



# Emissions Reductions at the landscape level in the Oromia Region, Ethiopia

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Ministry of Agriculture  
Oromia Forest and Wildlife Enterprise  
Farm Africa / SOS Sahel  
Ethiopian Forest Coffee Forum

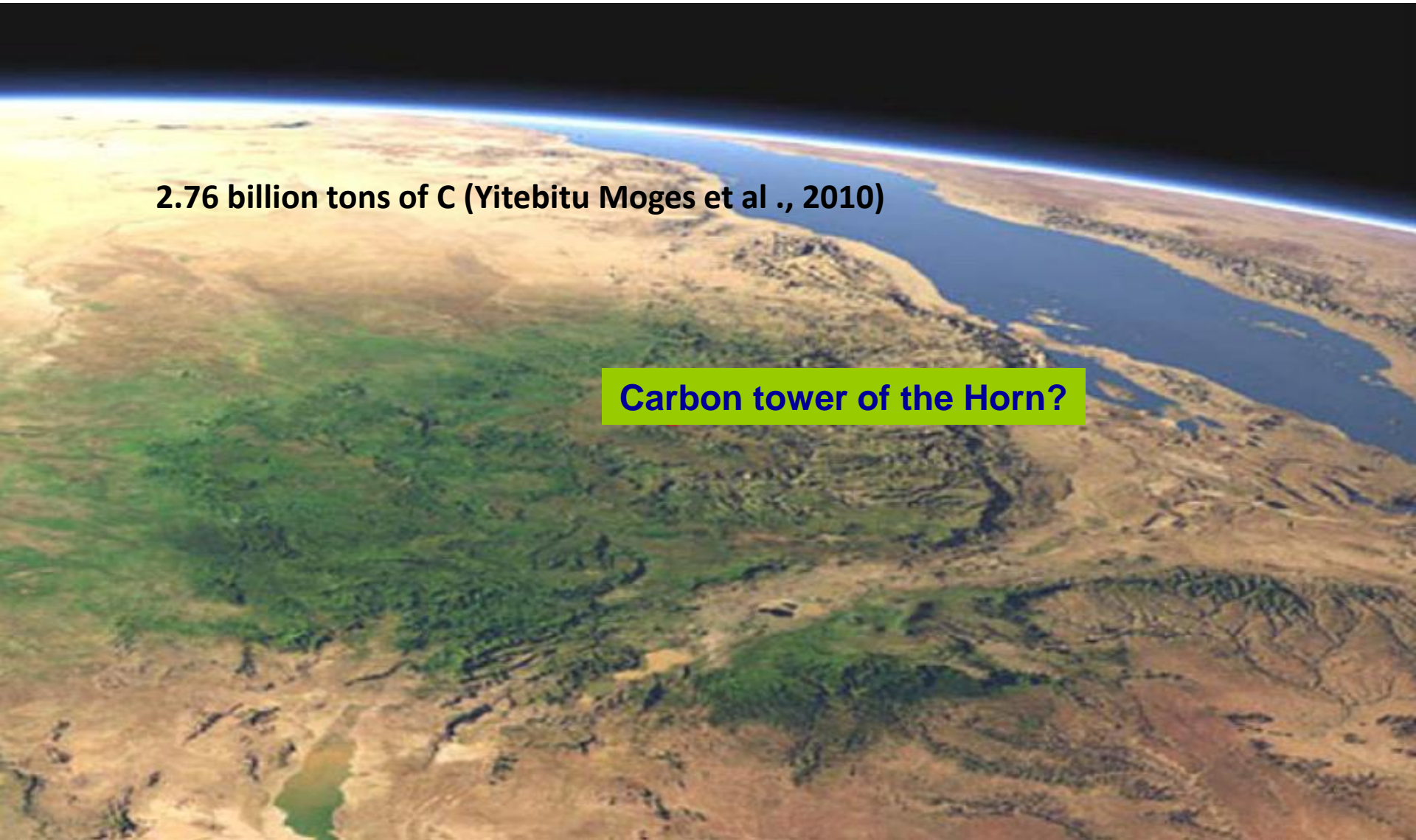
# Forest Resources in Ethiopia

Forest Type	Area (Mi / ha)	AGB C	C stock
High forest	4.07	106.68	434.1876
Woodland	29.55	42.75	1263.2625
Lowland Bamboo	1.07	47.5	50.825
Highland Bamboo	0.03	84.23	2.5269
Shrubland	26.4	36.04	951.456
Plantations	0.5	123	61.5
<b>TOTAL</b>	<b>61.62</b>		<b>2763.758</b>

