



# FEED THE FUTURE GLOBAL SUPPORTING SEED SYSTEMS FOR DEVELOPMENT – S34D

Development and Comparison of Seed Regulatory Systems Maps in Ethiopia

# DEVELOPMENT AND COMPARISON OF SEED REGULATORY SYSTEMS MAPS IN ETHIOPIA

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# PARTNERS OF THIS STUDY





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# AGENDA OF THIS WORKSHOP

- Welcome and Opening Remarks (USAID Ethiopia)
- Update on Seed Sector Development in Ethiopia (Director General Ato Girma Bekele)
- Introduction and Objectives of the Study and Today's Workshop (Dr. Bhramar Dey)
- Regulatory System Maps (RSMs) Tool and Methodology (Prof. Katrin Kuhlmann)
- Approach to Stakeholder Consultations (Dr. Mulugetta Mekuria)
- Overview of Key Findings under RSMs (Prof. Katrin Kuhlmann)
- Matrix of Measurements (Dr. Bhramar Dey)
- Use Cases/Feedback on RSMs (Representatives from Public and Private Sectors)
- Conclusions and Next Steps (Dr. Bhramar Dey/Prof. Katrin Kuhlmann)
- Q&A (All)

# OBJECTIVES OF THE ACTIVITY AND WORKSHOP

### **Objective of the Activity:**

- Document the processes and procedures contained in the current seed legal and regulatory system
- Compare with the changes contemplated under the Draft Seed Proclamation to raise awareness of current and proposed legal and regulatory system and highlight important gaps and bottlenecks.
- Provide guidance to track progress/dynamics in the seed sector

### **Objectives of Today's Workshop:**

- Disseminate key findings from the Activity
- Hear from national stakeholders on use-case value of RSMs
- Collect feedback

# WHAT ARE REGULATORY SYSTEMS MAPS?

- RSMs are visual tools that depict, step-by-step, the systems, processes, and procedures underlying a specific legal and regulatory domain.
- RSMs function as analytical instruments to highlight gaps, challenges (including with implementation), intervention points, proposed legal and regulatory changes, and systemic shifts over time ("Regulatory Gateways", NML 2019); Regulatory Gateways also provide entry points for making law more inclusive, equitable, and flexible (Kuhlmann 2022 & Kuhlmann & Dey 2021).
- Thus, RSMs serve as one of the regulatory tools that could potentially raise awareness about policies, laws, and regulations that govern a regulatory domain and increase transparency of systems and processes amongst stakeholders.
- RSMs were developed by the New Markets Lab in 2016 and have been adapted under the current S34D Activity with CRS to encompass additional dimensions (such as gender, cost, and links to forms).

# **METHODOLOGY**

Review of Current and Proposed Ethiopian Seed Laws and Regulations



- Comprehensive assessment of the relevant laws and regulations set out in Table 2.
- This helped identify the strengths and weaknesses of existing laws and regulations, highlighting possible areas of improvement using the RSMs.

- Virtual and in-person consultations with stakeholder (see Annex I) held in Addis Ababa.
- Stakeholders' consultations and validation reinforced findings from the legal and regulatory assessment and highlighted issues that were not apparent from a review of the laws and regulations themselves.

2

Stakeholders' Consultations

Draft and Develop Side by Side RSMs



- Produced an initial set of six RSMs. Maps integrate bottlenecks and challenges stakeholders are facing along the six study dimensions.
- Developed a second set of RSMs focused on the new proposed laws and regulations. This added a comparative element to the Activity and highlights changes or improvements to the system.

 The RSMs were validated by stakeholders at a virtual session on November 10, 2021.

 The validation confirmed information in the RSMs and highlighted additional aspects and priorities.



Validation Workshop

# **ENGAGEMENT & STAKEHOLDER CONSULTATIONS**

- Consultation tools included questionnaires tailored to the different stakeholders and focused on the key dimensions.
- Private stakeholders consulted included seven local seed companies and dealers, two multinational seed companies, two nongovernmental organizations, one international development agency, and the Ethiopian Seed Association.
- Eleven public sector stakeholders were consulted from the Ministry of Agriculture (MoA), the Regional Bureaus of Agriculture (RBoA), the Ethiopia Seed Enterprises (national and regional), the Ethiopian Institute of Agricultural Research (ElAR), Regional Agricultural Research Institutes (RARI), and the Agricultural Transformation Agency (ATA).

# **OVERVIEW OF APPROACH**

• Six regulatory dimensions: (1) Public varietal research, development, and transfer; (2) Seed dealer and venue registration (certificate of competence); (3) Seed variety registration and release; (4) Plant variety protection (PVP) or plant breeder's rights (PBR); (5) Seed certification and quality assurance; and (6) Anti-counterfeiting and consumer protection.

