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MAPT and MRV Capacity Building in Ethiopia

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COP 18 – Doha

December 2, 2012

Assessment of Current Status

- A total of 16 professionals were interviewed,
- An average of ten interviews per section.
- Agencies invited to participate
  - Environmental Protection Authority, National Meteorological Agency of Ethiopia, Ministry of Agriculture, Ministry of Mines, Ministry of Urban Development and Construction, Ministry of Water and Energy, Ministry of Transportation, Central Statistical Agency, Ministry of Trade and Industry, Ethiopian Electric Power Corporation, Forest Research Center, Forum for Environment, Institute for Biodiversity Conservation and World Vision Ethiopia.
  - Ministry of Water and Energy, Forum for Environment, Institute for Biodiversity, Conservation and Research and World Vision Ethiopia decline to participate.
  - Former employee of Ministry of Water and Energy participated in the study.
- Interviews were conducted between Sept 26th and October 10th, 2011.

Summary of Key challenges in GHG monitoring

- Policy
  - There is currently no clear guideline on who is responsible to collect and disseminate GHG emission data at a national, sub-national and sectoral level.
    - EPA has a mandate for National Communication Plan
  - Industries, sectors and government agencies don't have any mandate to collect data or have ownership of data.
  - Lack of institutional structure that can verify GHG data collected.

Key Climate Change Policies

- **Institutional Context**
  - Over 15 line ministries and agencies are working on activities related to coping with drought and climate change in Ethiopia. Most Important are
    - The Environmental Protection Authority (EPA) is responsible for environmental management and control.
    - The National Meteorological Agency (NMA) is responsible for activities related to weather prediction and climate forecast.
    - The Ministry of Agriculture is the central government agency responsible for development of rural communities.
    - The Ministry of Water and Energy is responsible for development and expansion of energy and water resources development and utilization based on watershed management principles.
    - The Ethiopian Agricultural Research Institute is responsible to determine and recommend those technologies that could promote agricultural productivity. It is a very important organization researching drylands agriculture in an attempt to identify crops resilient to drought and climate change.
    - The Ministry of Finance and Economic Development MoFED, is responsible for implementation of macro-level policies and strategies. It currently hosts the financing facility for climate initives.

Summary of Key challenges in GHG monitoring

- Resources
  - Absence of locally applicable data collection tool and methodology.
  - Lack of mechanism to store data and properly report it.
  - Institutions responsible for monitoring GHG emission don't have the necessary financial resources.

Summary of Key challenges in GHG monitoring

- Personnel
  - Lack of skilled manpower.
  - Absence of training and skill development program.
  - Institutions responsible for monitoring GHG emission don't have one or more dedicated staff to perform the task.
  - Climate change experts in the sector who may be responsible for monitoring GHG emission have too many tasks on hand.

National GHG Inventory Systems

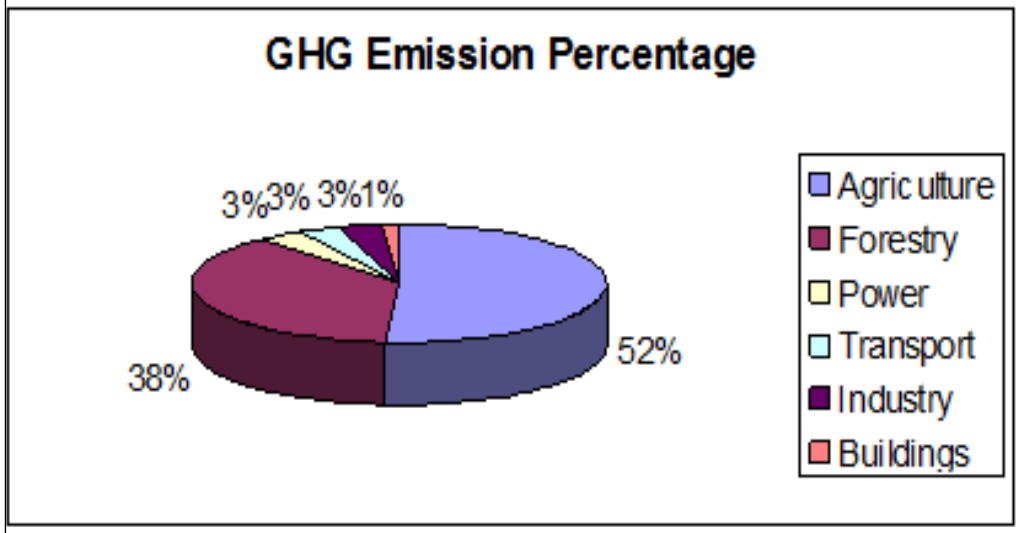
- Ethiopia a party to the United Nations Framework Convention on Climate Change (UNFCCC).
  - Has a commitment to develop and update periodically national inventories for anthropogenic GHG emissions by sources.
- In June 2001 Ethiopia published its first National Communication to the UNFCCC.
  - Prepared by National Meteorological Services Agency and Ministry of Water Resources.
- Second National Communication report will shortly starts.