# Carbon Store in Forests of Ethiopia

2.76 billion tons of C (Yitebitu Moges et al ., 2010)

Carbon tower of the Horn?



# CRGE as Strategy for Green Growth in Ethiopia

- Climate Resilient Green economy (CRGE) aims at developing an environmentally sustainable economy
  - NET ZERO EMISSIONS BY 2030
  - MIDDLE INCOME COUNTRY BY 2025
- Encompasses 8 key sectors that play significant role in the sustainable development of the country
- REDD+ as one of the three pillars of CRGE in the Agriculture Sector
- REDD+ and agriculture has potential for offsetting emissions from other sectors (energy, transport)

# Alignment with the CRGE Vision and the REDD+ Readiness Process

- ER P is consistent with the CRGE: the program contributes to the quantitative targets of the CRGE in emission reductions and carbon sequestration
  - Forests account for over one-third of total emissions today: 55 Mt CO<sub>2</sub>e annually, 37% of national emission.
  - CRGE strategy aims at the forestry sector for a huge abatement of GHGs (130 Mt CO<sub>2</sub>e in 2030)
  - Strategic options for reducing emissions from the forestry sector and for abatement through CO<sub>2</sub> absorption are consistent with the national REDD+/CRGE strategy
- Link to the national REDD+ Readiness process
  - This ER-P is the one pilot identified in the R-PP to inform the REDD+ Strategy
  - Nested Approach to REDD+ implementation → Oromia Program is pilot to be replicated in the country
  - As a multi-sectoral Program, it will contribute to inter-sectoral collaboration and strengthen coordination between federal and decentralized levels (region, woreda)
  - National REDD+ Readiness (Steering Committee + Technical WG) institutions will play a role in the design of the ER-P
  - ER-P preparation will contribute to multi-stakeholder consultations
  - Emerging MRV system will be tested and used at the Regional level