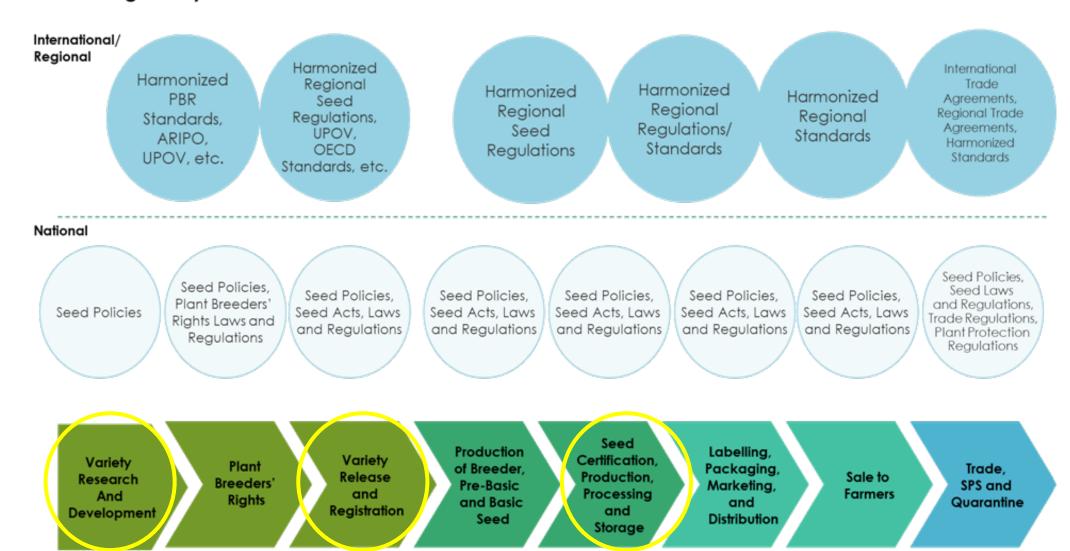
#### Two comparative RSMs for each dimension:

- One set focused on the seed regulatory system as it currently exists and is implemented
- A second set focused on depicting the new rules and procedures that are currently under development (twelve maps in total)

### Inclusivity and flexibility focus across current and proposed dimensions

• Study focuses on aspects of seed laws and regulations that incorporate flexibility and inclusivity. For example, this includes provisions and processes that integrate small farmers, women, private sector enterprises of all sizes, and public research organizations. (See Kuhlmann 2022 & Kuhlmann & Dey 2021)

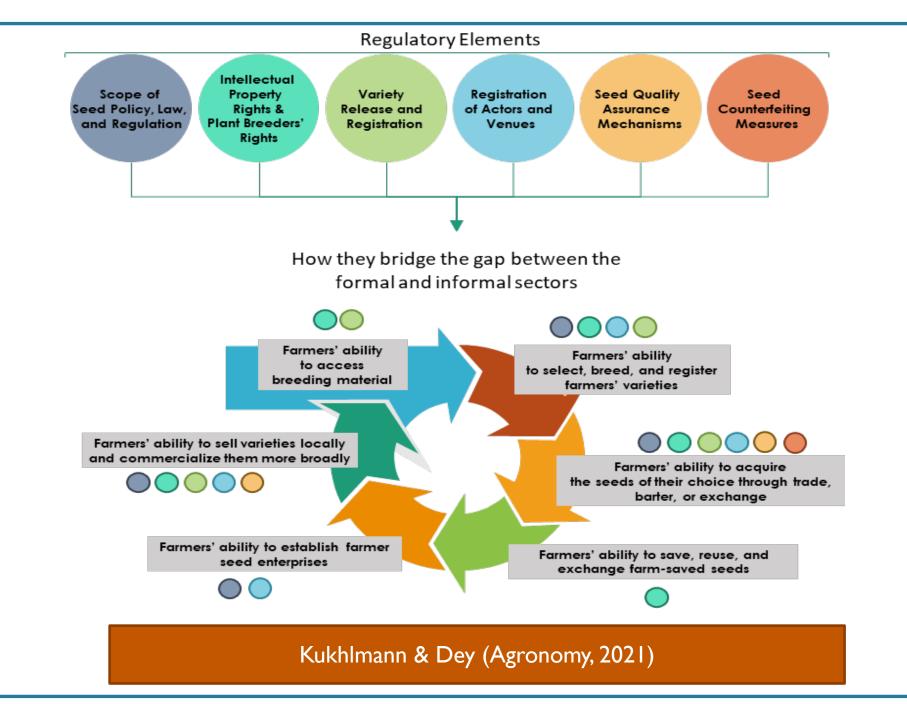
#### **Seed Regulatory Value Chain**



© 2019 New Markets Lab, adapted from New Markets Lab, "Legal Guide to Strengthen Tanzania's Seed and Input Markets", New Markets Lab with the Southern Agricultural Growth Corridor of Tanzania (SAGCOT) Centre Ltd. for the Alliance for a Green Revolution in Africa (AGRA) and U.S. Agency for International Development (USAID) (April 2016).

# KEY ELEMENTS OF THE STUDY

- The study highlights four key "dynamic" elements (with inclusivity and flexibility a focus across):
  - Aspects/steps that are changing with the new Draft Seed Proclamation
  - Aspects/steps that changed with the new 2020 Seed Policy, but are not yet operational
  - Areas that require more detailed regulations, directives, guidelines to become operational
  - Areas written into law or regulation differs from stakeholder experience in practice





# Dimension: Varietal Research, Development, and Transfer

# VARIETAL RESEARCH, DEVELOPMENT, AND TRANSFER

- For varietal research, development, and transfer, and the RSMs cover the following regulatory aspects: (a) genetic material or variety acquisition, development and research; (b) production of breeder, pre-basic, and basic seed (early generation seed); (c) production of certified seed; and (d) Early Generation Seed (EGS) distribution.
- Among these, engaging in varietal development and EGS production and distribution of EGS are particularly notable.

