



Ministry of State for Environmental Affairs (MSEA)
Egyptian Environmental Affairs Agency (EEAA)
Climate Change Central Department (CCCD)



Nationally Appropriate Mitigation Actions (NAMAs) in Egypt

Samir TANTAWI, M.Sc.
Mitigation Manager

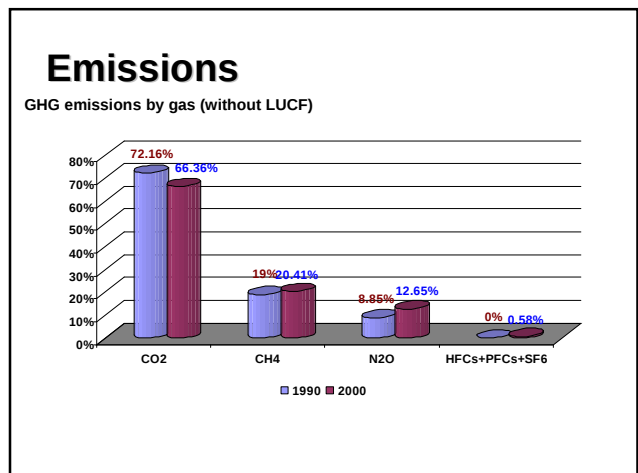
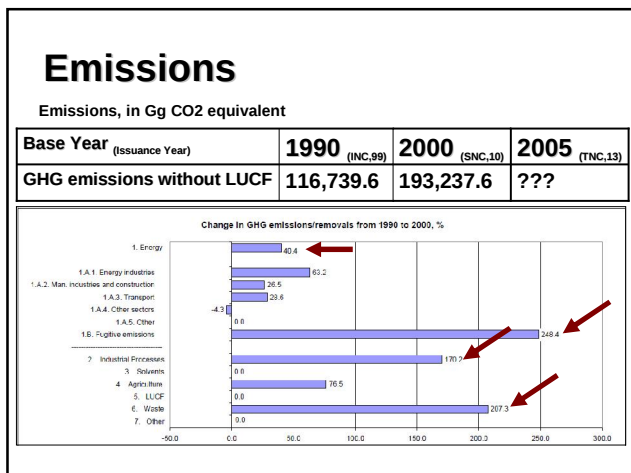
NAMA developments in the MENA Region
ClimateNet Side Event
19.May.2012, Bonn - Germany



Background

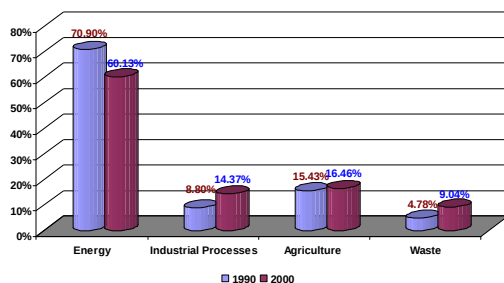
- Population: 80,801,170 (2011 est.)
- GDP₍₂₀₁₀₎ :
 - \$218.89 Billion
- GDP by Sector_(2010 est.)
 - agriculture: 13.5%;
 - industry: 37.9%;
 - services: 48.6%



Emissions

GHG emissions by sector (without LUCF)



Durban outcomes (Mitigation by NAI)

- **Ambition (NAMAs):**
 - invites developing countries, to submit, subject to availability, more information relating to NAMAs
 - requests SBSTA to develop general guidelines for domestic MRV of domestically-supported NAMAs
- **biennial update reports:**
 - adopts the guidelines (for NAI), FCCC/AWGLCA/2011/inf.1 (annex III)
 - respect the diversity of mitigation actions and provide flexibility for NAI
 - NAI (capabilities + level of support) should submit their first biennial update report by **December 2014/to be funded by GEF**

Durban outcomes (Mitigation by NAI), Cont.

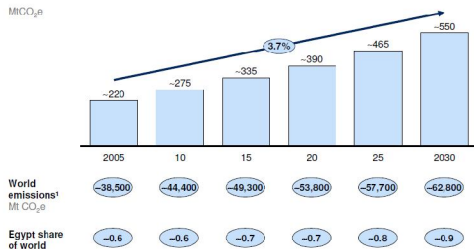
- **Registry:**
 - dynamic, web-based platform, prototype by SB36
 - Invite NAI to submit, as appropriate, to the Secretariat the info on individual NAMAs seeking int'l support
 - Invite financial organization to submit info on available finance/CB/TT

Cancun Decision 1/CP.16

- **Finance:**
 - **Para 97:** scaled up, **new and additional, predictable and adequate funding** shall be provided to developing country **particularly vulnerable**
 - **Para 98:** developed countries commit to mobilize USD 100 billion per year by 2020 to address the needs of developing countries
 - **Para 101:** Take note of the relevant **reports on financing needs** (adaptation and mitigation)