# National REDD+ arrangements

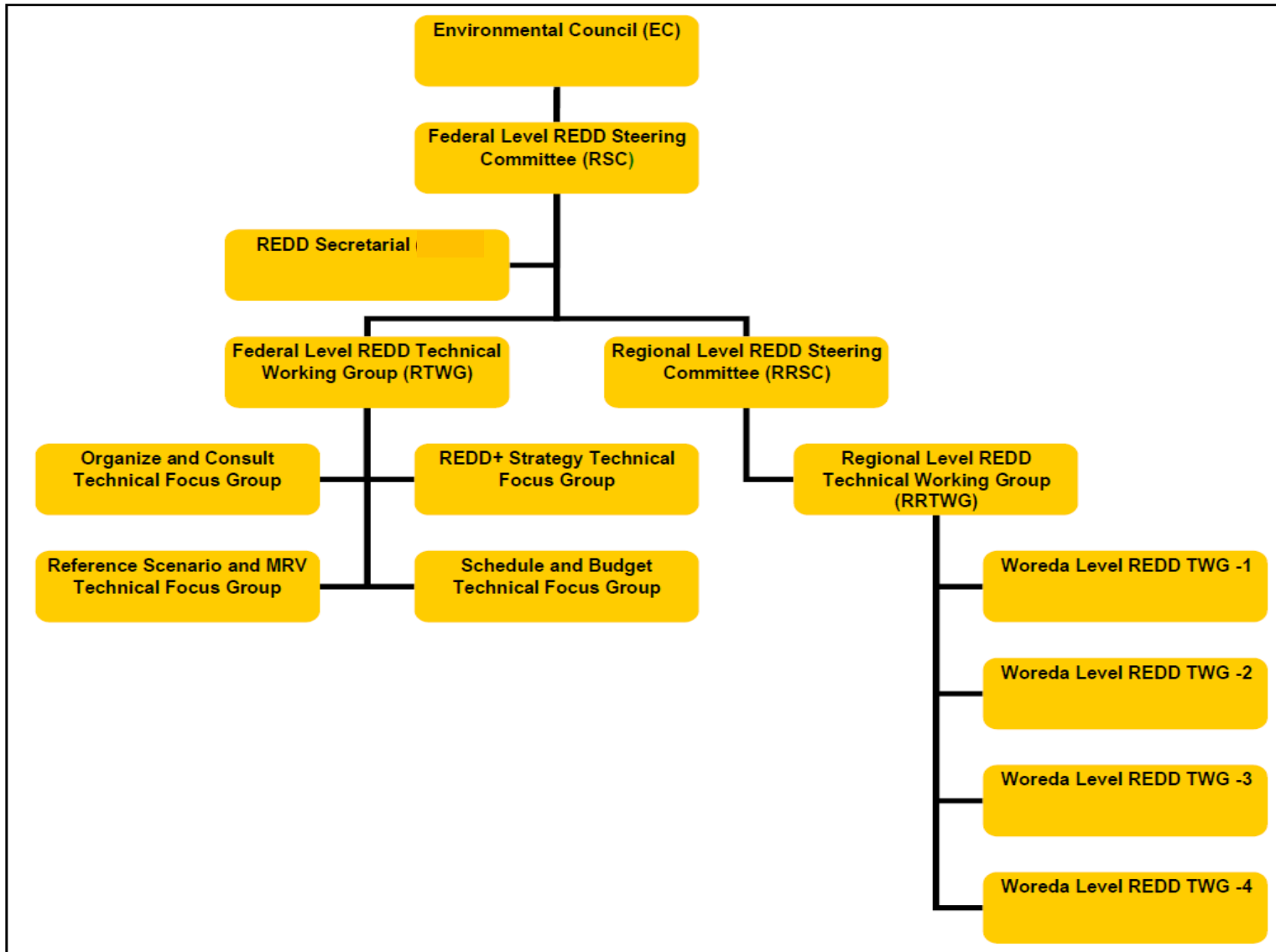