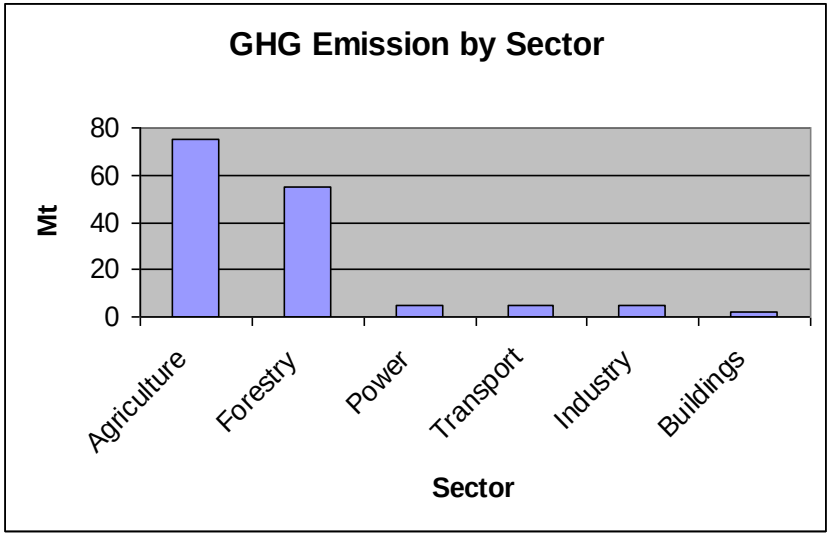
Key Climate Change Policies

- **Climate Resilient Green Economy (CRGE) Strategy**
  - Vision is to make Ethiopia a carbon neutral, middle income countries by the year 2025.
  - It encompasses both adaptation and mitigation
  - Within the strategic document,7 sectors were analyzed that were identified to have the highest potential for mitigation.

IV. Climate Change in Ethiopia

- GHG Emission in Ethiopia
  - Per capita emission is less than 2t CO2e.
  - Total emission in 2010 was estimated to be around 150Mt which is about .03% of total world GHG emission.





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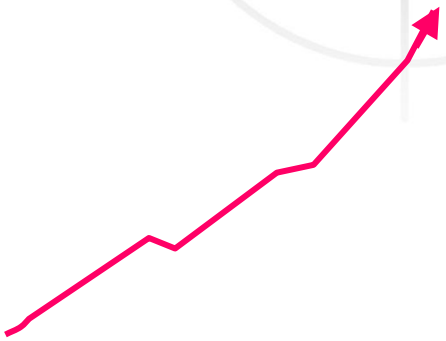
The green economy can significantly contribute to the goals of the GTP sectors

Goal of the sectors and implications

1. **Power** 
2. **Buildings/ Gr. Cities** 
3. **Forestry** 
4. **Soil** 
5. **Livestock** 
6. **Transport** 
7. **Industry** 

- Build generation capacity to satisfy growing demand
- Reach economic growth targets as planned in the GTP
- Economic growth of each sector will lead to higher emissions