Emission trend

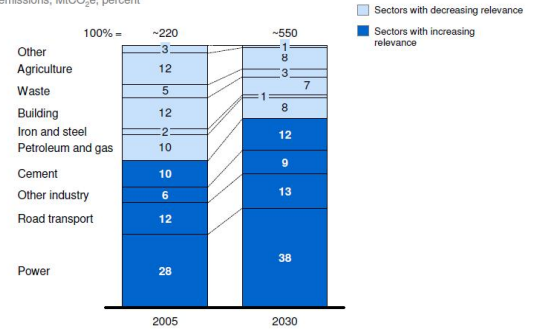
Overall Egypt's 2005 BAU emissions are in the range of 220 Mt and are expected to grow to ~550 Mt by 2030, equal to ~0.9% of world emissions



SOURCE: CAIT database on Egypt; POLES projections; CIDIAC; Enerdata; IEA Egypt profile; Global Insight; McKinsey Global GHG Abatement Cost Curve V2.0; Loca experts interviews; team analysis

Power, cement, transport and other industry will increase their share of total emissions

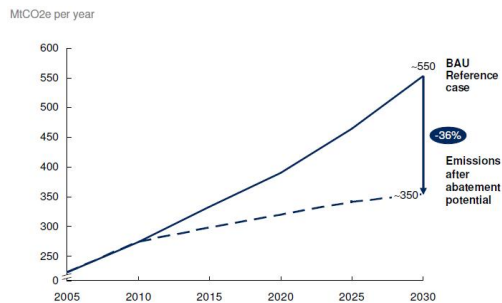
Direct emissions, MtCO₂e, percent



SOURCE: CAIT database on Egypt; POLES projections; CIDIAC; Enerdata; IEA Egypt profile; Global Insight; McKinsey Global GHG Abatement Cost Curve V2.0; Loca experts interviews; team analysis

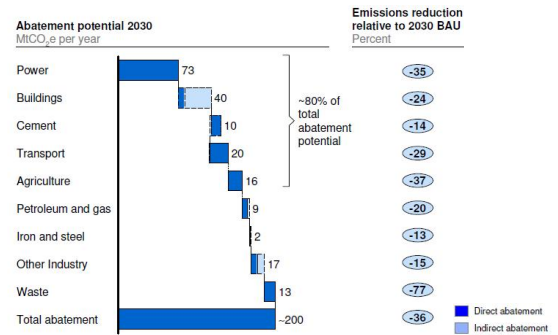
Potential abatement

Overall abatement potential is in the range of ~200 Mt CO₂e, equivalent to ~36% of BAU at 2030

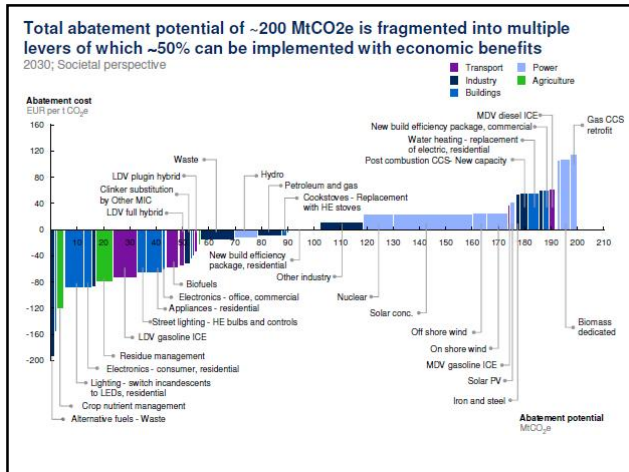


SOURCE: CAIT database on Egypt; POLES projections; CIDIAC; Enerdata; IEA Egypt profile; Global Insight; McKinsey Global GHG Abatement Cost Curve V2.0; Loca experts interviews; team analysis

Most potential abatement comes from key sectors which account for ~80% of the total abatement



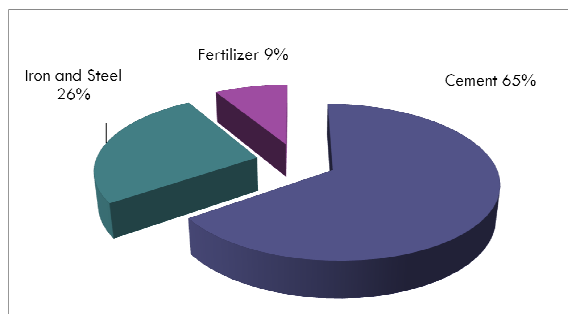
SOURCE: Global GHG Abatement Cost Curve v2.0