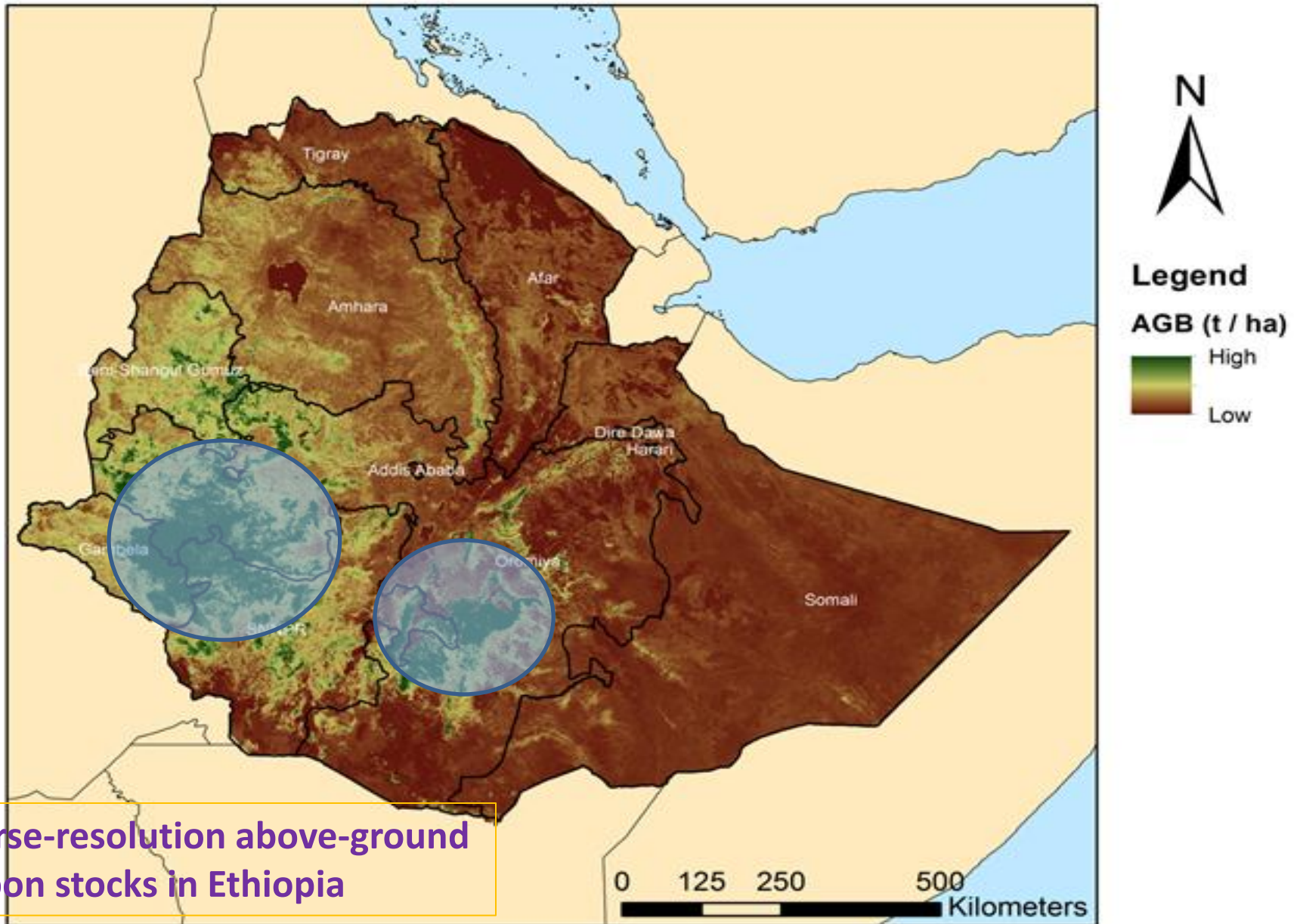