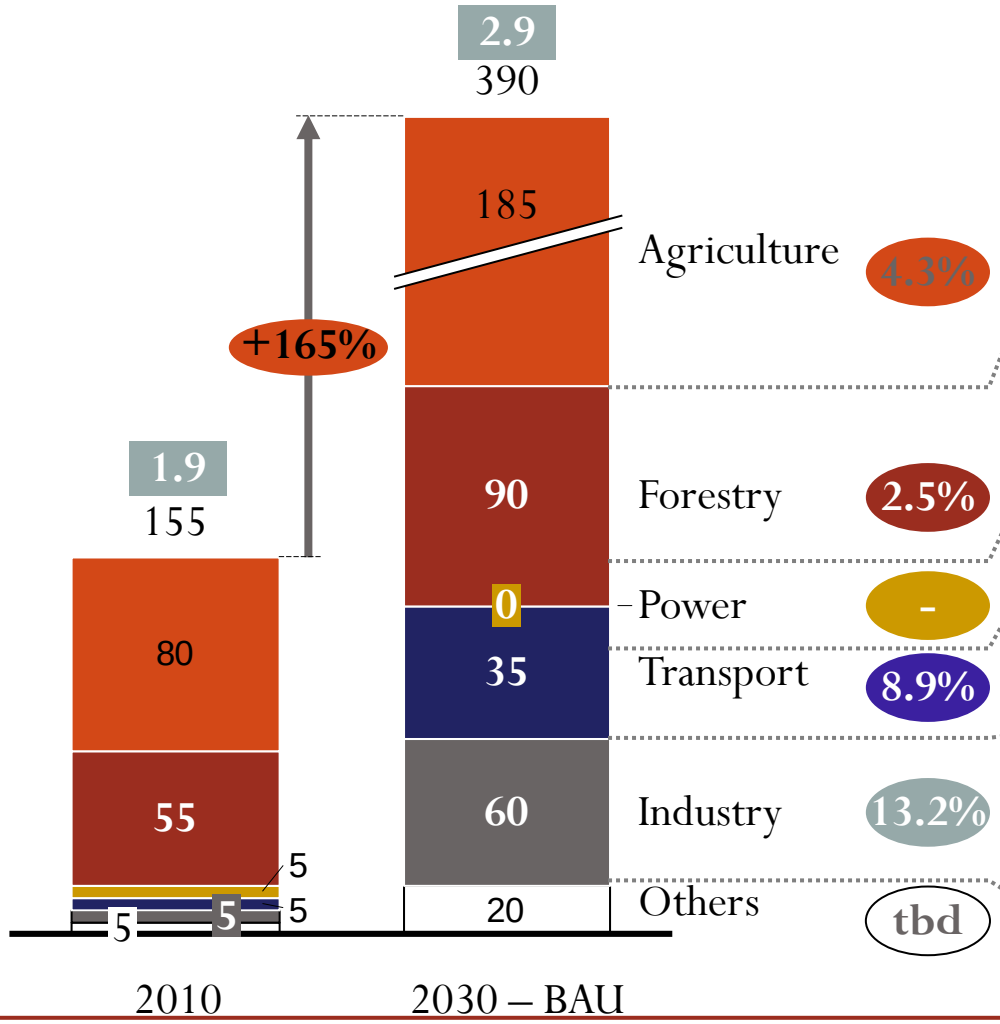
Contribution of CRGE

- **Enable** infrastructure development by developing strategy to **obtain financing**
- Develop green growth initiatives to **achieve GTP targets** while **reducing emissions**
- Provide essential analytics required to **secure carbon funding**
  - Estimate business-as-usual (BAU) emissions
  - Develop list of green growth interventions
  - Estimate abatement, growth contributions and feasibility of interventions
  - Develop implementation plans

today to 390 Mt by 2030

BAU emissions development

Mt CO_2e per year



CAGR[1]
Percent

4.3%
2.5%
-
8.9%
13.2%
tbd

t CO_2e/capita

Drivers and rationale

- Livestock: Increase in cattle population and other species (doubling from 2010-30)
- Soil: Increase in cultivated land (crops production) and synthetic fertilizer

- Average growth of cropland (estimated to reach 3.9% per year)
- Increase in populations leading to higher fuelwood consumption

- Switch to 100% clean/renewable electricity generation for on-grid

- Increase in passenger-km traveled projected based on elasticity to real GDP
- Increase in ton-km of cargo transported based on elasticity to real GDP