## RSM:Varietal Research, Development, and Transfer in Ethiopia (*Current System*)

#### Kev

- Varietal Research and Development
- Production of EGS
- Production of Certified Seed
- Distribution
- Notes N
- Changes in 2020 Seed Policy that require further legal measures
- Stakeholder experience differs from law

 Acquisition of germplasm from Consultative Group on International Agricultural Research (CGIAR) Centers through Material Transfer Agreements. 1. Development of nucleus seed by public research institutions/acquisition of nucleus seed from CGIAR Centers.

Public Research Institutions (Secondary Literature):

- 1. Ethiopian Institute of Agricultural Research (EIAR);
- Regional Agricultural Research Institutes (RARIs) namely Oromia, Amhara, South, Tigray, Somali, Afar Pastoral, and Gambella; and
- Higher Learning Institutes namely Haramaya, Hawassa, Jimma, Ambo, Mekele, Arbaminch, Addis Ababa, and Bahirdar.

2. Research and breeding of breeder, pre-basic, and basic (RARIs mostly) seed by public research institutions.

The Seed Policy encourages the introduction of a framework where domestic and foreign research entities holding a Certificate of Competence (CoC) can engage in variety development and maintenance and make germplasm accessible to public and domestic private breeders.

3. As per the 2013 Seed Proclamation, any producer holding a CoC can access breeder, prebasic and basic seed (early generation seed, EGS) from registered varieties producing institutions.

Entities authorized to produce EGS:

- 1. Ethiopian Seed Enterprise;
- 2. Regional Seed Enterprises; and
- 3. Seed companies.

Constraints in EGS Production:

- 1. Lack of funding;
- 2. Inadequate access to land to meet CoC requirements; and
- 3. Inadequate supply of source material.

4. Any person with a producer CoC with access to breeder and pre-basic seed can produce basic seed

5. Authorized seed producers produce certified seed as per quality requirements set out under relevant laws and regulations.

6. Distribution of EGS to seed producers through various channels including Regional Bureau of Agriculture, cooperatives unions, and primary cooperatives selling public varieties to farmers, as well as private dealers.

Under Ministerial Directive on Public Crop and Forage EGS Administration, institutions enter in contracts with EIAR and RARIs a year prior to accessing breeder, pre-basic, and basic seed at an agreed fee. In practice, these contracts are routinely breached.

2020 Seed Policy provides that the seed production (starting from EGS to certified seed) will be based on seed demand and an integrated production plan.

### **KEY FINDINGS: CURRENT SYSTEM**

Activity identified several implementation challenges in the legal framework for Varietal Research, Development, and Transfer in Ethiopia, as highlighted in the RSMs:

- Private seed companies do not engage directly in breeding, mainly because of challenges in accessing land and the lengthy processes in practice for obtaining an import permit for parent material (see blue shaded box attached to Step 4 in the RSM on the Current System).
- <u>Unavailability of EGS</u> is also an issue (see blue shaded box linked with Step 3 in both RSMs showing that practice does not match law). Reasons include (i) Public Research Institutions (PRIs) lack capacity and resources; (ii) Priority in EGS distribution given to Ethiopian Seed Enterprise (ESE) and farmer groups over private companies; and (iii) RBoAs interfere with setting price of seed.
- Absence of Legal Framework on Certificate of Competence for Varietal Research and Development.
- Absence of Flexibilities on Certificate of Competence Requirement for Small Seed Producers.
   Stringent producer CoC requirements effectively keep smallholder farmers operating within the informal sector.

### **KEY FINDINGS: PROPOSED SYSTEM**

- Two important changes are proposed to increase the engagement of the private sector in varietal research, development and transfer:
  - A CoC on Variety Development & Research (Seed Policy 2020); however, no such CoC is provided in Draft Seed Proclamation
  - A CoC on pre-basic seed multiplication (Draft Seed Proclamation)
- Proposed institutional licensing framework to address EGS bottlenecks:
  - Framework awaiting ministerial approval that will allow for licensing of public varieties and sharing of genetic material.
  - Licensing is linked with other regulatory dimensions, such as PBR (PBR Proclamation and Directive), which enhances the legal effectiveness of licensing frameworks. However, regulations under the PBR Proclamation are not yet in place, which makes the PBR regulatory framework incomplete. Private sector stakeholders seem to be unaware that the PBR Directive had been passed.

# RSM:Varietal Research, Development, and Transfer in Ethiopia (*Proposed System*)

# Key Varietal Research and Development Production of EGS Production of Certified Seed Distribution Notes Change proposed in new Draft Seed Proclamation Changes in 2020 Seed Policy that require further legal measures Stakeholder experience differs from law

 Acquisition of germplasm from Consultative Group on International Agricultural Research (CGIAR)
 Centers through *Material Transfer Agreements*.  Development of nucleus seed by public research institutions/acquisition of nucleus seed from CGIAR Centers.

Public Research Institutions (Secondary Literature):

- Ethiopian Institute of Agricultural Research;
- Regional Agricultural Research Institutes namely Oromia, Amhara, South, Tigray, Somali, Afar Pastoral, and Gambella; and
- Higher Learning Institutes namely Haramaya, Hawassa, Jimma, Ambo, Mekele, Arbaminch, Addis Ababa, and Bahirdar

The proposed Draft Seed Proclamation establishes a separate CoC for pre-basic seed production. Through licensing, EIAR is planning to share breeder seed with RARIs, Ethiopian Seed Enterprise and private seed companies to produce pre-basic seed.

