesh and Nepal. Those data, collected over the past decade, reflect that Bangladesh has relatively efficient variety registration procedures—30% faster and 68% less expensive than in Nepal. Not surprisingly, private seed companies in Bangladesh introduce three times more seed varieties than their counterparts in Nepal in any given year. The new varieties contribute to substantially higher growth in farmer yields over time.<sup>52, 53</sup>

**CHART 9: ONE YEAR LONGER TO REGISTER A NEW SEED VARIETY IN NEPAL THAN IN BANGLADESH**



<sup>48</sup> CIMMYT, 2009. <http://repository.cimmyt.org/xmlui/bitstream/handle/10883/80793477.pdf> Page V.

<sup>49</sup> Gisselquist, et. al. *An Obstacle to Africa's Green Revolution: Too Few New Varieties*. SSRN Working Paper Series, 2013. [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2263042](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2263042).

<sup>50</sup> Only 0.5 new food crop varieties were released per country per year between 2000–2008 in Kenya, Tanzania, and Zambia, according to a 2012 research study by Rutgers, McGill University, and IFPRI. Ibid.

<sup>51</sup> Ibid.

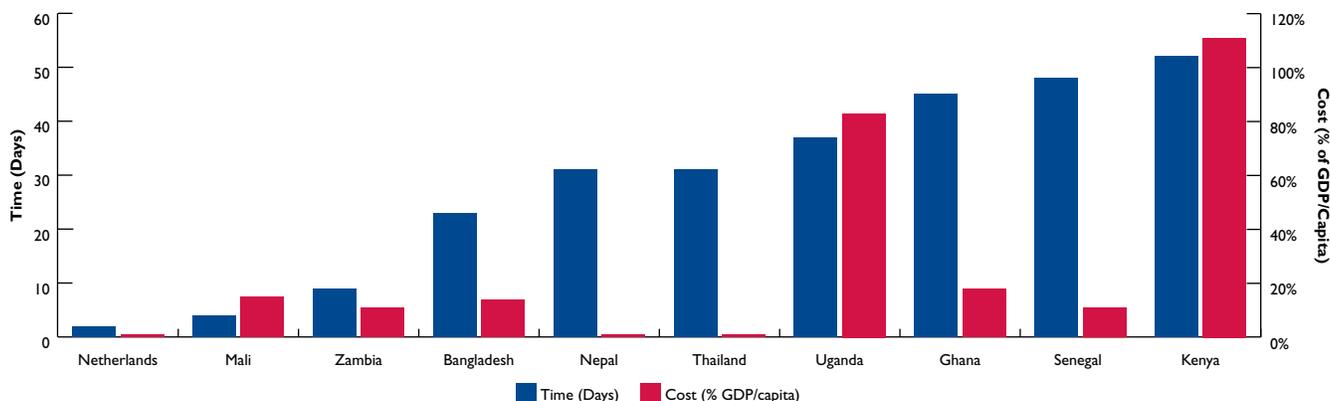
<sup>52</sup> Data on the rate of new seed variety registration in Bangladesh and Nepal were produced by the 2014 USAID-EAT project's *South Asia Policy Report*.

<sup>53</sup> Harun-Ar-Rashid, et. al. *Private Sector Agricultural Research and Innovation in Bangladesh*. CGIAR, 2012. <http://www.wasti.cgiar.org/pdf/private-sector/Bangladesh-PS-Report.pdf>.

## INDICATOR 2: LICENSES AND PERMISSIONS FOR SEED PROVIDERS

### Time, cost, and procedures to obtain operational licenses for a seed supplier

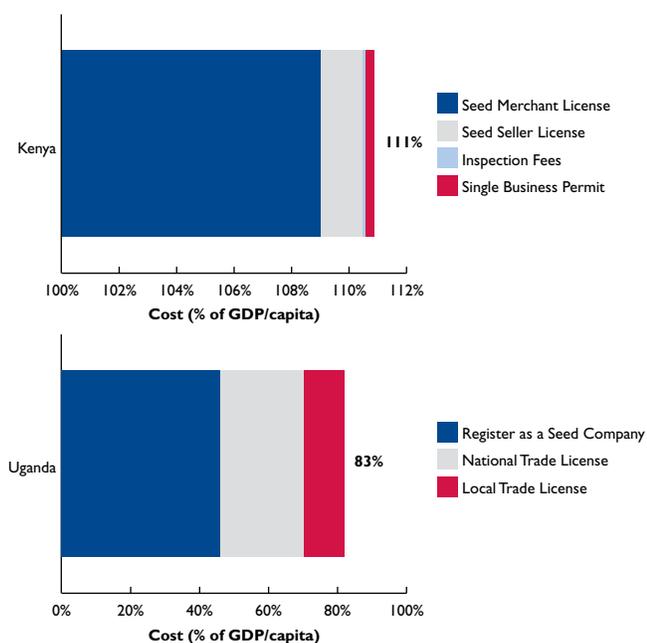
**CHART 10: TIME AND COST TO OBTAIN LICENSES AND PERMITS FOR A SEED SUPPLIER**



**I. It costs nearly 100% of GDP per capita to obtain seed business licenses in East African AGRI countries (Kenya and Uganda), the highest among all regions, compared with only 15% of GDP per capita in West African AGRI countries (Ghana, Mali, and Senegal).**

The costs to become a licensed, ready-to-operate seed supplier in West Africa (Ghana, Mali, and Senegal) are significantly below the AGRI average of 27% of GDP per capita, and are a fraction of the cost paid by seed suppliers in Kenya and Uganda (see Chart 10). For instance, a license to sell seeds is free in Senegal and costs only 15% of GDP per capita in Mali.

**CHART 11: BREAKDOWN OF COSTS BY SEED BUSINESS LICENSE IN KENYA AND UGANDA**



Kenya has the highest costs among all AGRI countries in both absolute terms (US\$925) and adjusted for GDP per capita (111% of GDP per capita). Chart 11 shows that the overwhelming majority of the cost in Kenya can be attributed to obtaining a seed merchant license, which costs 109% of GDP per capita. In addition to the high license fee, firms applying for a seed merchant license must demonstrate substantial technical experience, equipment, and financial resources. The combination of high costs and a high bar for expertise and resources may make it more challenging for new firms to enter the seed import and distribution business in Kenya.

In Uganda, the second-most expensive AGRI country, seed company licenses and permits cost 83% of GDP per capita. Seed company registration fees in Uganda are only one-third of those in Kenya, but two general trade licenses (at the national and local level) account for additional costs of 36% of GDP per capita. In both Uganda and Kenya, the costs to operate as a seed supplier are far higher than in other AGRI countries. High licensing costs in these countries may increase the risk of fake seed sold by suppliers operating outside the law.

## **2. Minimizing the number of seed licenses and permits, as in the Netherlands, greatly reduces compliance time—from as much as seven weeks to a matter of days.**

It takes only two days for a seed supplier in the Netherlands to obtain the required licenses and permits, compared with more than six weeks in Ghana, Kenya, and Senegal. The Netherlands minimizes the requirements, limiting them to only what is necessary to ensure seed quality. Any company can sell seed without special licenses, permits, or restrictions as long as the seed meets quality criteria and is stored and sold in accordance with the law.<sup>54</sup> Compliance is then monitored through spot checks by the Dutch consumer protection agency (NVWA) and the seed agency for field crops, NAK. This approach results in a minimal burden on seed suppliers and makes the Netherlands a benchmark for the time and cost to license seed suppliers.

Moreover, the cost to obtain licensing is low: only 1% of GDP per capita. NAK has positioned itself as a service provider for inspecting and analyzing seed—not solely as a regulator: Registration with NAK is free, easy, and a formality, and NAK staff report that its fees for seed services are structured for cost recovery rather than revenue generation. This approach transforms the regulator-regulated relationship into a service provider-client relationship, which creates incentives for NAK to be attentive to their client's (i.e. seed company) needs. The success of this approach is evident: NAK routinely provides seed analysis services to the private sector on a cost-competitive basis.

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<sup>54</sup> All seed marketed in the EU must be certified by a national seed agency.

## TOPIC 3: OBTAINING FERTILIZER

**Fertilizer, when used appropriately, is critical to increasing crop yields and maintaining soil fertility. Yet systematic fertilizer use remains low across developing countries, due in part to regulatory requirements that increase the cost of fertilizer supply. A supportive enabling environment improves farmers' access to fertilizer by ensuring efficient and transparent regulatory requirements and reducing compliance costs for suppliers.**

- » In five of nine AGRI countries, fertilizer licenses were found to be cost-prohibitive, redundant, or subject to delays.
- » Thailand's success comes in part from "right-sizing" regulatory requirements.
- » It is comparatively expensive and time-consuming to start a fertilizer supplier in the Netherlands because of requirements related to chemical and environmental regulations.

Similar to the Obtaining Seed topic, the Obtaining Fertilizer topic measures all procedures that a fertilizer supplier must complete in order to obtain the licenses and permits necessary to legally operate as a fertilizer company. Common requirements for fertilizer suppliers include obtaining an import license, wholesale or retail sale license, licenses for storage facilities, environmental permit, and national or local trading licenses.<sup>55</sup>

### FERTILIZER SUPPLIER RANKING

1. Nepal
2. Mali
3. Senegal
4. Thailand
5. Bangladesh
6. Ghana
7. Zambia
8. Netherlands
9. Uganda

### WHERE IS IT EASIEST TO OPERATE AS A FERTILIZER SUPPLIER?<sup>56</sup>

Nepal and Mali have the fewest requirements for fertilizer suppliers—only one procedure in each country.<sup>57</sup> Nepal requires a license for fertilizer retailers but not for importers or distributors. In Mali, the Ministry of Agriculture introduced a new license for fertilizer suppliers in 2013. Requirements to obtain the license are simple, and it takes only two days for the license to be issued.

In contrast, the Netherlands and Uganda require the greatest number of procedures (six and four, respectively), which take 200 days to complete. Procedures in these two countries are complex. The Netherlands has both local and national government requirements. In Uganda, fertilizer supplier licenses must be approved by a committee that meets only a few times per year.

### CASE STUDY FERTILIZER SUPPLIER

**Activities:**

Import, wholesale distribution, and retail sales; does not manufacture or repackage fertilizer

**Fertilizer:**

Inorganic compound fertilizer (e.g. NPK)

**Location:** Capital city

**Ownership:**

Domestic, non-state-owned enterprise

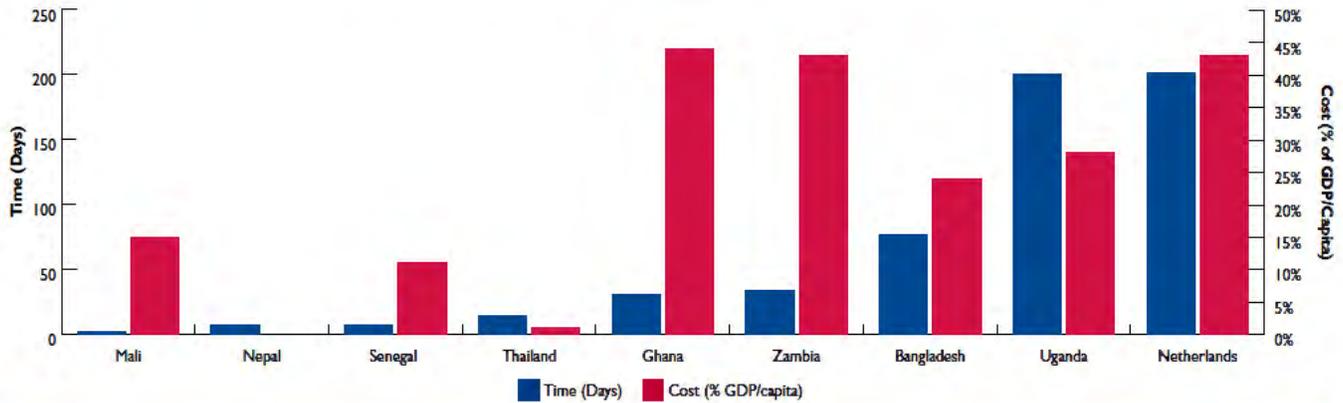
<sup>55</sup> A second indicator, the Legal Framework for Fertilizer Distribution Index, assesses key elements of the legal and regulatory framework pertaining to the fertilizer sector: the existence of legal provisions for truth-in-labeling; establishing accreditation of private laboratories to provide fertilizer analysis; clear designation of a regulating authority; and a system of regular inspections and sampling that follow international best practices. This indicator is not profiled in this report. Data for this indicator can be found in Annex 2, and discussion on the development of this indicator is included in Annex 1.

<sup>56</sup> Note: No data were collected on fertilizer suppliers in Kenya because an insufficient number of contributors participated and provided data on this topic during pilot testing.

<sup>57</sup> Nepal, Mali, and Senegal have the fewest licensing requirements for fertilizer suppliers among AGRI countries. Those countries pre-qualify import tenderers as part of government fertilizer subsidy programs, which reduces competition at the outset. Pre-qualification tender requirements may provide a means for controlling fertilizer quality and supplier behavior and act as a substitute for the licenses and permits identified in other AGRI countries. This area requires further research into the total regulatory burden for fertilizer suppliers across countries.