Figure 7: National Readiness Management Arrangements

# REDD+ Readiness in Ethiopia

- Milestones in REDD+ national process
  1. Ethiopia final R-PP – approved May 2011
  2. Ethiopia Grant Agreement – October 2012
  3. Official Launching of the Readiness Phase – January 2013
- Current status
  - Functional REDD+ Secretariat at MoA
  - Steering Committee + WG composed
  - Key technical studies to be launched (Strategy + SESA)
  - MRV roadmap
  - Thematic task-forces to be established
- Future plans
  - Mid-term review: June, 2014
  - R-Package submission: June, 2015

# Carbon stocks in Ethiopia



Coarse-resolution above-ground carbon stocks in Ethiopia

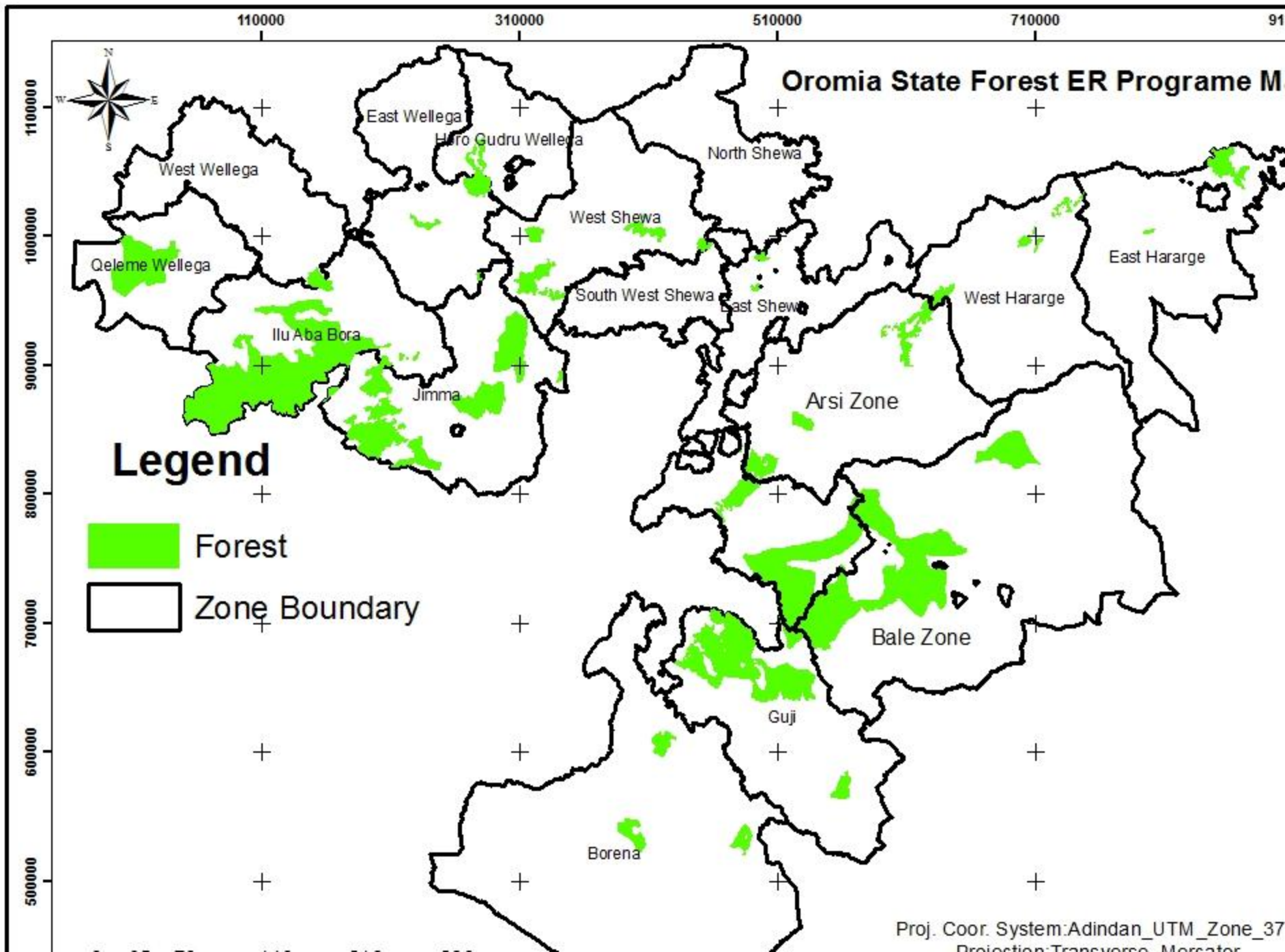


# The Scale of the proposed ER Program

- Sub-national jurisdiction- Oromia Regional State
- Why Oromia Regional State?
  - The largest Regional State endowed with forest resources, and historically facing high deforestation rates
  - Change in leadership: Commitment of the State to conservation of forest resources → land use plans, limiting expansion of commercial agriculture
  - Institutional readiness: Oromia Forest and Wildlife Enterprise
  - Long term PFM implementation experience (15 years)
  - Ongoing data generation on forest carbon stocks, and historical land use/land cover change (e.g., Farm Africa)
  - Ongoing experience in capacity building related to REDD+ activities.

# Area of the Proposed ER Program

- **Accounting area:** Oromia state
- **Priority Intervention area:** 2.03 million ha of high forest (60% of country's high forest area)
  - Forest blocks in the *southwest* and *southeast* parts of Oromia State (map)
  - **1.7 million ha** of high forest are under Oromia Forest and Wildlife Enterprise concession
    - 99% of forest is re-demarcated (boundaries well-known)
    - 1/4 already under community management (PFM)



# Managing Entity of the proposed ER Program

- Oromia Forest and Wildlife Enterprise (OFWE) is the managing institution of the ER-P
  - Forest management is devolved to regions
  - The program will be implemented by 8 branch enterprises, which are further divided into 38 forest districts
- BoA of the Regional State will be the implementer of REDD+ interventions in the neighborhoods (intensive agriculture, agroforestry, afforestation, reforestation, etc).