Entities authorized to produce EGS:

- 1. Ethiopian Seed Enterprise;
- 2. Regional Seed Enterprises; and
- 3. Seed companies.

Constraints in EGS Production (Secondary Literature):

- Lack of funding;
- 2. Inadequate access to land to meet CoC requirements; and
- 3. Supply of source material.

A seed producer may enter into a contractual arrangement with a land holder to produce seed on the latter's plot. This can resolve land access issues.

2. Research and breeding of breeder/pre-basic seed by public research institutions.

3. As per the 2013 Seed Proclamation, any producer holding a CoC can access breeder, prebasic, and basic seeds (early generation seed, EGS) from registered varieties producing institutions.

4. Any person with a producer CoC with access to breeder and pre-basic seed can produce basic seed.

5. Authorized seed producers produce certified seed as per quality requirements set out under relevant laws and regulations.

6. Distribution to seed producers through various channels including Regional Bureaus of Agriculture, cooperatives unions, and primary cooperatives selling public varieties to farmers, as well as private dealers.

The Seed Policy introduces a framework that encourages domestic and foreign research entities holding a Certificate of Competence (CoC) to engage in variety development and maintenance and make germplasm accessible to public and domestic private breeders. EIAR has planned to do this through licensing and an institutional guideline on licensing is awaiting approval.

Under Ministerial Directive on
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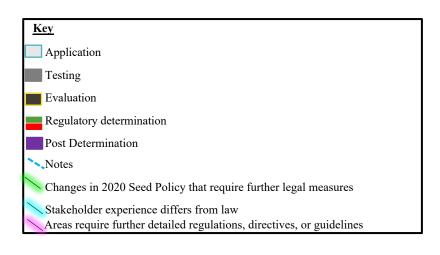


# Dimension: Seed Variety Registration and Release Process

# SEED VARIETY REGISTRATION AND RELEASE PROCESS

- The RSMs cover the following regulatory aspects: (a) application for variety release and registration; (b) testing of new varieties; (c) evaluation by regulatory authorities/committees; and (d) regulatory determination and post determination actions.
- In particular, the testing and evaluation stages contain important gaps and ambiguities.

# RSM: Seed Variety Registration and Release Process in Ethiopia (*Current System*)



Imported varieties may be exempt from registration if imported solely to be multiplied/produced for re-export.

 To release a variety, an application must be submitted to the Plant Variety Release, Protection and Seed Quality Control Directorate of the Ministry of Agriculture (MoA) for variety registration and release. Application is by formal letter. Costs:

a) DUS: Birr 100.

) NPT: Birr 100.

Conducted tests:

a) DUS: 3 sites 2 seasons.

NPT: 3 sites 2 seasons or 6 sites 1 season. 2. As per 2013 Seed Proclamation, the MoA conducts distinctness, uniformity, and stability (DUS) trials and national performance trials (NPT) on the variety. However, consultations reported that only NPT is actually conducted and testing is carried out by public research institutions.

Cost of Tests (Official Source):

a) DUS: Birr 4000

b) NPT: Birr 11000

As per stakeholder consultations, actual costs are much higher than the abovementioned costs.

The NPTC currently does not ensure representation of women or the private sector in the variety release process.

The NVRC is scheduled to meet twice a year. However, stakeholder consultations reported that this schedule is not usually followed.

The Seed Policy states that the participation of women in the variety registration and release process (including in NVRC) shall be ensured.

 If rejected, variety is not permitted to be produced for seed and marketed

Applicant aggrieved/unsatisfied with decision may appeal to the MoA by formal letter within 30 days of decision.

 MoA sends the test reports to the National Performance Trial Evaluation Technical Committee (NPTC) for evaluation.

The NPTC evaluates the variety against specific criteria for DUS/NPT.

5. NPTC submits a report to the National Variety Release Committee (NVRC).

Based on the NPTC report, NVRC will make recommendations to the MoA to:

Fully release the variety;

Provisionally release the variety;

c) Further test the variety; or

d) Reject the variety.

NVRC Composition (Official Source): 4 breeders, an agronomist or physiologist, an entomologist, a pathologist, an economist, a person in research and extension, and other people as may be required.

The NVRC members come from the MoA, the National Seed Industry Agency, Ethiopian Institute of Agricultural Research, the Institute for Biological Conservation and Research, the Coffee and Tea Authority, Awasa Agricultural College, Ethiopian Seed Enterprise, the Science and Technology Commission, the Quality and Standard Authority and any other relevant institution.

7. If approved, variety is <u>released</u> and MoA shall enter it in the National Variety Register.

National Variety Register shall be maintained by the MoA. An updated register cannot be found online, but one is available in hard copy at the MoA.

- 8. MoA may cancel the registration of the variety if the variety:
- a) Loses, changes or degrades characteristics;
- b) Poses risk to human or animal health or the environment;
- Is indistinguishable from a variety registered under a different name; or
- d) Is released or registered on false or misleading information.