**INDICATOR 1: LICENSES AND PERMISSIONS FOR FERTILIZER PROVIDERS**  
**Time, cost, and procedures to obtain operational licenses for fertilizer suppliers**

**CHART 12: TIME AND COST TO OBTAIN FERTILIZER SUPPLIER LICENSES**



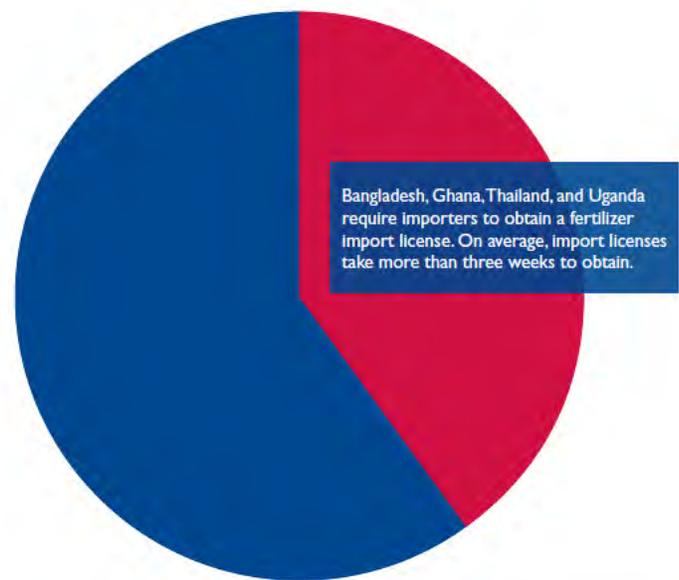
**I. In five of nine AGRI countries, fertilizer licenses were found to be cost-prohibitive, redundant, or subject to delays.<sup>58</sup>**

The time to obtain licenses and permits to operate as a fertilizer supplier varies greatly among AGRI countries. Licenses for fertilizer suppliers in the bottom half of AGRI countries take nearly 20 times longer to obtain than in the top half, and cost nearly 10 times more on average.

Fertilizer suppliers seeking to operate in AGRI countries face numerous common licensing challenges. These problems were most acute in Bangladesh, Ghana, Netherlands, Uganda, and Zambia.

» **Lengthy processing times** to issue a license and to arrange a physical inspection of the supplier's facilities (a common pre-requisite to obtaining a fertilizer business license) are frequent causes of delays to obtaining fertilizer supplier licenses. As the pie chart to the right demonstrates, four AGRI countries require an import license for fertilizer suppliers, which adds more than three weeks on average to the process. The wait time can be reduced by adopting more efficient administrative procedures.

**CHART 13: FOUR OF 10 AGRI COUNTRIES REQUIRE A BUSINESS LICENSE TO IMPORT FERTILIZER**



<sup>58</sup> Some licensing requirements are not "well-targeted," which refers to a license that applies to all businesses regardless of business size or activity. In this section, this means that there are no licensing requirements specific to the fertilizer supply business.

- » **Limited access to national government offices** poses a hurdle to rural agro-dealers who seek to become formally licensed. In Uganda, for example, fertilizer licenses must be approved by the Agrochemicals Board located in Entebbe. But business licenses are often delayed because the Board lacks the budget to meet more than several times per year to approve the applications. These resource and capacity constraints lead to lengthy and unpredictable delays in obtaining fertilizer supplier licenses. In Zambia, a fertilizer supplier cannot be licensed until its facilities have been inspected. However, inspections can be delayed by several weeks because there is a shortage of inspectors throughout the country.
- » **Duplicative licenses** create unnecessary delays and compliance costs for fertilizer suppliers. Fertilizer suppliers in Bangladesh, for example, must obtain two licenses in order to import fertilizer; one issued by the Department of Agricultural Extension and another by the Ministry of Commerce. These two licenses serve precisely the same purpose—to allow the import of fertilizer—and take a total of six weeks to obtain. Combining the two procedures would reduce the time required to obtain a fertilizer import license by a week and a half.

## 2. Thailand's success comes in part from “right-sizing” regulatory requirements.

The cost burden of regulatory requirements does not fall equally across all fertilizer suppliers. Fertilizer import and manufacture are capital-intensive activities typically undertaken by large firms with much greater revenue than a small, rural agro-dealer shop. License and permit costs for fertilizer sales are therefore comparatively more burdensome for small retailers than for large firms.

Thailand has reduced the regulatory burden on smaller fertilizer suppliers through a flexible, affordable system of “tiered licenses.” Under this system, each type of fertilizer business activity (e.g. import, distribution, manufacture) corresponds to a different license and each business need only obtain the licenses related to its activities. In total, there are seven different fertilizer supplier licenses, each with an annual fee proportional to the specific business activity. For example, a fertilizer retail sales license is cheaper than an import license and can be obtained locally, making it easier for rural agro-dealers to obtain a license. Moreover, licensing costs are relatively low: no single license exceeds 4% of GDP per capita, and even if a company obtains all seven licenses, the total fees are less than 9% of GDP per capita—the second lowest among AGRI countries). Thailand's system does all this without creating additional paperwork for applicants; only one check-off application is required.<sup>59</sup>

As a result of Thailand's tiered license system, the cost burden is more equitable. Small agro-dealer retail shops face fewer and less-expensive regulatory requirements than the largest importers.

## 3. It is comparatively expensive and time-consuming to start a fertilizer supply business in the Netherlands because of requirements related to chemical and environmental regulations.

Among all AGRI countries (except for Uganda), the Netherlands has the most expensive and lengthy process for obtaining fertilizer supplier licenses and permits. The high cost is attributable to regulatory compliance; for each chemical fertilizer product, all Dutch suppliers offering that product must register; all together, as a consortium with the European Chemicals Agency (ECHA), an EU body tasked with enforcing REACH regulations.<sup>60</sup> In order to access the EU market, the consortium—as a group—must pay a one-time fee of more than US\$20,000 per fertilizer product. The cost for each fertilizer supplier in the consortium depends on the number of firms involved; for example, in a consortium of 100 fertilizer suppliers, each company would only have to pay US\$200. This cost burden can put registration beyond the reach of smaller consortia and smaller fertilizer suppliers.

<sup>59</sup> For instance, a single application document can be used for all business licenses. The application document includes a list of fertilizer business activities. Applicants need only check the boxes that correspond to their firm's activities. The total cost to apply for the licenses is determined by a fee schedule that lists the license fee associated with each type of activity.

<sup>60</sup> EU Regulation on the Registration, Evaluation, Authorization and Restriction of Chemicals.

Additionally, fertilizer suppliers in the Netherlands must obtain a one-time environmental permit for each storage facility from the local municipal government. On average, it takes up to four months to conduct an environmental assessment and issue an environmental permit.

Contributors from the Netherlands noted that these environmental requirements, while adding time and cost for suppliers, reflected clear policy objectives to protect the environment and the local community rather than regulatory inefficiencies. Government policy choices fall outside of the scope of a benchmarking tool such as the AGRI Index. The question remains, however, as to whether the process for becoming a licensed fertilizer company in the Netherlands can be made faster and cheaper:

Furthermore, given the environmental risks—for all countries—relating to chemical fertilizers, the pathway to determining the optimal regulatory balance for fertilizer suppliers may begin with first establishing minimum compliance standards. The notion of minimum standards and a minimum advisable time and cost to complete processes is explored in greater detail in the Starting and Operating a Farm section of this report.

## TOPIC 4: ACCESSING RURAL LAND

**The transfer of rural land can be a lengthy and opaque process. Inefficiencies in the transfer process may reflect constraints inherent to the legal framework for property rights and/or a weak land administration system: decaying paper records; inaccurate land surveys; or a shortage of trained surveyors. As a result, despite expensive and lengthy processes to transfer rural land, farmers may not end up with the security of tenure they need. A well-functioning property system enables farm operators to increase on-farm investment and productivity by increasing the size of their landholdings and investing in more intensive agricultural production systems.**

- » Farmers often lack secure and stable property rights, which restricts their ability to rent, sell, or use the land as collateral.
- » Government consent to the transfer is the most time-consuming step in the transfer of rural land.
- » As a result of inefficient, opaque, and unpredictable administrative processes in Ghana and Bangladesh, it takes, on average, half a year to complete a land transfer.
- » Electronic land title records are central to the efficient administration of land, and are used in the Netherlands to increase the precision, security, and efficiency of the land transfer process.
- » Without definitive land title, additional time for public notice of the land transfer is required to ensure that there are no competing claims.

This topic measures the time, cost, and procedures to transfer rights to rural land, a key prerequisite for an agribusiness to grow and scale its production.<sup>61</sup> To control for differences in land tenure systems across countries, the indicator described in this section<sup>62</sup> measures the transfer of the most common form of transferable rights to farmland in each AGRI country—which in some countries, may not be formal legal title.<sup>63</sup> Common procedures to transfer rural land include a title and encumbrances search, property valuation and/or inspection, government consent to transfer, payment of stamp duty and transfer tax, and registration of deeds.

### LAND TRANSACTION RANKING

1. Netherlands
2. Nepal
3. Senegal
4. Zambia
5. Uganda
6. Thailand
7. Kenya
8. Mali
9. Ghana
10. Bangladesh

### WHERE IS IT EASIEST TO TRANSFER RURAL LAND?

The Netherlands and Nepal have the fastest and cheapest processes for transferring land. In contrast, Ghana and Bangladesh have complex and unpredictable transfer processes that require the greatest number of procedures among AGRI countries (up to 9 procedures in Ghana), take a half a year on average, and cost 1.5 times the AGRI average.

### CASE STUDY LAND TRANSACTION

#### Buyer and Seller:

Both Buyer and Seller are LLCs

**Farm size:** Hectare-weighted median farm size in country

#### Purchase Price:

50x GDP per capita

**Location:** Largest agricultural-producing region, within 100km of a main commercial center

**Land Tenure:** Most common form of transferable rights to farmland

<sup>61</sup> The Transfer of Rural Land indicator captures all required official procedures to transfer land, whether performed by the buyer, seller, or a third party such as a notary. The transfer process is measured until the point at which the buyer has all necessary approvals to own and possess the land and, if possible, has recorded this interest in an official land registry.

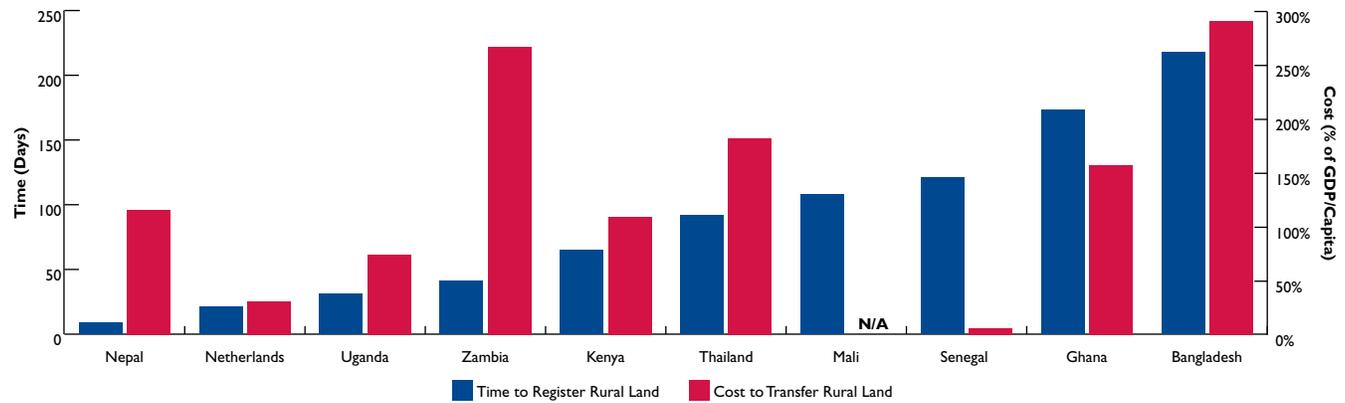
<sup>62</sup> Additional indicators include an index on access to property registration information and an index on the legal and regulatory framework for leasing land. Long-term leases in agriculture are common, yet legal restrictions on the maximum plot size, lease duration, and restrictions on the use of leased land and ability to subdivide, sublease, or mortgage the land can limit the overall ability of agribusinesses to lease land. The Access to Property Registration Information Index and Leasing Land Index are not profiled in this report. Data for these indicators can be found in Annex 3.

<sup>63</sup> For more information, see Key Finding 1 below.

## INDICATOR 1: TRANSFER OF RIGHTS TO RURAL LAND<sup>64</sup>

### Time, cost, and procedures to transfer rights to farmland

**CHART 14: TIME AND COST TO TRANSFER RURAL LAND<sup>65</sup>**



### I. Farmers often lack secure and stable property rights, which restricts their ability to rent, sell, or use the land as collateral.

Farmers in many AGRI countries lack clear and stable property rights. Secure access to land is a crucial prerequisite to making long-term investments in farm productivity and growth.

Land administration systems are complex. The AGRI team identified multiple types of land tenure in many AGRI countries, only some of which are accessible to farmers in rural areas. In many AGRI countries, land outside urban centers cannot be titled. In such cases, farmers may have clear rights to use the land, but may face restrictions on the ability to rent, sell, or mortgage the land. Contributors in Kenya, Uganda, and Zambia reported that rural areas tend to fall under customary or community land management. In those areas, farmers do not hold a title deed to their land and do not register their land interest at a registry. Other countries have different systems: in Thailand, there are multiple types of land titles and each confers a different level of tenure security, from full ownership (*chanote*) to legally recognized user rights (*nor sor sam*). (See text box.)

#### TYPE OF TENURE MEASURED

- » **Bangladesh, Kenya, Nepal, Netherlands, Uganda, Zambia:** Title transfer
- » **Ghana:** Long-term lease on customary land, with interest registered at the Deeds Registry
- » **Mali:** Transfer of local/customary land; buyer obtains provisional title to the land (*titre provisoire*)
- » **Senegal:** Transfer of user rights to government-owned land (*Domain National*), registered with local Rural Council
- » **Thailand:** Transfer of certificate of utilization for *nor sor sam* land: that is, land that has not yet been officially surveyed and titled

The reader should note that beginning with the 2013 assessments in Ghana, Mali, Netherlands, Senegal, and Thailand, the AGRI case study scenario was revised to measure the “most common form of transferable rights to farmland.”<sup>66</sup> This was done in order to collect comparable data that are closest to the AGRI case study specifications listed at the beginning of this section and

<sup>64</sup> In order to collect comparable data closest to the AGRI case study specifications of a rurally-located farm, the type of land transfer measured here is the “most common form of transferable rights to farmland” in a country.

