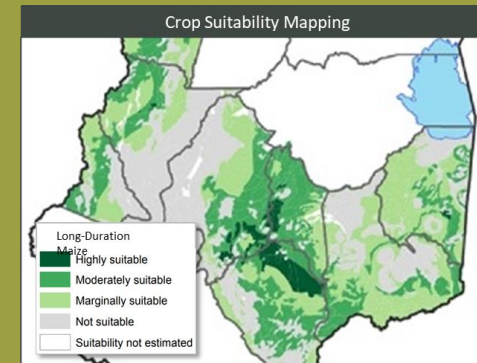
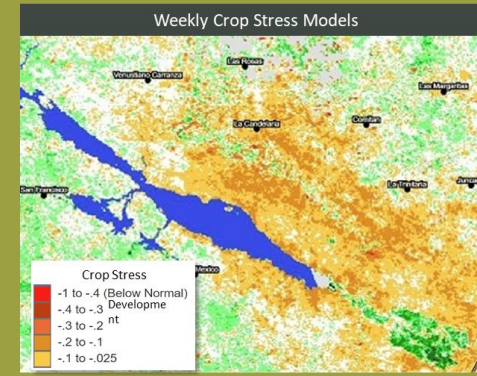
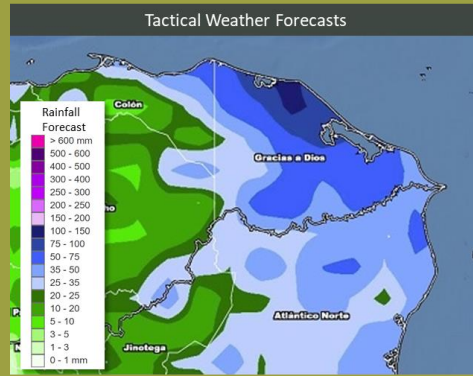
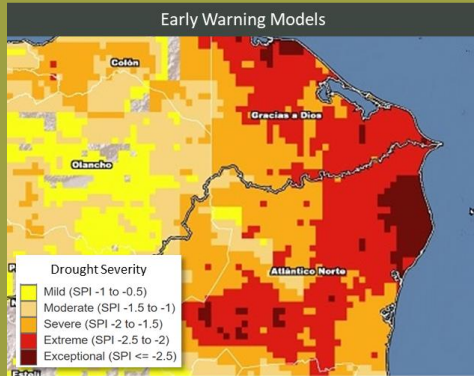


# Why the need for geospatial forest monitoring?



# Climate Crisis

# Evolving Regulations

## Solution: Interoperability of systems in agricultural supply chains



# 4 Domains of Interoperability

# 1<sup>st</sup> Domain of Interoperability: Semantic/Definition

# What Definitions?

- ✓ Deforestation
- ✓ Degradation
- ✓ Forest

# Accepted Definitions

- **'Forest'** means lands spanning more than 0.5 hectares (1.24 acres) with trees higher than 5 meters (16.4 feet) and a canopy cover of more than 10 percent, or trees able to reach those thresholds."
- **'Deforestation'** means the conversion of forest to agricultural use, whether human-induced or not - legal or illegal.
- **'Forest Degradation'** means structural changes to forest cover, taking the form of the conversion of primary forests or naturally regenerating forests into plantation forests or into other wooden land and the conversion of primary forests into planted forests.



# 2<sup>nd</sup> Domain of Interoperability: Syntax/Process

# Products & Bi-products Initially Impacted?

- ✓ Beef
- ✓ Coffee
- ✓ Soy
- ✓ Palm Oil
- ✓ Cocoa
- ✓ Wood/Timber
- ✓ Natural Rubber

# What's the Cutoff Date?



# Acceptable Data Sources

## Geo IDs (farm-level traceability)

- Farms greater than 4 hectares will require a 'polygon'
- Farms smaller than 4 hectares will require a single GPS coordinate

## Satellite Imagery

- Sentinel Data

# Recommendations to Firm

- Optimal spatial AND temporal resolution must be defined—not just the requirements for spatial resolution.
- Regardless of the required spatial resolution (30 meters or 10 meters), the resolution used should be *declared*, in addition to the “model” used to detect whether it is a crop or tree (declarative definition and meta-data). Confidence intervals should be published.
- Dispute mechanism for contesting geospatial analysis of deforestation (e.g., not misinterpreting best agricultural practices, like stumping and pruning). Who sets this standard?

# Recommendations to Firm

- What is the protocol for ground-truthing geospatial data?
  - Sampling methodology (spot check, square root, representative, or only to contest deforestation)
  - Who can sample? Third-party auditors, self-reported, etc. And, who sets this standard? EU legislation?
  - Draft Partial Protocol: Audits are conducted by professional, third-party auditors to avoid conflicts of interest and ensure competency of audits (adapt from ISO 17000 and align with ISEAL Provision 5.2.3). Audit firm competence is demonstrated by certifications, membership, and/or accreditations such as ISEAL, IAF, ISO 19011, and APSCA.

# Update: Rwanda Reference Project

# Rwanda Reference Project

- **Total Number of Farmers Surveyed:** 1,230 (national sample)
- **Key Lessons Learned:**
  - **Accurate GPS coordinates were difficult to collect.** Skilled enumerators were only able to secure center-of-farm GPS coordinates for 39% of farmers interviewed.
  - **Timing:** Farmers conduct most on-farm work from 0600 AM to 1100 AM. After this time, they are to be found at their households and do not return to their farm plots until the following day. Due to time limitations, piggybacking GPS data collection on an existing farmer survey was challenging.



# Launching: ISO Collaboration

# Next Steps

1. TBD, **ISO/DIN Standardization**
2. July, **Complete Rwanda Reference Project**
3. September, **Working Group Meeting (finalize syntax and review proposed data structure)**
4. Early 2024, **Endorsement & Adoption of DIASCA Recommendations**