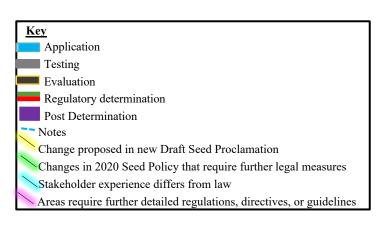
# **KEY FINDINGS: CURRENT SYSTEM**

- Despite a requirement that MoA conduct both DUS and NPT testing, only NPT testing is reportedly done in practice (see blue shaded box attached to Step 2 in the RSM on the Current System).
  - NPT testing is conducted by public research institutions and not MoA as required.
  - Fees charged for variety evaluation are contrary to those in the Service Fee Regulation (and much higher) (see blue comment box off step 2 in the RSM on Current System).
- <u>DUS protocols are absent</u>, which is one reason that DUS testing is not conducted (this difference in stakeholder experience is noted by the shaded box, Step 2 in the RSM on the Current System).
- Women and farmers are not well represented on the National Variety Release Committee (NVRC), even though the 2020 Seed Policy calls for greater gender representation (see green comment box off step 5 in the RSM on the proposed System).

### **KEY FINDINGS: PROPOSED SYSTEM**

- Draft Seed Proclamation calls for the creation of an independent entity responsible for variety registration and release (see yellow comment box attached to Step 2 in the RSM)
- System could be made more inclusive by expanding women's and farmers' representation on the NVRC (2020 Seed Policy) - by revising the Draft Seed Proclamation and/or Variety Release Policy and Mechanism Manual, 2001
- Simplify and streamline the process for variety release and registration:
  - Approval of DUS protocols for wheat and barley and development of DUS Protocols for other crops;
  - Revision of the Service Fee Regulation (include appropriate fees involved in the variety registration process, including DUS and VCU testing); and
  - Revision of the Draft Seed Proclamation to align with regional seed rules (COMESA Seed Trade Harmonisation Regulations) by defining "prioritized development goals"

# RSM: Seed Variety Registration and Release Process in Ethiopia (Proposed System)



Imported varieties may be exempt from registration if imported solely to be multiplied/produced for re-export.

The proposed Draft Seed Proclamation states that the MoA may exempt certain varieties from NPT based on its development goals and testing capacity after assessing:

- a) NPT results from country of origin of the variety or from equally acceptable third country;
- Adequate adaptation trial reports; and
- Variety fulfils biodiversity and quarantine requirements.

The NPTC currently does not ensure representation of women or the private sector in the variety release process.

The NVRC is scheduled to meet twice a year. However, stakeholder consultations reported that this schedule is not usually followed.

The Seed Policy states that the participation of women in the variety registration and release process (including in NVRC) shall be ensured.

If rejected, provisionally released or further testing ordered, the variety is not permitted to be produced for seed and marketed

Applicant aggrieved/unsatisfied with decision may appeal to the MoA by formal letter within 30 days of decision.

 To release a variety, an application must be submitted to the Plant Variety Release, Protection and Seed Quality Control Directorate of the Ministry of Agriculture (MoA) for variety registration and release.

2. As per 2013 Seed Proclamation, the MoA conducts distinctness, uniformity, and stability (DUS) trials and national performance trials (NPT) on the variety. However, consultations reported that only NPT is actually conducted and testing is carried out by public research institutions.

 MoA sends the test reports to the National Performance Trial Evaluation Technical Committee (NPTC) for evaluation.

4. The NPTC evaluates the variety against specific criteria for DUS/NPT.

NPTC submits a report to the National Variety Release Committee (NVRC).

- Based on the NPTC report, NVRC will make recommendations to the MoA to:
- a) Fully release the variety;
- Provisionally release the variety;
- Further test the variety; or
- d) Reject the variety.

7. If approved, variety is <u>released</u> and MoA shall enter it in the National Variety Register.

8. MoA may cancel the registration of the variety if the variety:

- Loses, changes or degrades characteristics;
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- Is indistinguishable from a variety registered under a different name; or
  - Is released or registered on false or misleading information.

Application is by formal letter. Costs:

- a) DUS: Birr 100.
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Cost of Tests (Official Source):

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- b) NPT: Birr 11000

As per stakeholder consultations, actual costs are much higher than the abovementioned costs.

#### Conducted tests:

- a) DUS: 3 sites 2 seasons.
- NPT: 3 sites 2 seasons or 6 sites 1 season.

NVRC Composition (Official Source): 4
breeders, an agronomist or physiologist, an
entomologist, a pathologist, an economist,
a person in research and extension, and
other people as may be required.
The NVRC members come from the MoA,
the National Seed Industry Agency,
Ethiopian Institute of Agricultural
Research, the Institute for Biological
Conservation and Research, the Coffee
and Tea Authority, Awasa Agricultural
College, Ethiopian Seed Enterprise, the
Science and Technology Commission, the
Quality and Standard Authority and any
other relevant institution.

MoA shall publish the list of varieties under consideration on its website or through the media.

National Variety Register shall be maintained by the MoA. An updated register cannot be found online, but one is available in hard copy at the MoA.

As per the proposed Draft Seed Proclamation, the MoA shall automatically register a variety if it is listed in a variety catalogue established in accordance with an international agreement ratified by the country.



# Dimension: Quality Assurance Process

# **QUALITY ASSURANCE PROCESS**

- The RSMs cover the following regulatory aspects: (a) seed quality assurance schemes; (b) application and evaluation; (c) field inspection and analysis; (d) seed processing; (e) seed sampling; (f) laboratory testing; (g) issuance of certificate of quality; and (h) rejection and appeal.
- Among these, seed quality assurance schemes, field inspection, and laboratory testing are particularly important and contain some notable gaps and ambiguities as highlighted in the RSMs.