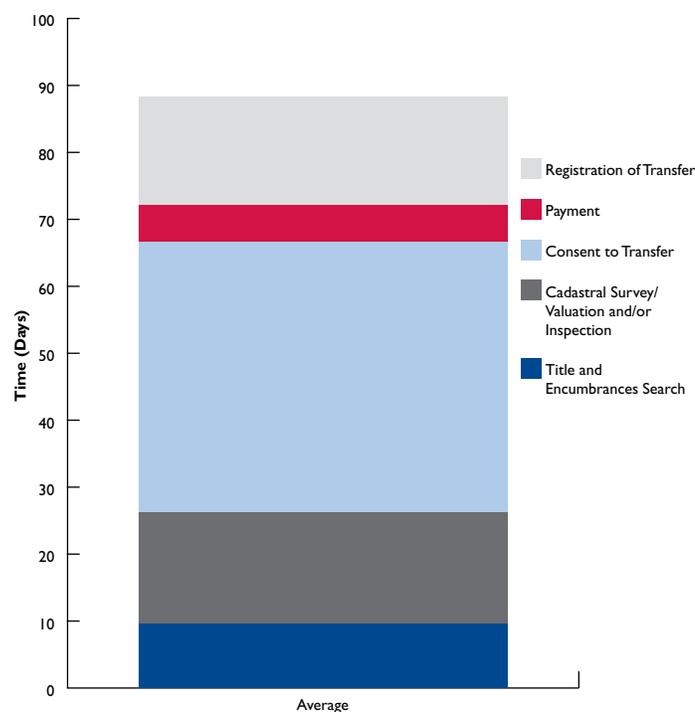
<sup>65</sup> No cost data were collected for the transfer of land in Mali. Irregular and informal payments without standardized fees were so common in Mali that the assessment team was not able to establish the official fees. The cost to transfer land in Mali was therefore not calculated.

<sup>66</sup> For more information on the development and refinement of AGRI indicators, see Annex 1.

that are most important to farmers, This scenario change enables AGRI to compare the relative time, cost, and efficiency of the transfer process through which an agribusiness can obtain some form of formally recognized land interest. Unfortunately, too often farmers' rights are not recognized or respected by authorities because farmers are unaware of their rights or cannot afford to complete the required paperwork and administrative hassle<sup>67</sup>.

## 2. Government consent to the transfer of rural land is the most time-consuming step in the transfer process.

**CHART 15: TIME TO TRANSFER LAND**



It takes nearly three months on average to transfer rural land in AGRI countries. Across countries, the transfer process generally follows similar steps. As Chart 15 demonstrates, such steps typically include confirming the plot's owner, mapping or valuing the land, and obtaining approval and registration of the transfer. Of these steps, consent to transfer from a local or national government authority is the most time-consuming, taking nearly one-half of the total time on average.

Consent to transfer from a government authority is required in all AGRI countries, whether the transfer involves a title deed, user rights (as in Senegal and Thailand), or for a long-term lease over customary land (as in Ghana). For example, in Ghana, the Lands Commission takes an average of three months to process a lease agreement for customary land. This involves checking for conflicts against existing land records, conducting a site inspection, and notifying the Office of the Administrator of Stool Lands<sup>68</sup> of the lease. Respondents noted there is no reliable time frame for this procedure, and 90 days assumes that there are no competing claims on the land. Ultimately, the leasehold

interest can be registered in the Deeds Registry which allows it to be used as collateral with a financial institution. Similarly, in Bangladesh, approvals can take up to six months because there are multiple levels of approvals required of both the buyer and seller:

## 3. As a result of inefficient, opaque, and unpredictable administrative processes in Ghana and Bangladesh, it takes, on average, half a year to complete a land transfer.

Across AGRI countries, administrative procedures were found to be lengthy, opaque, and unpredictable. Lengthy procedures, such as in Bangladesh and Ghana, result in land transfers that take an average of half a year to complete. Worse yet, there is considerable uncertainty in the transfer process because there is a high degree of variation in the time it takes to complete each step in the process. Unpredictability in the transfer process increases costs because completing each procedure typically requires multiple in-person visits to the land registry or other government office, which involves paying for transportation and the opportunity cost of missed work. Without consistent and regular follow-up by the buyer, the land transfer process can easily take more than a year in Bangladesh or Ghana.

<sup>67</sup> USAID, 2014. Land Tenure and Food Security. Presented by Karol Boudreaux, February 18, 2014.

<sup>68</sup> Stool land is a designation of customary land in Ghana.

#### **4. Electronic land title registry records are central to the efficient administration of land, and are used in the Netherlands to increase the precision, security, and efficiency of the land transfer process.**

The process to transfer land is comparatively fast in the Netherlands because the steps required to transfer land are clearly established, and unlike most other AGRI countries, administrative processes are fast. Central to the streamlined process is an electronic online land title registry (*Kadaster*), which allows for fully electronic land transactions.

An electronic database makes searching and registering a title deed instantaneous. In contrast, in most AGRI countries land records are kept in paper ledgers, which can take weeks to search. Paper records are difficult to access remotely or to centralize in a single database, and searching the registry thus requires going in person to the registry office where the plot of land is located. In Ghana, for instance, searching the deeds registry takes one month compared to less than one hour in the Netherlands. Finally, paper records are often of poor quality because title deeds deteriorate, are damaged by water or mold, or are forged—leading to cases of duplicate deeds or claims for the same plot.

#### **5. Without definitive land title, additional time for public notice of the land transfer is required to ensure that there are no competing claims on the land.**

Rural areas in Ghana, Mali, Senegal, and Thailand tend to lack formal titles to farmland. In those countries, acquiring rights to the land requires additional steps on the part of the buyer or as part of the formal process to ascertain that the seller has rightful possession of the land.

- » In Mali, the first step to acquire rural land is to sign an Act of Recognition (*Acte de Reconnaissance*) which establishes that the seller is the rightful owner of the land. This entails speaking with the village chief and neighbors to confirm the ownership and boundaries of the land plot. The buyer can then apply to the regional governor (*Prefet*) for formal provisional title to the land, which is later convertible to full title.<sup>69</sup> Before issuing a provisional title, however, the regional governor requires a public hearing to ensure that there are no other claims to the land. The meeting is advertised in the newspaper and on the radio, and posted at all relevant government offices. The hearing is attended by the *Prefet*, the village chief, village councilors, the buyer and the seller, neighbors and general public, and is followed by a 30-day deadline to challenge the claim to the land. Finally, if there are no objections, the sale is effected and the *Prefet* issues the provisional title. The entire process takes three and a half months.
- » In Thailand, farmers typically lack formal title to the land but instead hold a certificate of utilization.<sup>70</sup> As part of the transfer process, the buyer must publish announcements for 30 days regarding the change of ownership at Land Department offices at the province, district, sub-district, and village levels as well as on the land itself before registration of the title transfer can occur.
- » In Senegal, prospective land transfers of rural land are listed on a public notice board at the Rural Council.<sup>71</sup> The Rural Council meets every two to three months to make decisions on proposed transfers, and in the interim, any potential conflicting claim can be raised.

Ultimately, public hearings and advertisements are meant to protect the buyer from future disputes over land ownership. As one Ghanaian agribusiness noted, “[You] have to do a lot of due diligence to try to protect yourself as much as possible, and even then [the claim is] not secure. We try to get as many documents as proof, including voluntary publication” of the transfer:

<sup>69</sup> In practice, it is very unusual to obtain a full title (*titre fonciere*) in Mali and would be extremely rare in the case of a rural farm.

<sup>70</sup> The type of land tenure measured in Thailand, *nor sor 3*, is a legal certificate of possession that establishes who has the right to possess and use the land. However, the plot has not been formally surveyed and so the boundaries may not be precise. The land can be leased or sold subject to a 30-day waiting period to see if any conflicting claims arise.

<sup>71</sup> In Senegal, Rural Councils (*Communautés rurales*) are municipal authorities responsible for local land administration.

## CASE STUDY: THE PROCESS TO TRANSFER RURAL LAND

The time and cost to transfer rural land varies widely across AGRI countries. The case study below describes the process in two countries: Ghana and the Netherlands.

In Ghana, registering the transfer of rural land takes nearly half a year, more than twice the average time to transfer land in AGRI's six sub-Saharan African countries.

1. A cadastral site plan is prepared by a private surveyor and approved by the Lands Commission, which takes an average of one month.
2. A search must then be conducted in the deeds registry, which takes another month on average.
3. For customary land, consent must be obtained from the family head or chief to grant a lease.
4. An oath of authorization must also be obtained at the local level from the commission of oaths.
5. The lessee (tenant) submits lease documents to the regional lands commission for processing, which takes an average of three months; however, contributors noted that processing time varies widely and could take more than a year. Regular, consistent follow-up is required to complete this procedure.
6. A tax clearance certificate is obtained from the Ghana Revenue Authority.
7. Once processing of the lease documents is completed, the land value is assessed to determine stamp duty. After payment of the stamp duty, the new deed is finally registered in the Deeds Registry of the Lands Commission.

**Total: 9 procedures, 173 days, and 157% of GDP per capita**

**CHART 16: REGISTERING TRANSFER OF TITLE IN GHANA**

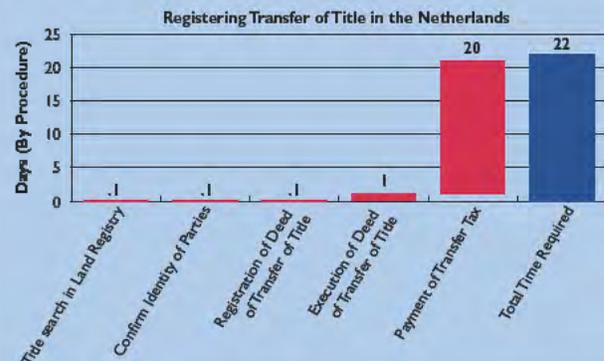


By contrast, in the Netherlands, similar procedures to those conducted in Ghana can be accomplished in a period of a few days and with much greater certainty and predictability.

1. Conducting a title search in the Land Registry and confirming the identity of the buyer and seller can be completed in less than one hour, since all records are online and easily accessible. (Two steps, two hours total.)
2. It takes less than one day to execute the deed of transfer of title and register the new owner. An electronic copy of the executed deed can be submitted to the Land Registry (Kadaster) on the internet and appear the following day in the Land Registry, signaling that the transfer is effective. (Two steps, two hours total.)
3. Payment of transfer tax to the Dutch Tax and Customs Administration occurs within a few weeks after the transfer.

**Total: 5 procedures, 22 days, and 31% of GDP per capita**

**CHART 17: REGISTERING TRANSFER OF TITLE IN THE NETHERLANDS**



## CASE STUDY: THE PROCESS TO TRANSFER RURAL LAND (CONTINUED)

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Land administration systems are complex, and it is unrealistic to assume that Ghana and other AGRI countries could overhaul their land administration to be as efficient as the Netherlands in a short period of time. The objective of a side-by-side comparison is to highlight where constraints exist and to identify existing strategies for addressing these constraints. The Netherlands represents a benchmark for procedures, such as the time needed to execute the title transfer deed (less than one day), and suggests that an electronic system greatly expedites the entire land transfer process.<sup>72</sup> The ongoing Land Administration Project 2 in Ghana already targets this same objective by seeking to “improve transparency and reduce time and cost of delivering service” through automation and decentralization of processes. **AGRI data point to where government land administration agencies can reduce uncertainty and reduce the time to complete administrative processes, so that rural land markets can function more smoothly and effectively.**

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<sup>72</sup> World Bank. Land Administration Project – 2. Overview. Accessed on June 16, 2014.  
<http://web.worldbank.org/external/projects/main?pagePK=64312881&piPK=64302848&theSitePK=40941&Projectid=P120636>.

## TOPIC 5: ACCESSING FINANCE

**Access to finance is vital for agribusinesses to grow and enter new markets; lack of access is a main constraint to growth.<sup>73</sup> A strong secured transactions framework allows agribusinesses to use their assets as collateral and access a range of financial products from banks and other financial institutions.<sup>74</sup> This increases the amount of credit available to borrowers, while decreasing the cost of credit.<sup>75</sup> Building blocks of a strong agricultural finance system include (1) a secured transactions law with a broad definition of collateral, (2) a collateral registry, and (3) a warehouse receipts system (WRS). These mechanisms increase the number of ways for individuals and firms to access credit, tailored to the specific needs of the agricultural sector.**

- » Bangladesh and Nepal scored lowest among AGRI countries on the Agricultural Collateral Index (6 of 10) because the two countries lack comprehensive legal frameworks for secured transactions.
- » Across AGRI countries, lender practices regarding the types of acceptable movable collateral are less permissive than the law.
- » Low scores on the Movable Collateral Registry Index (an average of 4.8 out of 11) reflect widespread legal and operational issues at collateral registries.
- » Improving the functions of the collateral registry requires both regulatory reforms (e.g., combining all movable collateral in the same registry) and capacity building (e.g., improving data management and IT systems).

The AGRI Index measures three key elements of the secured transactions framework that relate to agriculture. First, the Agricultural Collateral Index measures the legal ability of agribusinesses to use 10 types of common agricultural assets as collateral for a loan (e.g., a tractor; or crops stored in a warehouse). Second, AGRI measures the ability and ease with which security interests against movable collateral can be publicly registered in a collateral registry. Registration gives lenders added confidence because they are better able to protect their claims over movable assets and can easily search to see if there are existing liens on an asset. Third, AGRI measures the extent to which the legal framework for WRS protects all parties to the agreement: depositors (i.e., farmers), banks, and warehouse operators.<sup>76</sup>

### WHERE IS THE SECURED TRANSACTIONS FRAMEWORK MOST CONDUCTIVE TO LENDING TO AGRIBUSINESSES?

Overall, no clear leaders emerged on the Accessing Finance topic. The Netherlands performs best on the Agricultural Collateral Index but receives a “no practice” ranking on the Movable Collateral Registry Index (see Chart 20) because the country has no public collateral registry, and instead uses other mechanisms. Mali and Senegal share the same facilitative legal framework for movable collateral, yet performance of the collateral registries differs in the two countries because of differences in how registry data are managed.