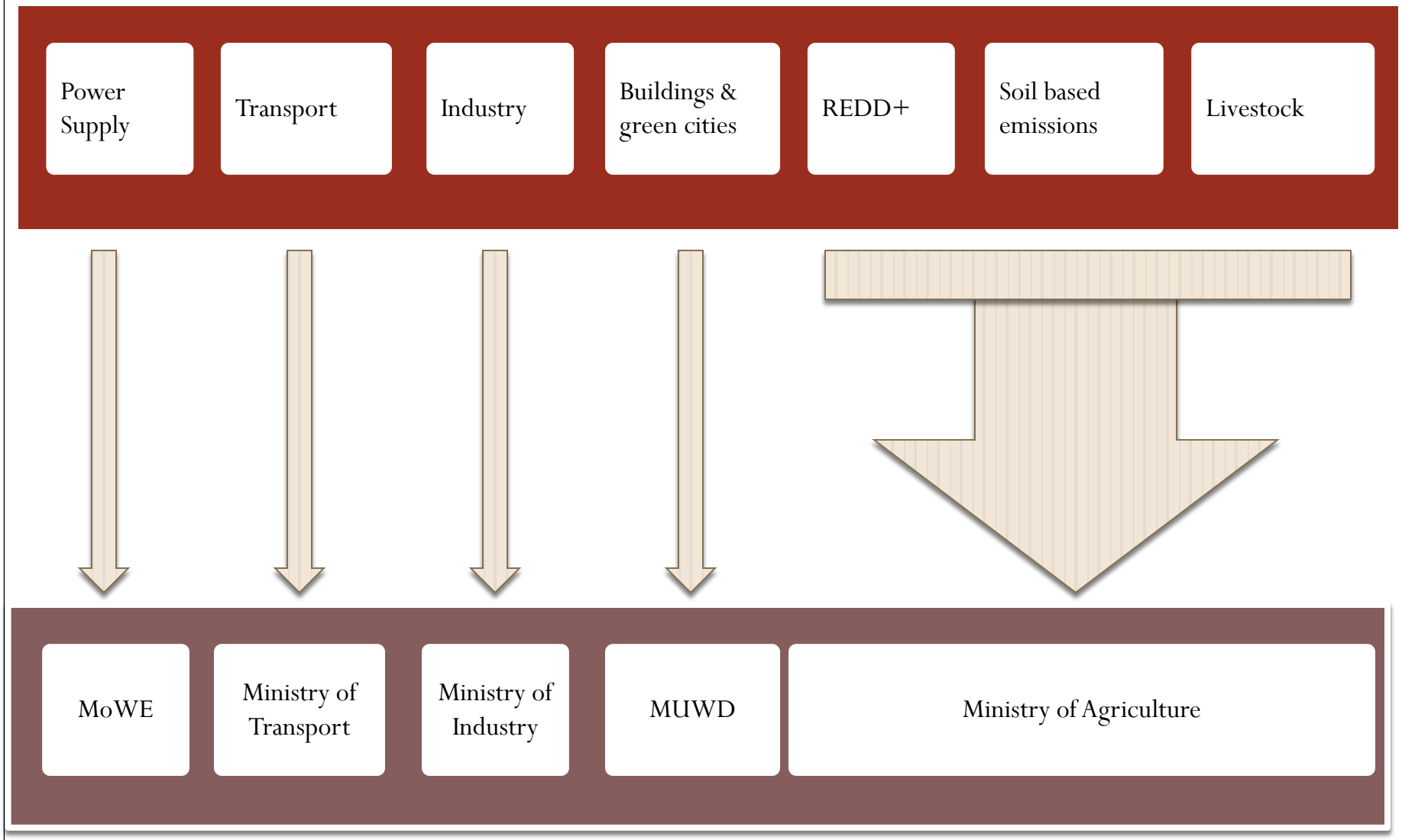
- Cement production (steep increase in GTP, thereafter approach to MIC-level)
- Establishment and scale-up of industries in textile, steel, fertilizer, mining and others