## RSM: Seed Quality Assurance Process in Ethiopia (Current System)

#### Kev: Seed Ouality Assurance Schemes Application and Evaluation Field Inspection and analysis Seed Processing Seed Sampling Laboratory testing Issuance of Certificate of Quality Rejections and Appeals Notes Stakeholder experience differs from law

Compulsory Seed Certification Application is submitted a month prior to sowing by a registered seed producer, supported with: a) A certificate of competence (CoC); b) Proof of variety registration; c) Proof that the variety is from a known source; and d) Proof of payment of inspection fees (Birr 30 per hectare for hybrids, and Birr 20 per hectare for non-hybrid varieties). Field inspections are conducted at least three times for hybrids, and at least twice per season for non-hybrids: a) Crop purity; b) Rotation; c) Isolation distance; d) Maximum percentage of other varieties or off-types; e) Maximum percentage of seed-borne diseases; f) Maximum percentage of objectionable weed plants; and g) Minimum number of inspections required. The field standard is rejected and application for certificate of quality Seed producer lodges an appeal for reinspection to the RBoA within five working days and pays for re-If the standard of the field is approved after re-inspection, the inspection fee paid for reinspection is refunded to the producer. Laboratory testing results are provided to the applicant 7 to 21 days after testing. The laboratory test result certificate costs Birr

dismissed.

inspection.

100. There are 13 laboratories.

If seed is found not to meet laboratory

testing standards, a certificate of quality is

rejected, and the seed processor can

appeal to the Ministry within 30 days

a) Imported registered seed for release on market as approved seed;

Approved Seed

b) Domestically produced seed for export:

c) Emergency seed.

1. Submit an application to the respective Regional Bureau of Agriculture (RBoA) for a certificate of approved seed/QDS.

Quality Declared Seed (QDS)

1. Submit an application to the Ministry of Agriculture (MoA) or RBoA for a certificate of seed quality/approved seed.

2. The RBoA or the MoA evaluates the application and supporting documentation.

3. RBoA or the MoA seed inspectors undertake seed field inspection visits in accordance with the Ethiopia Seed Standards, aligned with International Seed Testing Association standards (ISTA).

4. RBoA or MoA seed inspector releases the field analysis results.

5. A registered seed producer with a CoC processes the seed in accordance with maximum size and weight requirements under ISTA.

6. Samplers authorized by the MoA or the RBoA collect a seed sample in accordance with ISTA rules.

7. The seed sample is tested in an accredited public laboratory in accordance with ISTA standards, subject to payment of prescribed fees. Secondary Literature reported that none of the laboratories in Ethiopia is accredited to ISTA

Application to be accompanied by:

- a) Filled application form:
- b) Receipt of payment of inspection fees;
- Seed from one official tag taken from c) each lot of planted seed.
- 2. Seed producer prepares the final report with proof of undertaking the required internal seed quality control.

For QDS, the seed producer undertakes the following during internal seed quality control:

a) Verify that field standards are maintained: b) Maintain information relating to the source of seed; c) Sample, process, analyze and package seed in tandem with standards; and d) Affix tag and seal container.

Each seed lot is assigned a unique identifying lot number following an internationally recognized code scheme, identifying the federal or regional authority and year of production.

The seed producer should pay a sample collection fee of Birr 100.

Seed is tested for purity (Birr 20/sample), germination (Birr 40/sample), moisture (Birr 25/sample), health (Birr 182/sample), tetrazolium (Birr 47/sample), and other relevant tests.

8. RBoA or the MoA issue the applicant a certificate of seed quality/approved seed/ODS.

# **KEY FINDINGS: CURRENT SYSTEM**

- System currently carried out by public institutions, without private sector involvement. This causes delays for private seed companies and further postpones getting seed to farmers. This is an important area of focus for the Draft Seed Proclamation
- Both public and private sector stakeholders reported <u>laboratory capacity gaps in</u> <u>terms of finance</u>, <u>human resource</u>, <u>and facilities</u> (see Step 7 in the RSM on the Current System, which is shaded due to the difference in stakeholder experience).
- None of the laboratories has ISTA accreditation, which is called for under international seed testing standards and regional practices, and most laboratories at the regional level lack facilities to test additional seed quality parameters based on new protocols that address tests related to seed health, variety quality, and vigor, among other things.

# **KEY FINDINGS: PROPOSED SYSTEM**

- Creation of independent certifying authorities at the federal and national levels (this is depicted in Step 2 in the RSM on the Proposed System; these already exist in some regions)
- Authorization of private seed inspectors by the relevant federal and regional institutions to conduct field inspections (this is depicted in the yellow comment box attached to Step 3 in the RSM on the Proposed System)
- Authorization of private seed laboratories that meet international ISTA standards to conduct laboratory tests (this is depicted in Step 7 in the RSM on the Proposed System)
- Introduction of self-quality seed certification, with oversight by the relevant federal and regional institutions (details of this approach forthcoming in a Ministerial Directive)

## **RSM: Seed Quality Assurance Process in** Ethiopia (Proposed System)

#### Kev Application [Festing **■**Evaluation Regulatory determination Post Determination Notes Change proposed in new Draft Seed Proclamation Changes in 2020 Seed Policy that require further legal measures Stakeholder experience differs from law Areas require further detailed regulations, directives, or guidelines