<sup>73</sup> Access to credit is the most frequent constraint as listed by agribusinesses in the World Bank Rural Investment Climate report.

<sup>74</sup> The International Finance Corporation (IFC) defines secured transactions as “Credit transactions where a creditor holds an interest in a debtor’s movable property (‘collateral’) to secure a loan or a debt obligation. The interest in movable property is also referred to as [a] ‘security interest,’ ‘pledge’ or ‘charge.’” <http://www.ifc.org/wps/wcm/connect/793e79804ac10fff9ea69e4220e715ad/Secured+Transactions+and+Collateral+Registries+Brochure-English.pdf?MOD=AJPERES>.

<sup>75</sup> It is also important to note the main risk of using collateral—specifically, if the borrower defaults, the borrower loses its pledged assets.

<sup>76</sup> The WRS indicator is not included in the discussion below because relatively few AGRI countries have a WRS or equivalent system. This means that the current AGRI data set does not enable conclusions about best practices for designing a legal and regulatory framework for a WRS. For more information, see Appendix I.

### AGRICULTURAL COLLATERAL RANKING

1. Netherlands
2. Mali
3. Senegal
4. Zambia
5. Ghana
6. Kenya
7. Thailand
8. Uganda
9. Bangladesh
10. Nepal

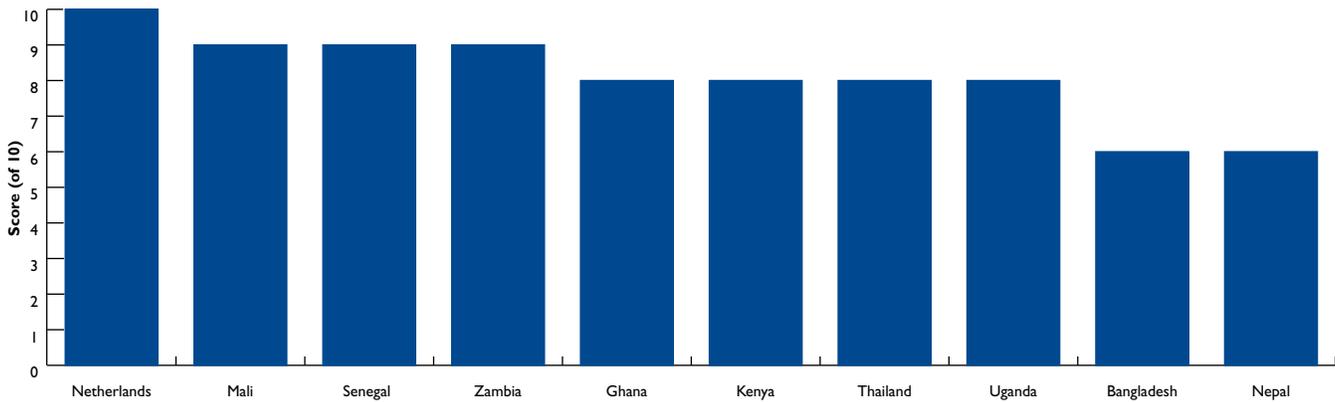
### MOVABLE COLLATERAL REGISTRY RANKING

1. Senegal
2. Ghana
3. Kenya
4. Uganda
5. Zambia
6. Mali
7. Bangladesh
8. Thailand
9. Nepal
10. Netherlands

On the other hand, performing well on the secured transactions framework does not imply strong performance in registering collateral. For example, the average score on the Agricultural Collateral Index is 8.1 out of 10, indicating that most AGRI countries have a legal framework that permits a relatively broad range of agricultural assets to be used as collateral. In contrast, the average score on the Movable Collateral Registry Index is only 4.8 out of 11, due to widespread legal, regulatory, and operational issues at collateral registries. These results suggest that governments can do more to facilitate secured lending by focusing resources on improving collateral.

**INDICATOR 1: AGRICULTURAL COLLATERAL INDEX**  
**Types of agricultural collateral allowed by the legal and regulatory framework**

**CHART 18: AGRICULTURAL COLLATERAL INDEX (OF 10)**



**1. Bangladesh and Nepal scored the lowest among AGRI countries on the Agricultural Collateral Index (6 of 10) because the two countries lack comprehensive legal frameworks for secured transactions.**

Not all AGRI countries have a comprehensive legal framework for secured transactions, which severely limits the ability of their agricultural sectors to obtain financing. Bangladesh and Nepal scored lowest among AGRI countries on the Agricultural Collateral Index (6 out of 10). Bangladesh lacks a comprehensive secured transactions law. Nepal passed a Secured Transactions Act in 2006, but as of 2012, the law had not become operational because no regulations or decree had been issued and no movable collateral registry created. Borrowers in Bangladesh and Nepal may pledge “all movable assets” as collateral to a lender through a private contract, but this provides little protection to the financial institutions that make the loans and therefore is rarely used.<sup>77</sup> As a result, borrowers have a difficult time meeting collateral requirements, and lenders do not have the legal protection they need to provide credit.

**AGRICULTURAL COLLATERAL INDEX**

Does the law permit common tangible and intangible agribusiness assets to be used to secure a loan?

1. Farm equipment
2. Crops in the field
3. Crops in the warehouse
4. Livestock
5. Inventory
6. Patented plant variety
7. Futures contract
8. Accounts receivable
9. Buy/sell agreements
10. Land

<sup>77</sup> The borrower may assign “all movable assets” through a generic contractual pledge known as hypothecation. The contract is not publically registered and lenders cannot obtain priority based on the time of filing, which increases the risk to lenders using this type of security.

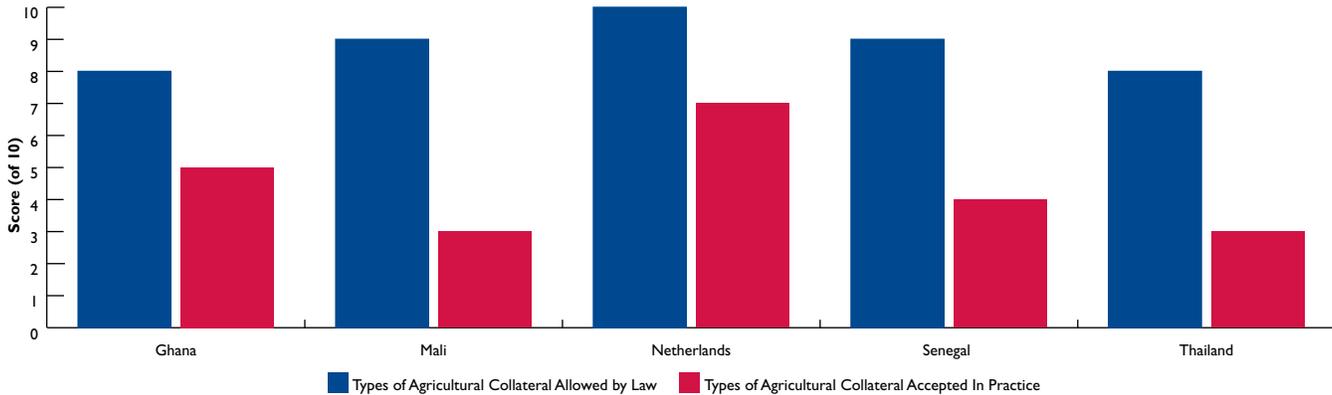
In contrast, all six AGRI countries in Sub-Saharan Africa have legal frameworks that better facilitate agribusiness, as evidenced by high scores on the Agricultural Collateral Index (8 or 9 out of 10). There are few restrictions on types of collateral allowed by law in Ghana, for instance, because any movable or immovable corporate asset can be used to secure a loan, and the lender has the flexibility to select and describe the type of charge (lien) used.<sup>78</sup> Similarly, Kenya and Uganda have chattel mortgage laws that allow a broad range of tangible agricultural assets to be used as collateral for a loan.<sup>79</sup> The types of collateral permitted by law in these countries align with the types of assets that farmers, especially smallholder farmers, tend to own. We expect that improving the legal framework for secured transactions in Bangladesh and Nepal would enable the use of a wider range of agricultural collateral, and thus better support agribusiness in those countries.

**2. Lender practices regarding the types of acceptable movable collateral are less permissive than the law, limiting the use of agricultural assets as collateral.**

Flexible secured transactions laws, in theory, promote increased access to finance for agribusinesses, but the full benefits will not be realized if lender practices are ill-adapted for agribusinesses. **Across AGRI countries, movable agricultural assets are not commonly accepted as collateral by financial institutions, even when the law permits such use.**<sup>80</sup> In Thailand, for instance, the law permits 8 of the 10 types of agricultural assets measured by the Agricultural Collateral Index to be used as collateral, but banks only accept 3 types in practice. Some Thai lenders require pledged assets to remain in the lender’s control. This requirement is highly impractical for agricultural assets such as crops, inventory, and livestock, because those assets must stay on the farm, at least before harvest. As a practical matter, this lender requirement limits the types of collateral that can be used to secure a loan.

Results from country assessments in 2013 and 2014 highlight the large gap between the legal framework and lender practices, suggesting that even though many AGRI countries have legal frameworks amenable to agricultural collateral, their actual impact on increasing access to finance may be limited.<sup>81</sup>

**CHART 19: LEGAL FRAMEWORKS AND LENDER PRACTICES – A LARGE GAP REMAINS<sup>82</sup>**



<sup>78</sup> In Ghana, the charge can be fixed on a specific piece of equipment or float over all movable assets.

<sup>79</sup> In common law systems, movable personal property may be referred to as chattels.

<sup>80</sup> During data collection for the AGRI Index, banks in both developed and developing countries often reported that they perceive movable agricultural assets as “weak” collateral. Movable assets tend to be treated as secondary, additional security after lending against the borrower’s land or building title deed. Financial institutions cite the difficulty to value, monitor, seize, maintain, or auction movable agricultural assets as collateral as limiting factors.

<sup>81</sup> Restrictive lender practices were noted during the first round of pilot testing in 2012 in Bangladesh, Kenya, Nepal, Uganda, and Zambia. As a result, the AGRI team modified the Agricultural Collateral Index survey so that for each type of agricultural asset, the survey collects data both on whether the law permits its use as well as if lenders accept this type of collateral in practice. Data are available in Annex 1.

<sup>82</sup> Data presented above include only five countries because, as stated in the previous footnote, the Agricultural Collateral Index survey was modified after 2012 pilot testing in Bangladesh, Kenya, Nepal, Uganda, and Zambia in order to specifically measure lender practices. Initial pilot results highlighted that lender practices were stricter than the law, which prompted the team to add questions to this indicator for subsequent assessments.

The Netherlands scored the highest among AGRI countries on the Agricultural Collateral Index (10 out of 10). The Dutch Civil Code allows for a broad interpretation of collateral, meaning that most tangible and intangible assets can be pledged. Agricultural lenders typically accept a broad array of movables as collateral because such assets are perceived to be easily valued and transferred. But even in the Netherlands, lenders consider movable agricultural collateral to be peripheral when deciding to issue a loan.

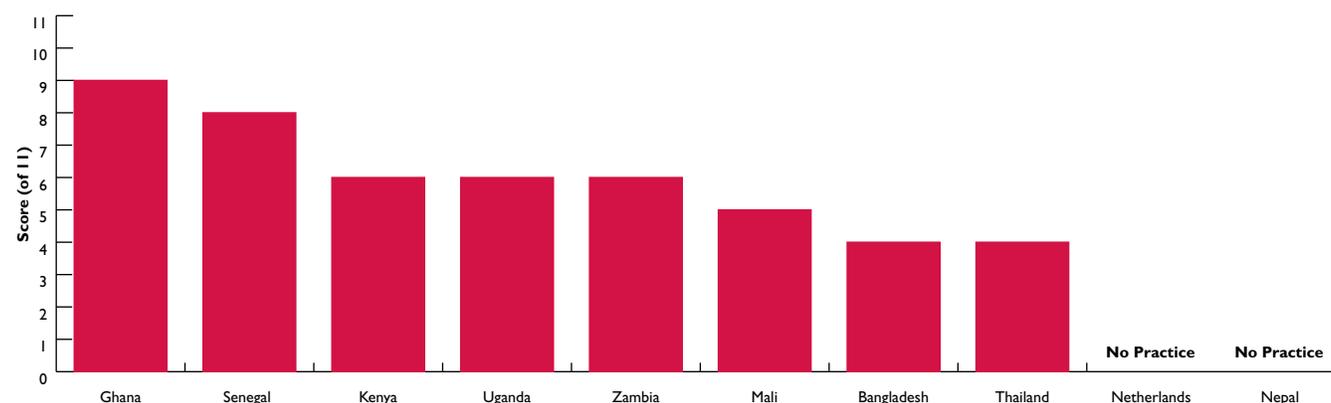
**Banks first assess a farm's cash flow and consider profits as the best indicator for the viability of a loan.**<sup>83</sup>

Banks then take mortgages over farmland and buildings, which on average account for 75% of the value of total farm assets, and use movable collateral only as supplementary security for the loan.<sup>84</sup>

## INDICATOR 2: MOVABLE COLLATERAL REGISTRY INDEX

**Strength of legal framework and capability of collateral registries to register movable collateral**<sup>85</sup>

**CHART 20: MOVABLE COLLATERAL REGISTRY INDEX (OF 11)**



### I. Low scores on the Movable Collateral Registry Index (an average of 4.8 out of 11) reflect legal and operational issues at collateral registries.

The AGRI average for the Movable Collateral index is 4.8 out of 11, indicating that AGRI countries on average had relatively weak legal frameworks for registering movable collateral. Legal and operational issues at collateral registries can discourage or make it difficult and costly for lenders to use them, which discourages agricultural lending. The following trends were observed across countries:

- » **Not all types of movable collateral can be registered.** In Thailand, which scored 4 of 11 on the Movable Collateral Registry Index, only security interests in fixed machinery can be registered. There is no registry for movable collateral.
- » **Registration is limited to certain types of debtors.** In Bangladesh, which also scored 4 of 11, general security interests (charges) for movables can only be registered for limited liability companies. Collateral used to secure a loan made to a sole proprietor or individual cannot be registered.