- tbd

1 Compound average growth rate

Source: STC analysis

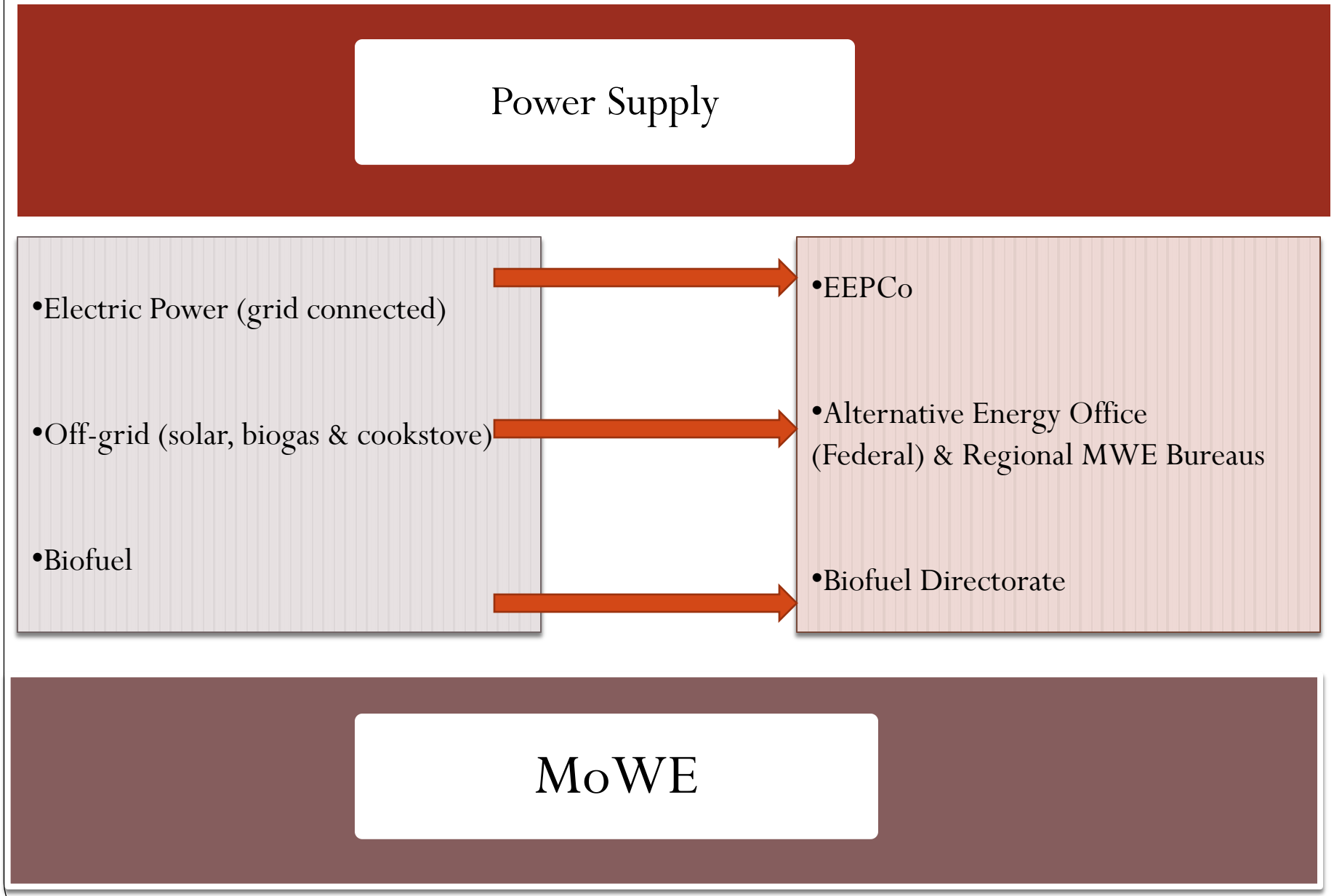
CRGE Sectors and lead ministries

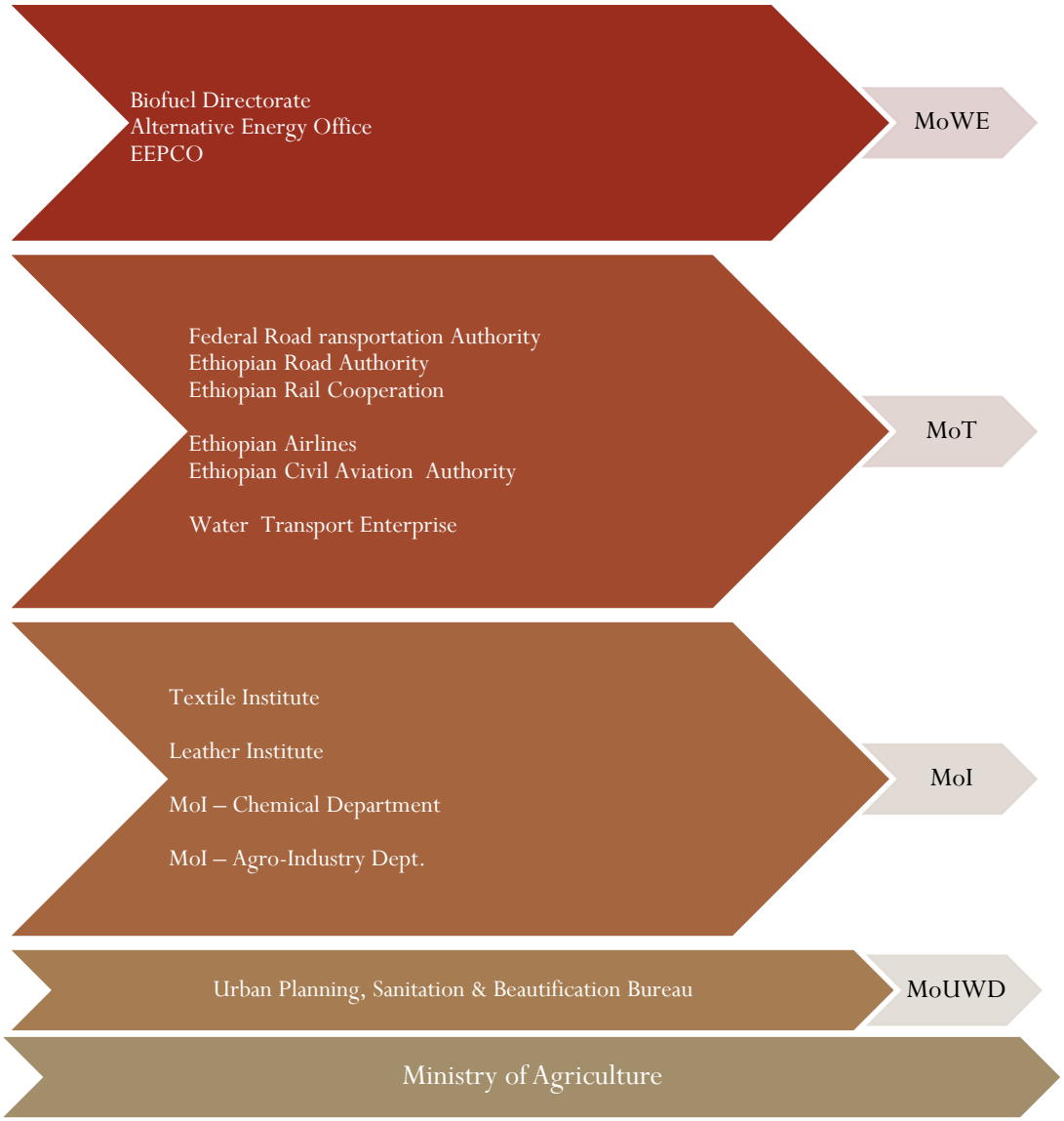


CRGE sectors and sub-sectors

Power Supply	Transport	Industry	Buildings & green cities	REDD+	Soil based emissions	Livestock
•Electric Power (grid connected) •Off-grid (solar, biogas & cookstove) •Biofuel	•Land •Air •Water	•Textile •Leather •Cement •Agro-industry	•Solid waste •Liquid waste •Off-grid energy			
MoWE	Ministry of Transport	Ministry of Industry	MUWD	Ministry of Agriculture		

II. CRGE


Power Supply
•Electric Power (grid connected)
•Off-grid (solar, biogas & cookstove)
•Biofuel
•EEPCo
•Alternative Energy Office (Federal) & Regional MWE Bureaus
•Biofuel Directorate
MoWE


Biofuel Directorate
Alternative Energy Office
EEPCO
MoWE
Federal Road ransportation Authority
Ethiopian Road Authority
Ethiopian Rail Cooperation
Ethiopian Airlines
Ethiopian Civil Aviation Authority
Water Transport Enterprise
MoT
Textile Institute
Leather Institute
MoI – Chemical Department
MoI – Agro-Industry Dept.
MoI
Urban Planning, Sanitation & Beautification Bureau
MoUWD
Ministry of Agriculture

VI. Capacity Assessment Findings

	Yes	No
I. Institutional		
a. Mandate	5	7
b. a separate unit for monitoring & evaluation	8	4
c. a separate unit for MRV*	1	11
d. established written standards	4	8
II. Technical		
a. necessary equipments	0	12
b. IT facility	1	11

*No system or budget indicated

Capacity Assessment Findings

	Yes	No
I. Finance		
a. separate budget for M&E	5	7
b. mandate to submit budget	4	8
II. Human Resource (Monitoring & Evaluation)		
a. number of people working		
None	3	
1-3	5	
More than 3	4	
b. availability of training	6	6