Authorized Private or Self-quality Assurance Quality Declared Seed Compulsory Seed Certification Cooperative Seed Quality Certification (ODS) Certification Application is submitted a month 1. Submit an application to the RBoA to set criteria and Procedural details to be prior to sowing by a registered seed respective Regional Bureau of described by authorize seed producing producer, supported with: a) A Ministerial Directive(s) Agriculture (RBoA) for a companies and cooperatives certificate of competence (CoC); b) to be developed QDS certificate. to certify their own seed. Proof of variety registration; c) Proof that the variety is from a 1. Submit an application to the known source; and d) Proof of Application to be accompanied by: independent authority by Ministry of payment of inspection fees (Birr 30) a) Filled application form; b) Payment of Agriculture (MoA) or RBoA for a per hectare for hybrids, and Birr 20 inspection fees; and c) Seed from one official certificate of seed quality/approved seed per hectare for non-hybrid tag taken from each lot of planted seed. varieties). 2. The RBoA or the MoA evaluates the 2. Seed producer prepares the final report with application and supporting Field inspections are conducted at least proof of undertaking the required internal seed documentation. three times for hybrids, and at least twice quality control. for non-hybrids: a) Crop purity; b) Rotation; c) Isolation 3. RBoA, MoA, or authorized private distance; d) Maximum percentage of other The seed producer undertakes the following seed inspectors undertake seed field varieties or off-types; e) Maximum during internal seed quality control: a) inspection visits in accordance with the percentage of seed-borne diseases; f) Verify that field standards are maintained; Ethiopia Seed Standards, aligned with Maximum percentage of objectionable b) maintain information relating to the International Seed Testing Association weed plants; and g) Minimum number of source of seed; c) sample, process, analyze standards (ISTA). inspections required. and package seed in tandem with standards; d) affix tag and seal container. 4. The authorized RBoA, MoA, or The field standard is rejected and private seed inspector releases the field Procedures on authorization of private seed application for certificate of quality analysis results. inspectors will be prescribed by Ministerial dismissed. Directive. 5. A registered seed producer with a CoC Seed producer lodges an appeal for re-Each seed lot is assigned a unique processes the seed in accordance with inspection to the RBoA within five identifying lot number following an maximum size and weight requirements internationally recognized code scheme, working days and pays for reunder ISTA. identifying the federal or regional inspection. authority and year of production. 6. Samplers authorized by the MoA or If the standard of the field is approved the RBA collect a seed sample in The seed producer should pay a after re-inspection, the inspection fee accordance with ISTA rules. sample collection fee of Birr 100. paid for re-inspection is refunded to the producer. 7. The seed sample is tested in an Seed is tested for purity (Birr 20/sample), germination (Birr Laboratory testing results are provided to authorized/accredited private or public the applicant 7 to 21 days after testing. 40/sample), moisture (Birr laboratory in accordance with ISTA 25/sample), health (Birr 182/sample), The laboratory test result certificate costs standards, subject to payment of tetrazolium (Birr 47/sample), and Birr 100. There are 13 laboratories. prescribed fees. other relevant tests. If seed is found not to meet laboratory testing standards, a certificate of quality is rejected, and the seed processor can

appeal to the Ministry within 30 days

8. RBA or the MoA issue the applicant a

certificate of seed quality/QDS.

### KEY TAKEAWAYS: FOCUS ON INCLUSIVITY AND FLEXIBILITY

- We reviewed roles of farmers, women, private sector, and research organizations to assess and recommend ways in which the rules do and could incorporate flexibility and inclusivity
- The 2020 Seed Policy calls for greater gender representation in the NVRC, which is notable, but this is not yet operational under the law. Small farmers and farmers' associations should also be represented.
- Small farmers may have difficulty meeting CoC requirements e.g., prior experience and education. Some countries have adopted more flexible approaches to recognize informal actors (Kuhlmann and Dey, 2021).
  - India's system is particularly noteworthy and maintains a separate registration system for small farmers and informal actors.
  - Peru exempts those engaged in the production, trade, and storage of traditional varieties from registration.

# KEY TAKEAWAYS: FOCUS ON INCLUSIVITY AND FLEXIBILITY (CONTD.)

Ethiopia's rules on PBR allow for registration of farmers' varieties, but the rules confuse DUS standards with standards for Quality Declared Seed, making the flexibility inoperable.

- Ethiopia could consider something like an "identifiability test" (adopted in Malaysia) which modifies the DUS test, substituting "identifiability" for uniformity and stability and better tailoring the test to farmers' varieties (Kuhlmann and Dey, 2021).
- Use of an identifiability test could also make it easier for small farmers to register their varieties. Other countries have adopted approaches such as preferential schemes for traditional varieties or alternative seed catalogues (Kuhlmann and Dey, 2021).
- Some countries maintain more flexible approaches to PBR (e.g., India, Peru, Thailand and Vietnam) and variety registration (e.g., Peru, Brazil, and Benin).