<sup>83</sup> Additionally, banks may value movable assets at a steep discount from current market price when calculating the assets' collateral value.

<sup>84</sup> The average Dutch field crop farm has a value of €3.3 million, of which two-thirds is land value and another 10% "other intangible fixed assets," primarily buildings. Source: LEI-Wageningen University. *Landbouw-Economisch Bericht 2013 (Agriculture Economics Report 2013)* pp.139–40.

<sup>85</sup> The Movable Collateral Registry index measures the ability and ease with which liens (charges) against movable collateral can be publically-registered in a collateral registry. The factors measured include: (1) existence of a single registry for all types of movable collateral; (2) coverage of a broad range of asset and debtor types; (3) use of a centralized and electronic database for registry records; (4) access to real-time, reliable data, such as an online registry; (5) reasonable time and cost to search the registry or to register a new charge; and (6) lien priority based on the order of filing.

- » **Registry records are paper-based** rather than electronic in most AGRI countries. Paper records are often not up-to-date, are unreliable, and take a long time to search. Mali (5 of 11), for example, has a paper-based collateral registry with records written in large ledger books. It can take up to a month to search the registry depending on the date the charge was registered.
- » **Registry data are not centralized**, meaning that it is not possible to conduct a single search in a single location to find records from the entire country. In Mali, for example, in order to conduct a search at the registry, a financial institution must physically go to the commercial court in the region where the company is registered.
- » **Using the registry can be expensive.** Registries in Senegal and Mali calculate fees to register movable collateral as a percentage (roughly 2–4%) of the asset value. This is far more expensive than in countries with low, flat fees for registering a charge and searching the register. A World Bank study on collateral registries reported that high costs to use the registry can greatly reduce the number of collateral registrations.<sup>86</sup>

Legal and operational issues at collateral registries constrain the ability of agribusinesses to secure loans using movable assets and may reduce the number of charges that are registered.

## **2. Improving the functions of the collateral registry requires both regulatory reforms (e.g., combining all movable collateral in the same registry) and capacity building (e.g. improving data management and IT systems).**

AGRI countries such as Ghana and Senegal score comparatively well on the Movables Collateral Registry Index. Those two countries have successfully implemented collateral registries that encourage the use of movable collateral, although more work can be done.

Effective collateral registries, as exemplified by Senegal and Ghana, are characterized by the following:

- » **A single, unified collateral registry for all types of movable collateral.** Senegal has a single company and collateral registry (RCCM) used to register charges for a broad range of movable collateral. Ghana has established a successful new electronic Collateral Registry; however, the relationship between the Collateral Registry and the pre-existing Companies Registry remains unclear. At present, charges against companies must be listed in both registries, resulting in duplication of records.
- » **Can register security rights for broad range of tangible and intangible assets, for all types of debtors.**
- » **Centralized, electronic databases consolidating information from across the country.** Electronic data are generally considered to be more reliable than paper records. Ghana's Collateral Registry is electronic and has an online portal that allows financial institutions to register a charge in minutes and pay electronically. In Senegal, however, most registry records are still paper-based.
- » **Reasonably rapid time frame and low, flat fees** for searching the registry or registering a charge.

Improving the functions of the collateral registry requires both regulatory reforms (e.g., combining all movable collateral in the same registry) and capacity building (e.g. improving data management and IT systems). These reforms are crucial for promoting agribusinesses: successfully implementing the collateral registry can catalyze billions of dollars of lending against movable collateral. Ghana's Collateral Registry was established in 2010 and touted as the "first online collateral registry in Africa." Within the first two years, more than \$6 billion in loans backed by movable collateral were issued to micro- and SMEs.<sup>87</sup>

<sup>86</sup> World Bank/IFC. Making Security Interests Public: Registration Mechanisms in 35 Jurisdictions.

<sup>87</sup> [http://www.ifc.org/wps/wcm/connect/776e280040e7cb2e90addb412e1cf4fc/StoriesOfImpact-WorldBankGroup\\_SME\\_Ghana\\_Collateral\\_Registries\\_WBG\\_FINA\\_REV-Enhanced.pdf?MOD=AJPERES](http://www.ifc.org/wps/wcm/connect/776e280040e7cb2e90addb412e1cf4fc/StoriesOfImpact-WorldBankGroup_SME_Ghana_Collateral_Registries_WBG_FINA_REV-Enhanced.pdf?MOD=AJPERES) and <http://www.ghanatrade.gov.gh/Trade-News/collateral-registry-registers-104308-collaterals.html>

### **3. Nepal and the Netherlands have no legal mechanism for registering a charge on movable collateral. This poses less of a challenge in the Netherlands, where alternative financial infrastructure exists.**

Nepal and the Netherlands scored “no practice” on the Movable Collateral Registry Index (i.e. 0 of 11), the lowest among AGRI countries.<sup>88</sup> As previously noted, Nepal passed a Secured Transactions Act in 2006 but no regulations have been issued and no movables registry has been established, so there is no place to register movable collateral.<sup>89</sup>

The Netherlands, has no movable collateral registry, but unlike other AGRI countries, this does not appear to limit access to finance. Borrowers must report their assets and loans in an annual financial statement that is signed by a certified accountant. Financial institutions need only to review the business' annual financial statement and recent financial records to determine if there are existing liens on farm assets, which serves the same function as a public collateral registry.

Financial statements allow lenders to identify the assets and liabilities of a potential client and to ascertain the profitability of the agribusiness—a key determinant in a bank's decision to lend. Dutch banks monitor their borrowers via annual updates. Thus, the Dutch system meets the needs of the private sector without the need for a movable collateral registry and demonstrates how countries can take different approaches to achieve similar policy objectives.

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<sup>88</sup> Similar to *Doing Business*, if a country has no laws or regulations covering a specific area and/or the procedure cannot be done in practice, it receives a “no practice” mark, which is equivalent to being ranked last.

<sup>89</sup> In Nepal, as of August, 2012, charges over land and buildings are registered in the Land Revenue Offices, charges on vehicles are registered in the Transportation Management Office, and companies are registered in the Office of the Company Registrar. A registry for movable assets does not yet exist.

**CASE STUDY: SENEGAL AND MALI HAVE THE SAME LEGAL FRAMEWORK FOR AGRICULTURAL COLLATERAL AND COLLATERAL REGISTRIES. HOWEVER, IMPLEMENTATION AND LENDING PRACTICES DIFFER, LEADING TO BETTER OUTCOMES IN SENEGAL THAN IN MALI.**

Mali and Senegal have the same legal framework for secured transactions: the regional OHADA Uniform Act Organizing Securities.<sup>90</sup> The two countries rank high on the Agricultural Collateral Index (9 out of 10) because the OHADA law broadly defines the acceptable types of collateral.<sup>91</sup> For instance, livestock is not specifically mentioned as a security by law, but is interpreted to be allowed as collateral as a “farm product.”<sup>92</sup>

However, lender practices in the two countries differ, affecting the types of collateral that can be used in practice. In Senegal, for example, farmland is not available as primary form of collateral due to the nature of the land tenure system.<sup>93</sup> Out of necessity, lenders have turned to alternative forms of collateral such as agricultural equipment. In contrast, Mali borrowers with land title can use their land as collateral—a rare occurrence for farms—but have few other options. Farm equipment is not typically accepted as collateral in Mali except by the agriculture development bank (BND) for BND-financed purchases of new equipment.

The shared OHADA legal framework also includes the collateral registry. Farm assets used as collateral can be registered at the movable collateral registry, the RCCM (*Registre de Commerce et du Credit Mobilier*).<sup>94</sup> By law, the RCCM may register charges on most types of collateral from all types of debtors. The primary difference between the registries in Senegal and Mali is how data are managed. Neither country uses an electronic database, but Senegal centralizes RCCM while Mali does not. Searching the register is therefore faster in Senegal than in Mali, where real-time data are not publicly accessible without going to each individual registry office to conduct a search.

Operational differences between the collateral registry in Senegal and Mali, as well as greater flexibility in using movable assets as collateral in Senegal, provide more options for agribusinesses to access secured financing in Senegal. Anecdotal evidence on the number of collateral registrations in each country further supports this finding.<sup>95</sup>

<sup>90</sup> *Acte Uniforme portant Organisation des Suretés*. OHADA is a system of business laws adopted by seventeen West and Central African countries, including Senegal and Mali.

<sup>91</sup> By law, existing or future personal property—tangible or intangible—may be pledged as collateral.

<sup>92</sup> In practice, livestock is not used as collateral but this practice may become possible as agricultural insurance becomes more widely available.

<sup>93</sup> In Senegal, rural land cannot be mortgaged, while in Mali it is very unusual to hold title to rural land.

<sup>94</sup> Article 120 of the OHADA.

<sup>95</sup> A 2012 World Bank report, “Making Security Interests Public,” identified 1,492 collateral registrations at Senegal’s RCCM in 2009. While Mali is not included in the World Bank data set, RCCM officials in Mali reported far fewer collateral registrations during AGRI interviews.

## TOPIC 6: STARTING AND OPERATING A FARM

**Starting a formal business enables fledgling commercial farms to grow by purchasing land, accessing finance, and entering into formal contracts. Crucially, forming a limited liability company (LLC) means that entrepreneurs are not bankrupted by a business that fails, which encourages innovation and risk-taking in agriculture. Research shows that reducing start-up costs increases the rate of new business creation for small and large farms alike.<sup>96</sup> However, business registration among farms remains relatively rare in developing countries, making it all the more important to reduce registration costs so as not to discourage formalized entrepreneurship in agriculture before it can even start. The indicators under this topic focuses on “small-to-medium” size commercially oriented farms because these farms stand to benefit from formalizing their operations but have few resources to navigate a complex and expensive registration process.**

- » One-stop shops can dramatically reduce the time and cost to register a business. Expanding one-stop shops throughout a country, as Thailand has done, can make registration services more accessible to rural agribusinesses.
- » Notary fees are the largest cost component for registering businesses in Mali, the Netherlands, and Senegal. Notaries are often located far from rural agribusinesses, further increasing the cost to register.
- » In six AGRI countries, obtaining licenses and permits for farming activities represents a substantial portion of the time and cost to start a farm. In the remaining four AGRI countries, however, there are no regulatory requirements specific to commercial farming.

This topic measures the start-up process for a small to medium-sized grain farm. Starting a farm in the formal economy typically entails registering the business as well as obtaining a variety of licenses and permits that apply to farm operations, such as national or local trading licenses, chemical storage permits, workplace or employee registration, and environmental or water permits.<sup>97 98</sup>

### LIMITED LIABILITY COMPANY (LLC) RANKING

1. Thailand
2. Ghana
3. Mali
4. Netherlands
5. Senegal

### SOLE PROPRIETOR (SP) RANKING

1. Bangladesh
2. Nepal
3. Uganda
4. Zambia
5. Kenya

### CASE STUDY FARM

**Crop:** Most widely-traded staple grain

**Farm size:** Hectare-weighted median (varies by country)

**Location:** Largest staple grain-producing region, within 100km of a main commercial center

**Legal Form:** LLC

**Annual Revenue:** US\$1,000 per hectare

**Land Tenure:** 50-year lease

**Market:** Farm gate, local market

**Employees:** 1 manager, 5 workers

<sup>96</sup> Djankov, et. al. *The Regulation of Entry*. The Quarterly Journal of Economics (2002) 117 (1): 1-3, and Motta et. al. *An Open Door for Firms: The Impact of Business Entry Reforms*. World Bank Group, 2010.

<sup>97</sup> The size of the farm in the case study varies by country, from 5 hectares (ha) in Thailand to 35 ha in the Netherlands. The weighted-median farm size, or the point at which half of all land in a country is on small farms and half is on large farms, is a threshold used to distinguish smallholders from large farms; this is a particularly useful distinction for the AGRI Index's target small/medium-sized commercial farm. [http://www.ers.usda.gov/media/216698/en51\\_1\\_.pdf](http://www.ers.usda.gov/media/216698/en51_1_.pdf).

<sup>98</sup> The Starting a Farm topic also includes brief index questions on entrepreneurs' access to business registration information. The Access to Business Registration Index is not profiled in this report. Full data for this indicator can be found in Annex 3.

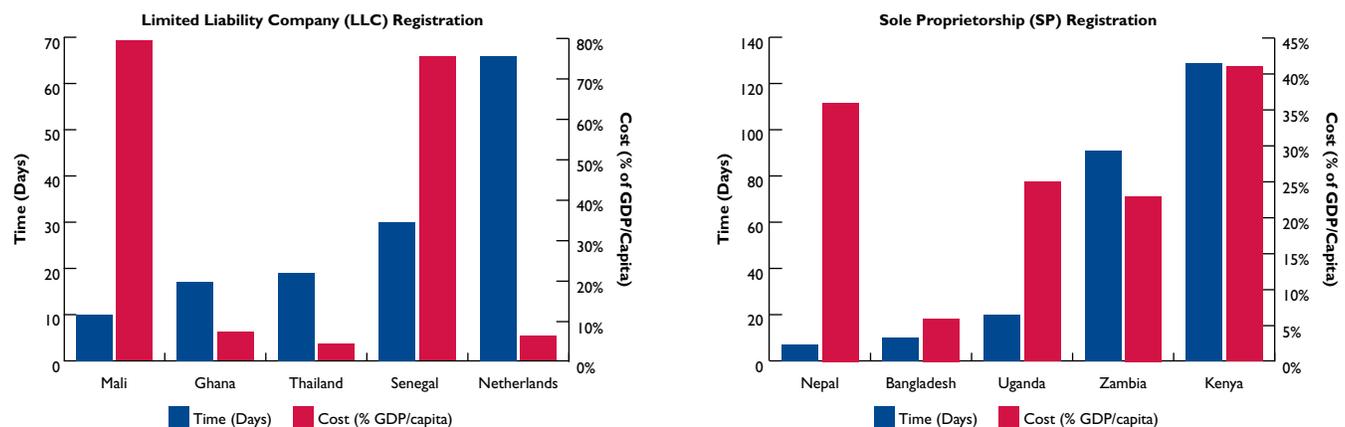
## WHERE IS IT EASIEST TO START A FARM?<sup>99</sup>

Thailand has the most efficient start-up procedures for a production-oriented farm LLC based on the total number of procedures, time, and cost. Thailand has a one-stop shop for business registration, which has significantly reduced the time and cost to business registration. Senegal and Mali also have one-stop shops but do not perform as well on this indicator because of high business registration costs. The Netherlands has a comparatively high number of start-up procedures that take more than two months to complete, many of which are related to farmer training and environmental protection.