# Partners in the proposed ER Program

- *Federal Democratic Republic of Ethiopia Ministry of Agriculture*- experience sharing among regions, scaling up to other regional states, overall supervision, ensure that the lessons feed into the national REDD+ process
- *Federal Democratic Republic of Ethiopia EPA*: Monitoring actions, National Climate Change Focal Point
- *Oromia Bureau of Agriculture*: Implementation of REDD+ activities in the transition zone

# Partners in the proposed ER Program

- *Oromia Cooperative Promotion Agency*: Organizing communities into cooperatives and unions and legalizing land rights
- *Oromia Rural Land and Environmental Protection Bureau*: Monitoring and evaluation of actions
- *Farm Africa-SOS Sahel and Environment and Coffee Forest Forum (ECFF)* : Capacity building; knowledge transfer and communication; capturing lessons and dissemination; networking
- *Ministry of Water and Energy and Bureau of Water and Energy*: alternative and efficient energy technologies
- *Ministry and Bureau of Health* – Family planning
- *The Regional Judiciary and the Police*- law enforcement

# Expected lifetime of the proposed ER Program

- ER program is planned to run from 2015-35 (20 years)
  - Important milestone 2030 (CRGE)
- Three key phases of the Program
  - **Preparation phase:** until 2015
    - Analytical studies, REL, MRV, consultations, safeguards, etc.
  - **Investment Phase:** 2014-2016
    - BioCarbon Fund and development partners to cover upfront financing needs through **proxy** performance-based payments (not based on ERs)
  - **Implementation Phase:** 2017-2035
    - Results-based payments for Verified ERs.
    - FCPF Carbon Fund as a potential 'buyer'
- Financial structure still under consideration

# Causes of deforestation and strategic options

- Deforestation: Expansion of subsistence agriculture in Oromia State (in and around the concession areas)
- Strategic options for reducing deforestation
  - Sustainable Forest Management in PFM model - ongoing
  - Agricultural intensification using improved agricultural technologies to reduce deforestation
  - Reducing post harvest losses to reduce the demand for agricultural land
  - Improved livestock management for reducing forest degradation
  - Positive incentives- payment for PES
  - Restoration of degraded areas, tree-based agricultural systems (agroforestry)
  - Implementing land use planning
  - Promotion of alternative livelihoods





# Causes of forest degradation and strategic options

- Forest degradation is mainly caused by *unsustainable fuel wood consumption*
  - Also, conversion of forest to commercial crops such as coffee (by small holders)
  - Illegal tree harvesting and grazing
  - Indirect causes are poor law enforcement and population growth, migration, and road infrastructure
- Strategic Options
  - Efficient stoves and sustainable and alternative energy (solar cook stoves and lamps). Distribution and use of stoves with 45% efficiency
  - Promotion of alternative energy sources
  - Sustainable firewood supply from compensatory woodlots, buffer plantations
  - Family planning
  - Judiciary and police

## Expected social and environmental benefits

- Communities directly benefit from the REDD+ program payments (poverty alleviation or livelihood improvement)
- Conservation of biodiversity including the last wild populations of *Coffea arabica*
- Water for hydropower electric generation, irrigation and consumption
- Forest condition, water quality and local climate regulation maintained or improved

# Bale Mountains - Oromia Forest



# Biodiversity Conservation-Mountain Nyala



# Safeguards/ESMF

- Strategic Environmental and Social Assessment (SESA) of the national REDD+ process started
  - A SESA workshop was held to sensitize stakeholders on issues in the REDD+ implementation and the purpose of conducting SESA studies
  - ToR for SESA prepared
  - SESA task force being established
- SESA will use Oromia as a focus region for some of the consultations and analysis

# Consultation with stakeholders

- OFWE's Senior Management and Experts (March 8) have been consulted with the ER P idea, provided feedback and endorsed the idea
  - Staff from OFWE involved in the development of the ER P concept
- To be presented to the National REDD+ Steering Committee
- During Preparation, to be consulted with a wider group of stakeholders (communities, PFM participants, civil society orgs, and other relevant public sector entities)
  - Communities represented by Forest Users Union!