# MATRIX OF MEASUREMENTS

Dimensions	Issues	Proposed indicators
Varietal research	Include a CoC on variety development and	# of CoC issues to private sector per year;
dev and transfer	research to enable private sector engagement	% share of applications renewed each year
		#of private entities commercializing production of EGS; Total
		amount (crop and variety disaggregated) in MT
Seed dealer	Seed producers contracting land holders	# of contractual arrangements made (per year – age and gender
registration		disaggregated)
Variety	Define "prioritized development goals"	Goals defined and shared with stakeholders for validation;
registration and		# of stakeholders shared with;
release		Digitized national variety register available on public domain and
		accessible free of cost
	To qualify for NPT exemption, an applicant	# of applicants applying for and receiving the NPT waivers
	seeking registration applies for an NPT waiver	(gender, and age disaggregated)
	NVRC composition needs to be more	% of members that are women; youth; farmers; private sector
	inclusive and diverse	entities
		#of times the NVRC convenes per year
PBR	Share PBR directive widely	#of stakeholders participated in the sensitization of the directive
		(age and sex disaggregated)
Seed quality	Seed certification is delayed	Amount of time (in # of days) taken for seed certification
assurance		(disaggregated by types of applicants)
Anti-	Some regional authorities have less capacity	# of court cases filed; Guidelines established and shared in the
counterfeiting	than others.	public domain

# FEEDBACK ON USE CASE

- How can the RSMs play a role in increasing awareness of the legal and regulatory system?
- How could the RSMs help facilitate engagement in legal and regulatory processes central to development of the seed system?
- Do you think digitization of the maps can raise awareness amongst all stakeholders and increase transparency?
- Other comments?

# PRIORITIZATION OF GOALS

- Short Term Focus on "Gateway" Changes via Instruments in Draft (Including Seed Proclamation) or Directives:
  - Establish CoC on Variety Development and Research to enable the private sector to more fully engage in EGS and align with the 2020 Seed Policy
  - Support licensing of public varieties by PRIs and move forward with Ministerial Directive on licensing of public varieties and corresponding guidelines to improve EGS
  - Clarify important issues related to DUS testing (DUS protocols and delink from QDS)
  - Formally include women in NVRC and incorporate flexible requirements for smallholder farmers to obtain a CoC to ensure their inclusion in the formal sector
- Medium Term Modify Other Legal/Regulatory Instruments:
  - Simplify process for variety registration and release and PBR, with focus on inclusivity, through changes to related legal instruments
- Long Term Align with Regional Developments Underway:
  - Revision of 2016 Seed Regulations to align with COMESA seed labels and seed classes

# **CONCLUDING REMARKS**

- Financial and operational planning and accountability to execute many of the changes proposed in the new seed rules. For example, a new institutional structure has been proposed (Agricultural Inputs Regulatory Formation Authority) that will require dedicated resources and budgetary allocation, as will institutions like the NVRC. An M&E framework will also be important.
- Flexibility and inclusivity in the rules will be important for addressing the needs of small farmers, the private sector, and women and youth to make it a more pluralistic and inclusive seed sector.
- Legal and regulatory change can be an ambitious and costly undertaking, and it will be important to prioritize short-, medium-, and long-term goals.
- Good practices from other countries (like those highlighted in legal and regulatory takeaways), provide important options and would enhance Ethiopia's existing good practices.
- Given the different initiatives focused on Ethiopia's seed systems, **sectoral coordination and co-location** critical to raising awareness, engaging stakeholders, and building capacity as rules, institutions, and system overall evolve.

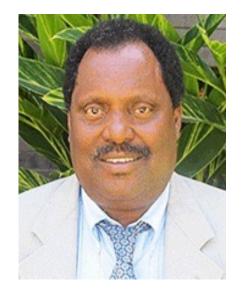
# SPEAKER BIOS



**Prof. Katrin Kuhlmann** is President and Founder of the New Markets Lab and a Visiting Professor at Georgetown University Law Center. Her areas of expertise include law and development, comparative economic law, agricultural regulation and trade corridors, regional trade harmonization, and international trade and development. Professor Kuhlmann is also a Senior Associate with the Global Food Security Project of the Center for Strategic and International Studies (CSIS) and a member of the Trade Advisory Committee on Africa at the Office of the U.S. Trade Representative (USTR). Previously, she was a Lecturer on Law at Harvard Law School; Senior Fellow and Director at the Aspen Institute; Director at USTR; and international lawyer in private practice. J.D. Harvard Law School; BA Creighton University; Fulbright Scholar 1992.



**Dr. Bhramar Dey** (Senior Technical Advisor, S34D CRS) brings a unique blend of project design, management, and analytical skills focusing on country-led interventions (often through negotiations with governments) in data, policy, monitoring and evaluation, and agricultural input systems. She has over 18 years of experience in data and regulatory reform analyses, and designing, managing large client and stakeholder-oriented projects. Prior to joining CRS, Dr. Dey worked at the Bill and Melinda Gates Foundation (BMGF) - Agriculture initiative. Passionate about turning data into information, Dr. Dey focuses on institution strengthening, and bridging gaps between evidence and impact. Bhramar holds a Ph.D. in Applied Economics from Clark University.



**Dr. Mulugetta Mekuria** is an Ph.D. scholar in Agricultural Economics from Michigan State University and an international consultant specializing in African agricultural research and development. Dr Mulugetta contributed to the advancement of farming system research in Ethiopia as head of EIAR's Department of Agricultural Economics and Farming system Research. He was Professor, Head of Department of Agricultural Economics and Deputy Dean of Faculty of Agriculture of the University of the North, South Africa. He worked at CIMMYT for more than 20 years where he was Regional Representative and Head of the Diplomatic Mission for CIMMYT Southern Africa Regional Office based in Harare, Zimbabwe. Mulugetta was CIMMYT's Program Leader for the Sustainable Intensification of Maize-Legume Cropping Systems for Food Security in Eastern and Southern Africa.

# THANK YOU!

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