## INDICATOR 1: LICENSES AND PERMITS TO START A FARM

**Time, cost, and procedures for business registration and obtaining licenses and permits for a mid-sized staple grain farm**

**CHART 21: TIME AND COST TO START A FARM**



**I. One-stop shops can dramatically reduce the time and cost to register a business. Expanding one-stop shops throughout a country, as Thailand has done, can make registration services more accessible to rural agribusinesses.**

Rural areas tend to lack access to the government services required to register a farm, which greatly increases the time and cost required to register a rural business. “One-stop shops” for business registration, where they exist, have greatly reduced the time and cost to register a business.<sup>100</sup> One-stop shops for business registration have been a successful strategy to reduce the time and cost to register businesses in countries such as Thailand, where registration takes as little as four days and costs 4% of GDP per capita. Mali, Senegal, and Zambia also have one-stop shops. In Mali, for example, all government agencies responsible for business registration are co-located in the one-stop shop in Bamako, reducing the time to register a business to under 72 hours.

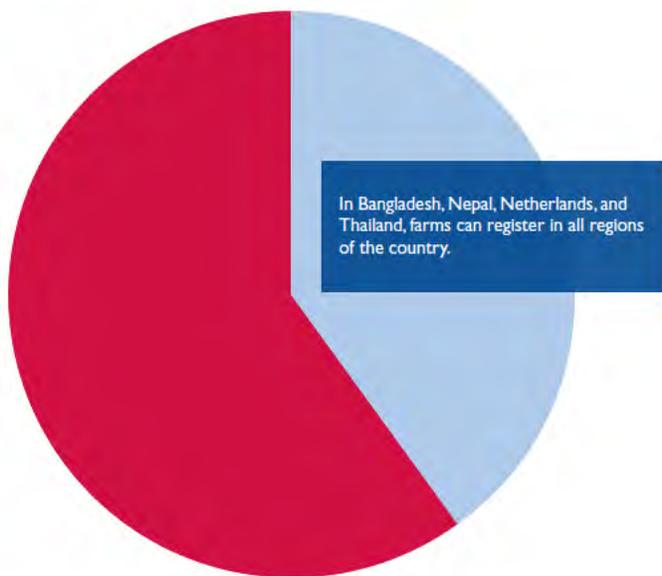
### AGRI COUNTRIES WITH A ONE-STOP SHOP FOR BUSINESS REGISTRATION

- » Mali
- » Senegal
- » Thailand
- » Zambia

<sup>99</sup> Note: The AGRI Index case scenario for starting a farm measured the process to register as a Sole Proprietor (SP) in 2012 pilot countries (Bangladesh, Kenya, Nepal, Uganda, and Zambia), and was modified to measure the process to register a LLC in 2013/2014 country assessments (Ghana, Mali, Netherlands, Senegal, and Thailand). The revision was made to better reflect the company form most frequently observed among small and medium commercial farms in the first five AGRI assessment countries. The analysis below does not directly compare the process for SP registration to LLC registration because business registration procedures differ by company form, and the type of company form confers different rights and responsibilities on the entrepreneur. For more information on revisions to this indicator, see Annex 1.

<sup>100</sup> A one-stop shop is a single office that acts as a contact point for all business registration needs. A 2010 National Bureau of Economic Research (NBER) paper on business reforms in Portugal, including the creation of a one-stop shop, found that business registration increased 17% with particular effect on start-up rates for “marginal” firms that are small and operate in low-tech sectors such as agriculture. Source: Branstetter, et. al. *Do Entry Regulations Deter Entrepreneurship and Job Creation? Evidence from Recent Reforms in Portugal*. NBER Working Paper Series, 2010. <http://www.nber.org/papers/w16473.pdf>.

**CHART 22: SIX OUT OF 10 AGRI COUNTRIES DO NOT HAVE BUSINESS REGISTRATION SERVICES FOR FAMS IN ALL REGIONS**



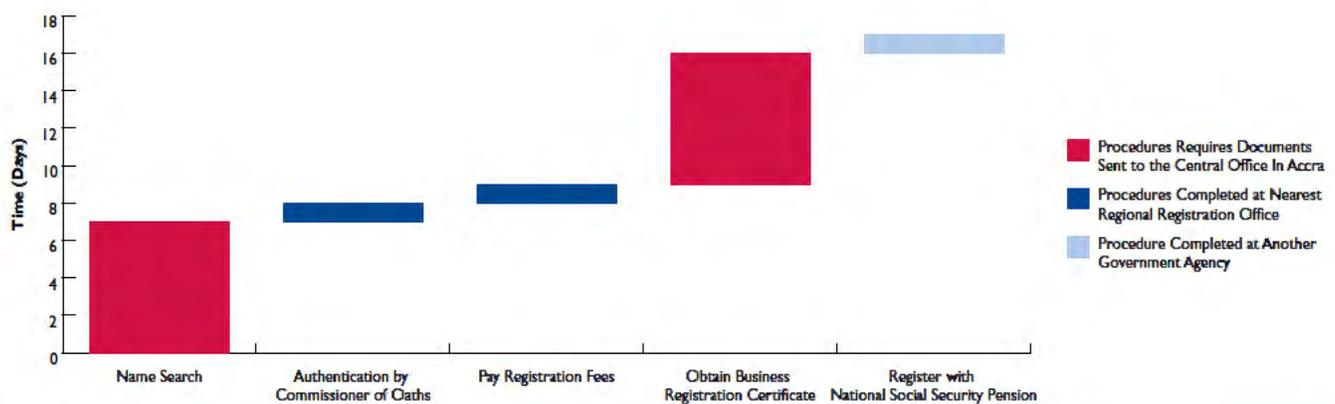
However, one-stop shops and other important services, such as the Companies Registry and notaries, are typically located only in the capital city or in a few urban centers, causing inconvenience and additional costs to farmers interested in incorporating as a formal business. One-stop shops in Mali, Senegal, and Zambia exist only in the capital city. As a result, business registration takes much longer outside the capital city. Efforts are underway in those three countries to expand one-stop shops to commercial centers throughout the country.

Benchmark countries such as the Netherlands and Thailand already have widely available business registration services. Thailand has one-stop shop registration in each of its 86 regional offices. In the Netherlands, businesses can be registered at any of the 36 Chamber of Commerce (KvK) offices countrywide.

Also, online resources such as registration forms, an online business directory, and electronic form submission are particularly useful where rural areas lack access to government services related to business registration.

Ghana illustrates common delays to business registration for rural agribusinesses. Ghana does not have a one-stop shop. Instead, business registration occurs at one of four regional business registration offices, which complete most (but not all) required procedures. In particular, registration certificates can only be printed at the headquarters in Accra. It takes one week each time a document must be sent from a regional office to the headquarters for processing. **Improving communications between headquarters and the regional offices could reduce business registration time from 17 days to only 5 days, which would make Ghana the fastest AGRI country for starting a farm.**

**CHART 23: IN GHANA, SUBMITTING BUSINESS REGISTRATION REQUESTS AND OBTAINING A CERTIFICATE FROM THE CAPITAL CITY ADDS TWO WEEKS TO THE PROCESS**



## 2. Notary fees are expensive, and notaries are often located far from rural agribusinesses, further increasing the cost to register a business.

Mali, Senegal, and the Netherlands require the use of a civil-law notary to register a business as an LLC. Where required, notary fees are the single most expensive charge related to business registration, contributing to the fact that Mali and Senegal are the two most expensive AGRI countries for LLC registration.

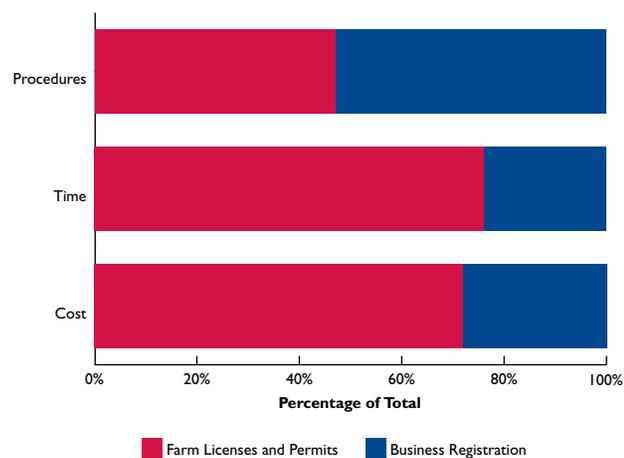
High notary fees are compounded by agribusinesses' lack of access to notaries. Mali and Senegal cap the number of notaries by law at 36 for the entire country, or roughly one notary for every 400,000 people.<sup>101</sup> Notaries tend to cluster in commercial centers and are located only in 8 of 14 regions in Senegal and 5 of 9 regions in Mali. As a result, rural agribusinesses must travel to urban centers in order to access the services of a public notary, which further raises the costs of business registration.

## 3. In six AGRI countries, licenses and permits for farming activities represent a substantial portion of the time and cost to start a farm. In the remaining four AGRI countries, however, there are no regulatory requirements specific to commercial farming.

AGRI data shed light on the variety of licenses and permits that may be required in order to begin farming. The countries studied fall into two distinct groups: those that impose no regulatory requirements specific to farming activities, and those that do. Among those that do, licenses and permits related to farming represent a substantial portion of the start-up time and cost.

**Four of the 10 AGRI countries have no regulatory requirements specific to farm operations.** In Ghana, Mali, Nepal, and Senegal, once a farm is duly registered as a business it may commence production operations without needing to obtain any further permission from local or national authorities. Anecdotally, a commonly cited explanation by contributors in these countries is that farms are not considered businesses and therefore do not fall under the regulatory control of the state in the same way that other businesses do. This perception results in few agriculture-specific regulatory requirements for farms, but may also lead to limited legal protections for agribusinesses and little consideration given to farmers when crafting a commercial law framework.

**CHART 24: FARM LICENSES AND PERMITS – A SUBSTANTIAL TIME AND COST FACTOR FOR START-UP FARMS IN BANGLADESH, KENYA, NETHERLANDS, THAILAND, UGANDA, AND ZAMBIA**



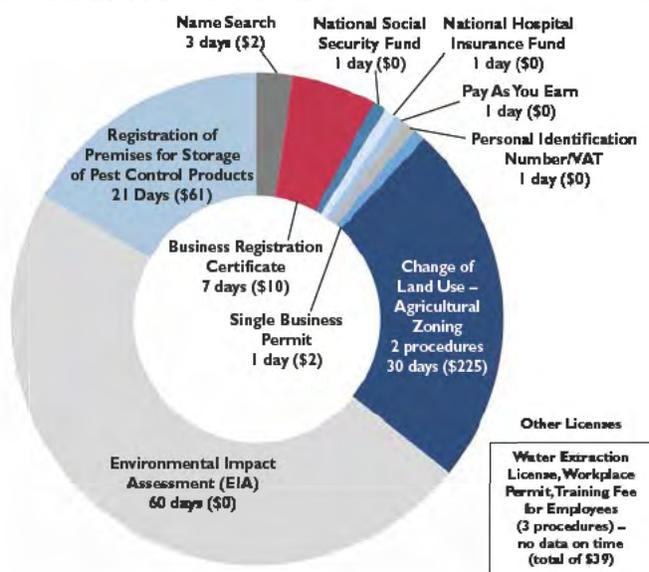
**In the remaining six AGRI countries, licenses and permits for farming activities collectively represent the bulk of start-up time and costs.** As reflected in Chart 24, obtaining licenses and permits for farming activities accounts for 46% of the total procedures, but take 76% of the total time and 72% of the total cost for starting a farm in Bangladesh, Kenya, Netherlands, Thailand, Uganda, and Zambia. In these countries, farm requirements are varied and may include national or local trading licenses, chemical storage and use licenses, environmental impact assessments, agricultural zoning permits, water use permits, and registration with farm subsidy schemes (in the Netherlands and Thailand).

Many farmers in these six countries find it difficult to identify the full set of regulatory requirements that pertain to the startup of a farm because of the potential involvement of many different government agencies at both the national and local level. The lack of clarity as to which requirements may apply and which agencies may intervene make it difficult for farmers to follow the rules.

<sup>101</sup> Population data from CIA World Factbook website, accessed September 8, 2014.

For example, Chart 25 depicts the myriad procedures to start a commercial farm in Kenya. Eleven different government agencies are involved in the process, imposing 129 days in time and US\$339 in start-up costs. Of the 14 required procedures, 6 relate to business registration and are required of all businesses (such as obtaining a registration certificate, and registering for taxes and employee pensions), while 8 procedures relate to the operation of the farm and account for 89% of the total time and 96% of the total start-up costs.

**CHART 25: STARTING A FARM IN KENYA – 14 PROCEDURES, 129 DAYS, 41% PER CAPITA GDP**



In the AGRI countries with no farm-specific regulatory requirements, low scores on this indicator do not necessarily reflect an efficient regulatory system; rather, they reflect the absence of a system at all. On the other hand, countries that choose to regulate agricultural production must inevitably impose some compliance costs on farms to complete the required procedures. It is difficult therefore to conclude that any country that chooses to regulate the creation of formal, commercial farm operations is constraining agribusinesses. The Netherlands, for instance, requires a comparatively high cost and time to obtain farm licenses and permits, yet contributors noted that each requirement reflected clear policy objectives such as farmer education, training, and environmental safety. Therefore, each regulatory requirement should be evaluated based on three criteria—specifically, the extent to which it (1) has a clear purpose, (2) achieves a desired policy objective, and (3) is efficiently managed.