# Benefit Sharing

- Experience exists in OFWE- benefits linked to responsibility
  - Benefit sharing from joint forest management-the largest proportion of the revenue generated goes to communities
  - Timber. Hunting trophy, NTFP, PES, REDD Fund: 50-70% to communities
  - The benefit shared depends on the weight of the task, roles and responsibilities of defined in the forest management agreement
- REDD+ payments may involve other stakeholders (e.g., MoA)
- Big issue to be addressed in the readiness phase



## Estimated RELs

- Based on the preliminary analysis, emissions from natural forests in Oromo Regional State is ***17 million tons of CO<sub>2</sub>e only from high forests***
  - Carbon density: 120 tons of C per ha.
  - From NCRC and ECFF
- Deforestation rate: ECFF, NCRC and several other sources

# Estimated REL

- Preliminary estimates on REL is made based on the following data and assumptions:
  - Historical approach to be taken
  - Average annual deforestation rate (2000-2010) of 4% and 120 tons of C/ha in the aboveground in southeastern Oromia
  - Average annual deforestation rate (2000-2010) of 1.2% in southwestern Oromia and 120 tons of C/ha in the aboveground
  - **REL (tons CO<sub>2</sub>/year): = Total forest area\* historical annual deforestation rate\* (ha)\* tCo<sub>2</sub> / ha**
  - Subject to refinement and update as the Readiness Process and other initiatives (NFI) generates data
  - REL will be developed for the whole accounting area, ie, the Oromia Region

# Leakage Management

- PFM – tested approach; know how to apply; being scaled up to a larger area
- Forest user cooperatives, and communities in neighborhoods under ER program
- REDD+ pilots in neighboring forests in other regional states to manage inter-state leakage.
- Overall national REDD+ implementation envisaged in 3-4 years.

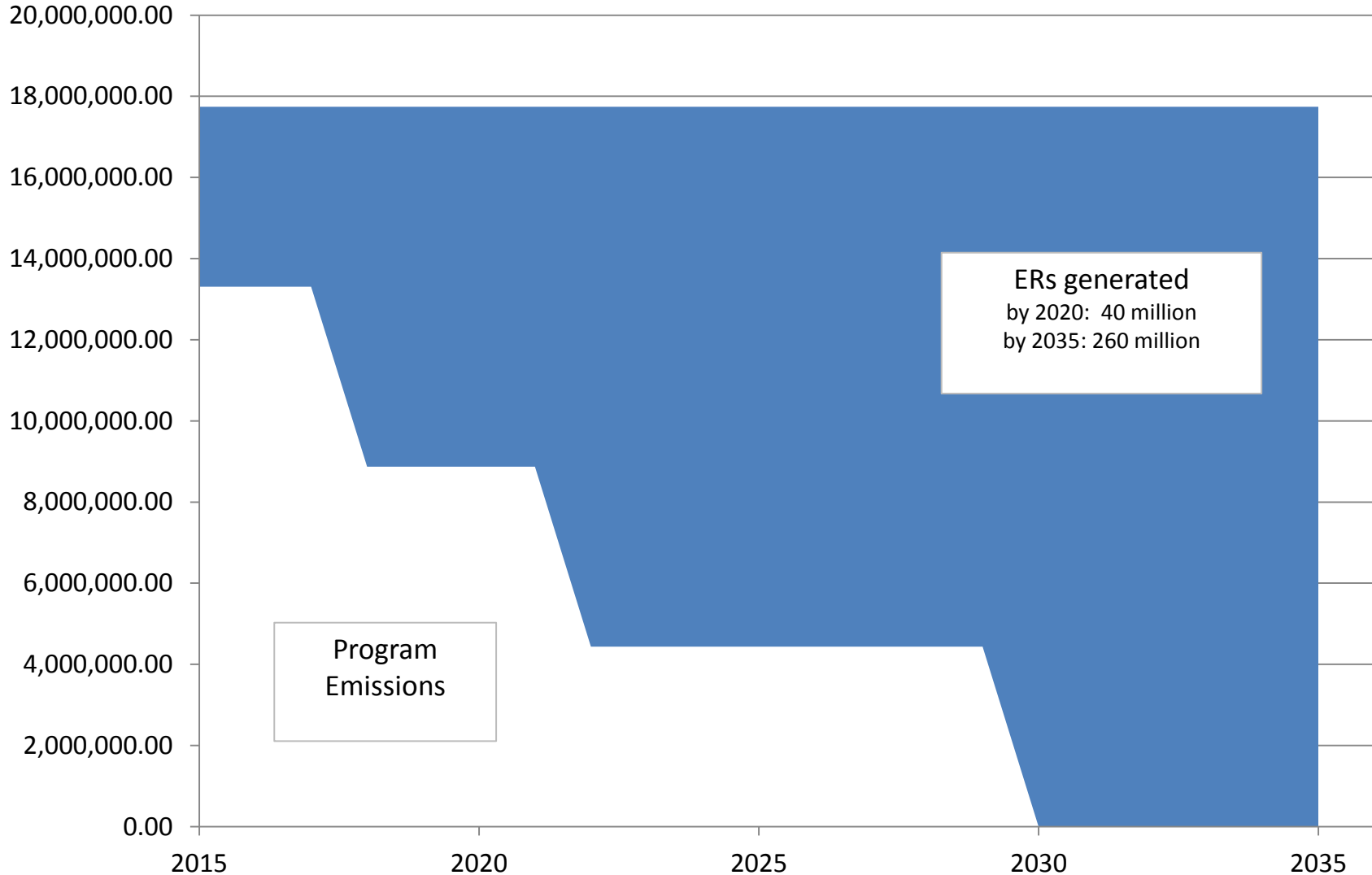
# Estimated ERs from the ER P

Date	REL	Prog. Emissions	Expected ERs
2015	17,742,412.80	13306809.6	4,435,603.20
2016	17,742,412.80	13306809.6	4,435,603.20
2017	17,742,412.80	13306809.6	4,435,603.20
2018	17,742,412.80	8871206.4	8,871,206.40
2019	17,742,412.80	8871206.4	8,871,206.40
2020	17,742,412.80	8871206.4	8,871,206.40
2021	17,742,412.80	8871206.4	8,871,206.40
2022	17,742,412.80	4435603.2	13,306,809.60
2023	17,742,412.80	4435603.2	13,306,809.60
2024	17,742,412.80	4435603.2	13,306,809.60
2025	17,742,412.80	4435603.2	13,306,809.60
2026	17,742,412.80	4435603.2	13,306,809.60
2027	17,742,412.80	4435603.2	13,306,809.60
2028	17,742,412.80	4435603.2	13,306,809.60
2029	17,742,412.80	4435603.2	13,306,809.60
2030	17,742,412.80	0	17,742,412.80
2031	17,742,412.80	0	17,742,412.80
2032	17,742,412.80	0	17,742,412.80
2033	17,742,412.80	0	17,742,412.80
2034	17,742,412.80	0	17,742,412.80
2035	17,742,412.80	0	17,742,412.80
			<b>261,700,588.80</b>

**ERs generated**  
 by 2020: 40 million  
 by 2035: 260 million

# Expected ERs from the ER

CO2 Emissions / year



# MRV system for the Program

- The monitoring of emission reductions attributable to the ER program will be part of the REDD+ MRV Strategy.
- A national workshop on REDD+ MRV roadmap was held supported by the Norwegian government
- Road map for the REL/FRL and REDD+ MRV developed

Thank You for your Attention!