Ultimately, determining the optimal level of regulation of farming activities may require first establishing minimum compliance standards for farms. This approach has been taken by the World Bank's *Doing Business* research team, which established a "distance to the frontier," which acts as a minimum advisable time and cost to complete processes so as not to reward "efficiency" at the expense of complete government withdrawal from regulating the market. AGRI data can play a role in helping to establish appropriate minimum standards for starting a farm by mapping the existing regulatory requirements in place across countries and identifying the policy objectives and level of (in)efficiency related to each requirement.

## TOPIC 7: ENABLING CONTRACT FARMING

**Contract farming<sup>102</sup> allows smallholder farmers to participate in a variety of sophisticated value chains: “buyers” provide improved access to mechanization, inputs, and end markets, enabling smallholders to grow high-value crops. A strong legal regime and effective enforcement offers smallholders the security needed to enter into arms-length transactions outside their personal networks of family and friends. The legal framework for contract farming should mitigate the risks for farmers and buyers and thus encourage contract farming arrangements. As an integral part of that framework, when contract disputes arise, buyers and farmers need access to impartial, affordable, and timely dispute resolution services.<sup>103</sup> Alternative dispute resolution (ADR) mechanisms such as arbitration or mediation can offer distinct advantages over litigation such as speed and confidentiality.**

This topic assesses key legal components that enable contract farming. First, the Legal Framework for Contract Farming Index measures key legal protections in countries' contract laws that underpin agreements between farmers and their “buyers.”<sup>104</sup> Second, the Grades and Standards Index measures the institutional mandate and capacity to develop, manage, and control grades and standards, and assesses whether these standards are developed in accordance with international standards and with input from stakeholders.<sup>105</sup> Third, the ADR Index assesses the availability, cost, speed, and enforceability of alternative forms of dispute resolution.

### CONTRACTS INDEX RANKING

1. Bangladesh
2. Ghana
3. Kenya
4. Mali
5. Netherlands
6. Senegal
7. Uganda
8. Zambia
9. Nepal
10. Thailand

### ADR INDEX RANKING

1. Bangladesh
2. Nepal
3. Netherlands
4. Senegal
5. Uganda
6. Zambia
7. Kenya
8. Mali
9. Thailand
10. Ghana

- » All AGRI countries scored at least 6 out of 7 on the legal framework for contract farming index, suggesting that there are few specific legal constraints to contract farming arrangements.
- » Reasons why countries did not score 7 out of 7 on the Contracts Index include the lack of a legal mechanism to ensure the expedited sale of goods during a dispute (Nepal) and instances of price controls (Thailand).
- » The introduction of standard agricultural contracts encourages greater use of contracts and contract farming.
- » All AGRI countries have multiple ADR or expedited mechanisms that can be used to resolve contract disputes.
- » Low awareness and limited access to ADR pose challenges to wider use.

<sup>102</sup> The Food and Agriculture Organization of the United Nations (FAO) defines contract farming as “agricultural production carried out according to an agreement between a buyer and farmers, which establishes conditions for the production and marketing of a farm product or products.” <http://www.fao.org/ag/ags/contract-farming/faq/en/#c100445>.

<sup>103</sup> In practice, parties may prefer to negotiate a solution on their own. Nevertheless, the existence of a credible threat of enforcement is a factor in encouraging contract compliance.

<sup>104</sup> The Legal Framework for Contract Farming Index measures seven key legal protections in a country's contract law that underpin agreements between farmers and buyers: (1) freedom of contract, (2) freedom to set prices, (3) ability to enter into tripartite agreements, (4) recognition of force majeure, (5) right recover damages, (6) ability to void contracts created under conditions of fraud or coercion, and (7) expedited seizure and sale of perishable goods.

<sup>105</sup> The Grades and Standards Index is not profiled in this report. Data for this indicator are available in Annex 2, and a discussion of the development of this indicator is included in Annex 1.

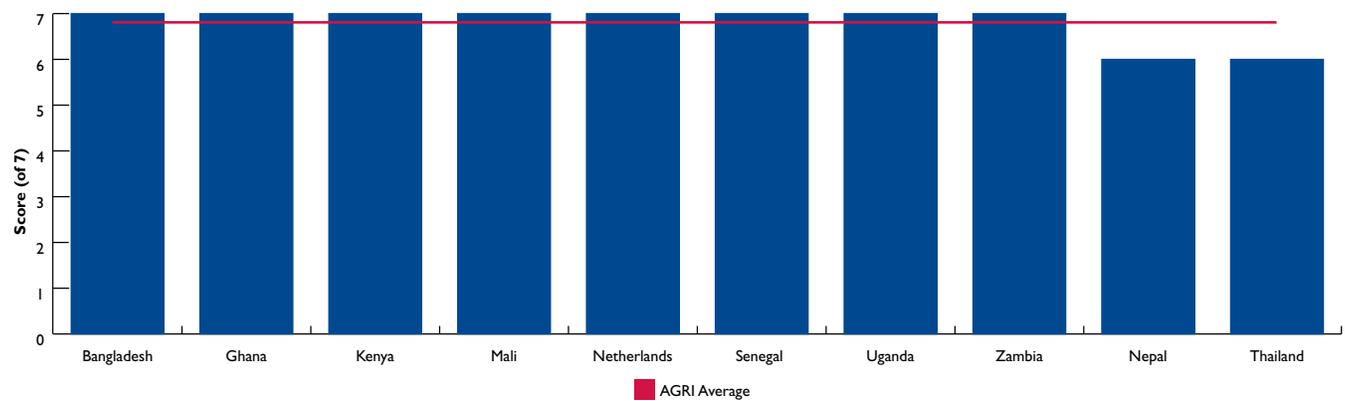
## WHERE IS THE LEGAL FRAMEWORK MOST CONDUCTIVE TO CONTRACT FARMING?

AGRI countries performed well on the Enabling Contract Farming indicators. The average score was 6.8 out of 7 on the Contracts Index and 7.4 out of 8 on the ADR Index. The rankings demonstrate the lack of significant variation in scores: 8 countries tied on the Contracts Index with scores of 7 out of 7. Similarly, 6 countries scored 100% (8 out of 8) on the ADR indicator, reflecting the existence of ADR mechanisms that can serve agribusinesses in all AGRI countries. In practice, however, the awareness and use of ADR remains low in many countries. For example, Ghana received the lowest score on the ADR Index (5 of 8). Since the passage of Ghana's ADR Act (2010), few arbitrators and mediators have been trained, arbitration proceedings remain slow, and services are not yet available outside the capital city.

### INDICATOR 1: LEGAL FRAMEWORK FOR CONTRACT FARMING INDEX

Index on key elements of the legal framework that protect parties to contract farming agreements

CHART 26: CONTRACTS INDEX SCORES (OF SEVEN)



**1. All AGRI countries scored at least 6 out of 7 on the Contracts Index, suggesting that there are few specific legal constraints to contract farming arrangements.**

***“All basic contracting principles are in place necessary for contract farming.” – Thai lawyer***

A strong contracts law is a prerequisite to any business agreement. AGRI countries scored, on average, 6.8 out of 7 on the Contracts Index, indicating that their legal systems already contain the basic building blocks for contracts between parties and that few formal legal constraints to contract farming exist. However, although the requisite legal protections are generally in place, in practice they are not always utilized. For instance, although 9 out of 10 AGRI countries provide for court-ordered seizure and expedited sale of perishable goods, few instances were reported of this occurring in practice. The box on the next page details the constraints contract buyers face and the strategies they employ to minimize the risk of non-performance.

## 2. Reasons why countries did not score 7 out of 7 on the Contracts Index include the lack of a legal mechanism to ensure the expedited sale of goods during a dispute (Nepal) and instances of price controls (Thailand).

The AGRI team found few legal constraints to agricultural contracts in AGRI countries, and this is reflected in the generally high Contract Index scores. Some exceptions are noted below.

» **Expedited sale of goods (Nepal).** During the time it takes to resolve a contract dispute, an entire shipment of perishable agricultural goods can be lost to spoilage. To minimize those losses, a country's legal framework should allow for expedited seizure and sale of perishables—and this the case 9 of 10 AGRI countries. The sole exception is Nepal, which has no such legal mechanism. This notable gap can leave buyers with no legally sanctioned recourse for breach of contract, and consequently may deter the sale of agricultural goods on credit.

» **Price controls (Thailand).** In Thailand, some form of price controls exist for six strategic crops, including rice and sugar. Price controls are determined by government regulation, not by contract, and often relate to elements of agricultural policy.<sup>106</sup> When prices are not determined by the free market—that is, by supply and the demand for a product or service—buyers and sellers may be dis-incentivized to enter into contractual relations.

## 3. The introduction of standard agricultural contracts encourages greater use of contracts and contract farming.

Standard agricultural contracts help facilitate agricultural trade by clarifying the terms between contracting parties and thereby reducing the likelihood of disputes. Although AGRI does not assess the use or strength of standard agricultural contracts specifically, further research could illuminate the legal and regulatory elements and the local or industry-related trade practices that encourage their use.<sup>107</sup>

Well-balanced standard contracts can protect all parties' interests by ensuring that agreements are based upon commonly-accepted principles of contract law, are fair and straightforward, clearly delineate each party's obligations, and establish a plan for resolution in the case of nonperformance of contract. For example, some Thai millers already use standard contracts for purchasing sugarcane from producers. The contracts allow the miller to provide cash or agricultural inputs to the farmer for the duration of the growing season and to specify the number of tons of sugarcane to be delivered at harvest. Similarly, in the Netherlands, industry associations such as the Grain Traders' Committee work with the private sector to create commonly accepted definitions of trade terms and conditions used for grain trade. Standard contracts in the Netherlands specify delivery and payment terms, grades and standards for the product, and include standard arbitration clauses. Standard agricultural contracts make transactions much easier since the terms and expectations for each party are widely known. Over time, product standards and terms of trade become widely accepted, even if the provisions are not explicitly written into the contract.

***“A good understanding with your growers is more important [than] an unbalanced, over-protected contract.”***  
***– Ugandan seed company***

<sup>106</sup> Other instances of price controls were also reported in a number of AGRI countries for various crops. The AGRI indicator focuses on instances of price controls for a major staple grain, which was the case only in Thailand.

<sup>107</sup> See FAO Contract Farming Resource Centre website, <http://www.fao.org/ag/ags/contract-farming/faq/en/#c100445> which includes a list of common contract clauses, a toolkit of sample contracts, and other resources.

## STRATEGIES EMPLOYED BY CONTRACT FARMING BUYERS

Conversations with contract buyers underscore that a strong contracts law is a precondition for contract farming, but is not the only factor at play. Although all countries scored well on the Contract Index, buyers report problematic practical considerations, practices, and customs that impede effective contract farming. More specifically, contract buyers report (a) limitations in using written contracts with farmers because of low literacy rates and a lack of experience with written contracts; (b) the fact that farmers have few assets that can be seized if they default under a contract; and (c) the dearth of accessible and trade-relevant forums to resolve contract disputes (covered in greater detail in the following section).

As a result, contract buyers report that their main recourse is to stop working with farmers who side-sell or do not deliver. Buyers have come to expect some degree of side-selling and losses and side-selling as the normal course of business—and simply write them off. To mitigate these risks, contract buyers indicate<sup>108</sup> that they use a combination of oral, informal agreements, written contracts, Memorandums of Understanding (MOUs), and other strategies. The following strategies came into focus through AGRI team interviews with contract buyers:

- » **Organize farmers into groups** based on geographic area. Through a contract or MOU, the farmer group is collectively responsible for providing the contracted quantity of produce and for repaying production loans. Farmer groups can also store goods in a collective warehouse for delivery to the buyer. In the case of non-performance, the group is collectively responsible for repayment. This mechanism relies on farmer organizations to have an adequate organizational structure in place in order to represent their members and ensure that the members live up to their contractual obligations.
- » **Sign written contracts with a local broker** to act as an intermediary between the buyer and farmers. The broker, often a respected community leader or a well-established middleman, is provided pre-financing to distribute to the farmers and is responsible for delivering a guaranteed amount of product. It is easier for buyers to work through a single liaison to provide loans and extension support because the broker can be held accountable for non-performance of the contract, including by seeking legal remedies. The use of middlemen and local brokers reduces profit margins but also reduces risk.
- » **Require farmers to assign their crops to the contract buyer.** If the farmer defaults, the buyer can still harvest the crops. Another option on a smaller scale is to use co-guarantors, where two individual farmers in the outgrower (contract farming) scheme guarantee funds received by a third farmer.
- » **Build goodwill and trust through long-term relationships with farmers.** For example, millers in Thailand work closely with farmers by offering technical assistance, loans, subsidized fertilizer, and seedlings. In Senegal, a food processor supports business groups for women, girls' education, and public health facilities in areas where the company sources its inputs. Farmers have the incentive to abide by the contract on goodwill, knowing that prices and payment terms are favorable. A leading Ugandan seed company says, "A good understanding with your growers is more important [than] an unbalanced, over-protected contract."<sup>109</sup>
- » **Negotiate between the parties or use a respected third party as a mediator** in the case of nonperformance to establish plans for alternate payment or delivery.

The buyer strategies tend to confine the contract farming model to specialty, export-oriented or high-value crops. Specialty crops have few local marketing channels, so farmers have few options to side-sell their produce. High-value crops may command higher prices overseas than in the local market, so farmers stand to profit more by honoring the contract than by side-selling. The buyer thus serves as the link between the farmer and the market and works closely with the farmer to attain specific quality standards.

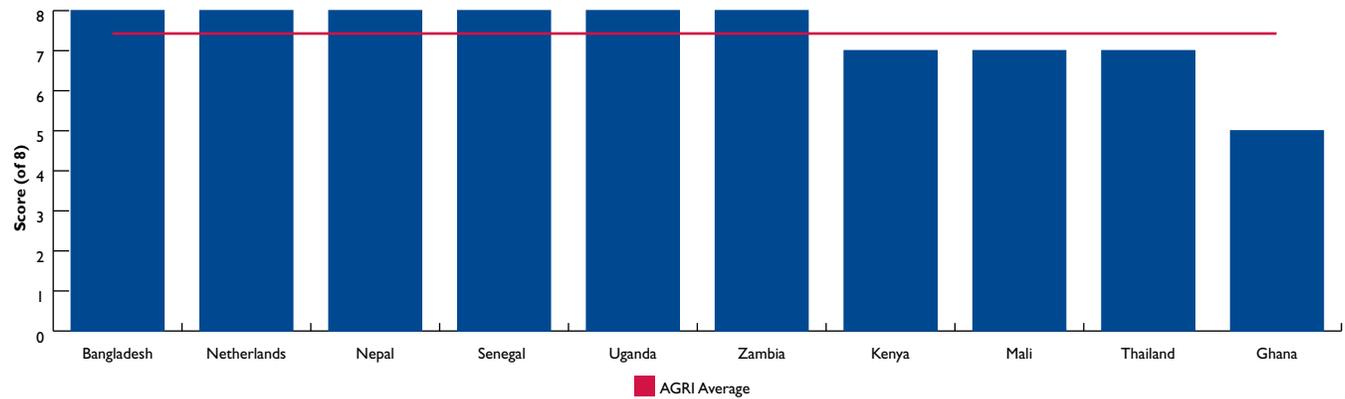
<sup>108</sup> These strategies and practices were identified during AGRI Index interviews with contract buyers.

<sup>109</sup> Source: personal communication with a contract buyer in Uganda.

## INDICATOR 2: ADR MECHANISMS INDEX

Index on access to expedited or alternative mechanisms to the formal court system for resolving contract disputes

CHART 27: ADR INDEX SCORES (OF EIGHT)



### I. All AGRI countries have multiple ADR or expedited mechanisms that can be used to resolve contract disputes.

All AGRI countries have multiple expedited or ADR mechanisms that can be used to resolve contract disputes. Expedited mechanisms include commercial court and small claims court, which exist inside the formal court system, while alternative options such as arbitration, mediation, and local options are alternatives to litigation. The most commonly available ADR options in AGRI countries are arbitration and mediation.

- » **All AGRI countries have arbitration**, and arbitration awards can be upheld in court. In the Netherlands, for instance, a party cannot appeal an arbitration ruling directly on its merits—appeal is available only if the ruling is contrary to “good morality.” This gives arbitration rulings legal standing and establishes arbitration as a viable alternative to court. Arbitration can be more or less expensive than going to court, depending on the amount of the dispute and number of arbitrators, but can offer advantages such as speed and confidentiality.
- » **Despite potential advantages of mediation, AGRI contributors prefer arbitration.** Mediation differs from arbitration in that the parties voluntarily agree to the outcome rather than an arbitration ruling, where a binding decision is made by a third party. While arbitration can be expensive for a small business, mediation can be low- or no cost. Most AGRI countries have mediation, but Uganda is the only country where mediation is required in commercial cases before the commercial court will hear the case. Mediation is just starting in Nepal after enactment of the Mediation Act in 2011.
- » **Eight of 10 AGRI countries have a commercial court or commercial chambers within the civil court system.** The main advantage of commercial court is that judges are specialized in business matters. Commercial courts may not be any faster than civil court, however. Commercial courts in Mali, for instance, are understaffed; although a hearing can be held within a month or two from filing, it can take six months after the hearing for the judge to write the decision.

» **Local and informal dispute resolution mechanisms are widespread, but decisions may be difficult to enforce.**

In Senegal and Mali, social pressure and re-negotiating the deal are the first and often only recourse during a dispute. Business acquaintances or a respected third party can help mediate the dispute to allow the parties to develop re-cast terms. In Ghana, the new ADR Act provides for local ADR mechanisms by allowing parties to appoint a customary leader or villager as a mediator by mutual agreement. The situation differs in Bangladesh, where village courts solve the majority of disputes, but their jurisdiction is limited to the village level and to disputes involving less than US\$300. Local and informal dispute resolution can be limiting because decisions may not hold up in court, there may be a maximum claim size or limited jurisdiction, and facilitators may not be impartial.

In sum, a variety of different ADR mechanisms are available to agribusinesses. There is no inherent limitation to the use of ADR mechanisms, particularly if parties incorporate an arbitration or mediation clause into their contract that specifies the preferred mechanism and venue for ADR in the case of a dispute.

Each type of dispute resolution mechanism has benefits and drawbacks. For instance, parties to the dispute can select an arbitrator or mediator with specific agricultural expertise who is more knowledgeable in agriculture than a commercial court judge. Arbitration, however, can be expensive and may be seen as too drastic a measure, particularly for agribusinesses that are concerned with non-confrontational options that allow the parties to maintain a future business relationship. In comparison, mediation holds promise if parties can jointly agree on a third party mediator and are able to reach a settlement.

## **2. Low awareness of and limited access to ADR pose challenges to wider use.**

In many AGRI countries, access to formal ADR mechanisms is limited outside major cities. Ghana and Mali, for instance, have few trained arbitrators and mediators and ADR is not readily available outside of the capital city. Without access to ADR, awareness remains low, further limiting the use of ADR mechanisms. Relatively high costs, limited access, and lack of awareness contribute to the low utilization of ADR in AGRI countries such as Ghana, Mali, and Senegal.<sup>110</sup>

Reducing the cost and improving access to ADR will make ADR more attractive to agribusinesses and parties to contract farming agreements. Importantly, ADR centers can do much to encourage increased use of their services through marketing and outreach to the private sector. ADR centers must highlight the benefits of ADR, including speed, affordability, impartiality, and confidentiality. One strategy to increase the prevalence of ADR in agricultural disputes is to establish agriculture-specific ADR centers. The Netherlands, for example, has both arbitration and land tribunals specific to the agricultural sector. Agriculture-specific ADR mechanisms can build credibility and connections with the agricultural sector, so that agribusinesses feel comfortable taking their disputes to a knowledgeable third party.

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<sup>110</sup> Mali's Arbitration and Mediation Center (CECAM), for example, hears only one or two cases per year.

## CONCLUSION

**The AGRI Index represents the first international exercise specifically tailored to measuring the ease of doing business in agriculture.** This report aggregates and assimilates three years of design, testing, consultation, and expert review. The resulting AGRI Index provides an initial basis for comparing economies, identifying reform priorities for the agricultural sector, and tracking progress of reforms in a particular economy over time. By completing the AGRI pilot and compiling a 10-country data set, this USAID-EAT project provides donors, policy makers, and other interested parties with:

1. Proof of concept that an agriculture-specific, quantitative benchmarking tool can make meaningful comparisons between and within economies based on measurable attributes of their legal, regulatory, and administrative systems.
2. A small suite of targeted indicators fine-tuned to track meaningful attributes, including the time to import seed or register a fertilizer supplier.
3. Synthesized data on the time, cost, and complexity of legal, regulatory, and administrative requirements imposed on agribusinesses in 10 countries across Africa, Asia, and Europe.
4. Discussion of key findings and implications of cross-cutting themes pertaining to the legal, regulatory, and institutional framework that governs the agricultural sector.
5. A list of priorities based on peer-to-peer comparisons, helping to pinpoint where deeper causal analysis and technical assistance is needed most.
6. A platform for developing other analytical tools and technical assistance products by utilizing components of the AGRI methodology. The USAID-EAT team has already adapted the AGRI Index for a tailored qualitative and quantitative regional trade assessment in Southeast Asia.<sup>111</sup>

## AGENDA FOR ACTION

The USAID-EAT project recommends continued and expanded efforts to benchmark the AgBEE across and within countries over time. Such work will continue to spotlight actions that governments and donors can take to strengthen food and agricultural systems in countries where this is needed most. The existing body of work under AGRI can dovetail with Feed the Future's learning agenda, priorities, and monitoring and evaluation (M&E) efforts. AGRI results can also inform USAID Missions in designing programs and technical assistance in the AgBEE.

The multi-donor investment in the World Bank's related *Enabling the Business of Agriculture* (EBA) project is a logical addition to the work completed under AGRI. EBA pilot results published in November 2014 underscore the widely held belief that discrete, actionable measures of the business environment for agriculture are crucial to creating more productive, competitive, and resilient agricultural systems. Comparable data will play a crucial role in achieving this goal by informing host country and donor (especially USAID) program design, technical assistance, and M&E. The following actions are recommended next steps to scale up AgBEE benchmarking worldwide.

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<sup>111</sup> In 2014, the USAID-EAT project conducted an "Assessment of the Enabling Environment for Cross-border Trade of Agricultural Inputs," an activity under the Agriculture and Food Security Pillar of the Lower Mekong Initiative (a cooperative agreement between the governments of the United States, Vietnam, Cambodia, Thailand, Laos, and Myanmar). The LMI study utilizes a survey-based methodology built on the AGRI Index to assess the legal, regulatory, and institutional environment for regional cross-border trade of seed, fertilizer, pesticide, and fish fry.

**1. Collect AgBEE benchmarking data in a large number of countries on a recurring basis.** The power of benchmarking tools expands with each additional country added to the dataset. Continued focus on *agriculture-specific metrics* to inform USAID policy decisions is critical to the success of donor responses to the global food crisis, including the US Government's Feed the Future initiative. Repeated collection of focused benchmark data is the only way that governments and donors can track progress against the ambitious goals established over the last few years.

**2. Include AgBEE benchmarking data in Feed the Future and New Alliance indicators.** USAID and other donors have relied heavily on the World Bank's Doing Business reports to track the progress of countries' enabling environment reforms on a recurring basis. But given Doing Business' explicit focus on the non-agriculture economy, it is essential that donors move beyond this data when looking at the business of agriculture. The World Bank's EBA data can and should be used for future benchmarking of the agriculture sector where it aligns with the Feed the Future framework, but may need to be supplemented by tailor-made indicators, such as those developed under AGRI.

**3. Establish a global peer-to-peer learning platform around AgBEE benchmarking data.** AgBEE benchmarking tools such as the AGRI Index provide a framework for policymakers, experts, and practitioners to meet and share strategies on the efficient design and implementation of regulatory processes for agribusinesses.

**4. Invest in research** that explores the evidence connecting legal and institutional performance such as measured by AGRI and observable outcomes at the micro (e.g., business profitability) and macro (e.g., agriculture GDP) levels.

The USAID-EAT project intends that this report will add depth to the conversation within USAID and beyond about the importance of the legal, regulatory, and institutional environment related to agriculture. Specifically, we intend that the data from this study and the efforts that follow will help illuminate the broad array of institutional governance choices that policymakers have available to address the challenges of managing the agricultural sector in a way that simultaneously promotes the public good and recognizes the importance of facilitating agribusiness growth as a means to economic growth, poverty reduction, and increased food security.

## **POLICY RESEARCH APPLICATIONS OF AGRI DATA**

AGRI has collected a vast amount of unique and insightful information about crucial legal, regulatory, and institutional constraints common to agricultural economies. This data can be used to develop best practice approaches to help policymakers identify, prioritize, and undertake reforms. Research could explore ways in which AGRI countries have successfully implemented reforms in the past, providing other countries with a path forward in areas such as:

- » Designing and implementing trade facilitation systems and electronic certification programs (such as in the Netherlands) to inform similar ongoing efforts in Kenya, Nepal, and Bangladesh.
- » Implementing regional seed policy harmonization (such as in the EU) to assist ongoing efforts to implement ECOWAS and COMESA seed variety registration policies.
- » Designing "right-sized" regulations for fertilizer suppliers (as in Thailand) to minimize barriers to entry and formalization for fertilizer suppliers.
- » Creating an electronic collateral registry (as in Ghana) to provide a path forward for countries seeking to establish or improve collateral registration practices.
- » Designing one-stop shops for business registration that ensure rural access to business registration services (as in Thailand) to help optimize existing one-stop shops in Mali, Senegal, and Zambia.

## ANNEXES

**ANNEX 1:** Discusses AGRI methodology and data notes.

**ANNEX 2:** Includes blank templates of each of the final survey questionnaires; a list of the different types of experts identified as key contributors for each AGRI topic; and scoring rubrics for each index (i.e. indicator comprised of Yes/No questions) included in the study.

**ANNEX 3:** Contains the full AGRI data set by country.

**ANNEXES TO THE 2014 AGRI INDEX REPORT ARE AVAILABLE ONLINE AT  
[www.eatproject.org](http://www.eatproject.org) under the Portfolio page**

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## ACKNOWLEDGEMENTS

The AGRI team is grateful for the input provided by our USAID colleagues, including Kelley Cormier, Steven Fondriest, Mark Huisenga, Wade Channell, Deanna Gordon, Julie Howard, Elizabeth Diebold, and the many others in the Bureau for Food Security whose support we have received. We appreciate the expert advice of Emmy Simmons, Jennifer Chien, David Gisselquist, Louise Williams, Patrick Hanemann, Michael Ingram, Stephanie Haile, Mima Nedelcovych, and Joanne Cornelison during the development process.

This report was made possible by the participation of more than 600 agribusinesses, lawyers, bankers, accountants, trade experts, private-sector representatives, and public officials in 10 countries. It was also made possible through collaboration with our local partners—the facilitators and institutions in each country—and feedback from USAID Missions in Bangladesh, Ghana, Kenya, Mali, Nepal, RDMA, Senegal, Uganda, and Zambia.

Finally, we'd like to thank our colleagues at the USAID-EAT project and on the AGRI team—Jennifer Chien, Elin Cohen, Meghan Mize, Pin Thanasant, Ydun Donahoe, Colin Deffet, Brian Gitau, and Vanessa Molina—for their invaluable contributions to the study.

**The Agribusiness Regulation and Institutions (AGRI) Index examines laws, regulations, and administrative practices that affect agribusiness performance around the world. This report presents analysis based on primary data collected in 7 key topic areas across 10 countries. Findings and implications are discussed for each topic area. The AGRI Index's quantitative indicators create a framework for benchmarking the agribusiness enabling environment across countries and over time.**

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