Power Sector

- Overall abatement potential is in the range of ~116 Mt CO₂e, equivalent to ~56% of total power BAU emissions in 2030
- ~37% of the overall abatement potential (~43 Mt CO₂e) is driven by reduction of electricity demand in consuming sectors (mainly from building sector)
- Solar, Wind and Hydro, with a total abatement potential of ~54 Mt CO₂e represent the most relevant levers
- Total investment required through 2011-2030 to capture the overall potential is in the range of EUR ~22 billion

Emissions by Sector (t CO₂/yr)



Potential for Emissions Reduction

Industry	Current Emissions (Mt CO ₂ /yr)	Specific Emissions (t CO ₂ /t product)	Potential Decrease in Emissions (t CO ₂ /t product)	Percent Reduction (%)	Reduction (Mt CO ₂ /yr)
Cement	36.37	0.78	0.20	26%	9.30
Iron and Steel	14.57	1.29	0.30	23%	3.40
Fertilizer (Ammonia)	4.80	1.05	0.32	30%	1.44

Transport Sector

	Vehicles	railway locomotives	CO ₂ Emissions*
1990	1,025,060	774	21.368
2000	2,292,576	870	27.21

Source: SNC 2010

* Using tier 1

Transport Sector- BAU



28 Mt CO₂e (2005)
~12% of total Egypt emissions

72 Mt CO₂e (2030)
~13% of total emissions



Light Duty Vehicles (LDV) ~44%



Medium Duty Vehicles (MDV) ~53%
<16 tons



Heavy Duty Vehicles (HDV) ~3%
>16 tons

Transportation Sector- Abatement Potential (2030)

~21 Mt CO₂e, (~29% of BAU)

Key abatement levers



Light Duty Vehicles (LDV) fuel efficiency technology ~13 Mt CO₂e



Biofuel usage ~5 Mt CO₂e

Transportation Sector- Strategic

- Design national policies for SD transport (expanding/enhancing)
- Design transport master plans for each mode of transport
- Design and implements measures for
 - commercialization of services into the overall infrastructure network;
 - rehabilitation of road network;
- Design the legal and institutional framework for implementation of the policies and measures
- Increase transport safety measures and levels
- Others...

National Arrangements

- National Team
 - Ministry of Environment *Recommended to be added;*
 - Ministry of Petroleum
 - Ministry of Transport
 - Ministry of Energy
 - Ministry of industry
 - Ministry of Agriculture
 - Ministry of Housing
- First meeting (22.Aug.2011)

-Ministry of Foreign Affairs
-Ministry of Planning
-Ministry of Interior Affairs
-Others...

National Arrangements, *cont.*

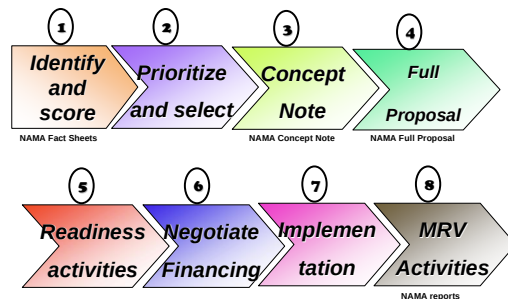
- Phase I
 - Transport sector
 - Housing sector
- Phase II
 - Energy sector (including petroleum)
 - Industry sector
- Phase III
 - Agriculture sector
 - Waste sector

National Arrangements, *cont.*

- Phase I
 - NAMAS (Transport and Industry)
 - LEDS Framework
- Phase II
 - NIS
 - Domestic MRV Criteria

National Expert Meeting on 29.Dec.2011

Main Steps in the Development of a NAMA and Supporting Documents



Challenges

1. Volatility of Carbon Markets
2. Future of CDM & Carbon Markets
3. Fund (GCF, Long Term Finance, ..etc)
4. Capacities (institutional, individual)
5. Technology Transfer
6. MRV (Domestic Criteria)
7. LEDS (sector specific)
8. NIS
9. P-P-P

Preliminary list of NAMAs

#	Project	Est. red. By 2020 Mt CO2e
1	Greater Cairo Ring Road Afforestation Project	0.8
2	Scrapping and Replacement Program of Two-Stroke Motor Cycle in Egypt	0.12
3	Line 3 Greater Cairo Metro Network Phase 1 & 2 Project	0.34
4	Fuel Switching for Industrial Processes in Delta Steel Co.	0.09
5	Fuel Switching from Light Oil and Cookoven Gas to Natural Gas in El-Nasr Forging Industry Co.	0.02
6	Fuel Switching from Mazout to Natural Gas in General Co. for Paper Industry (RAKTA)	0.15
7	Fuel Switching from Heavy oil to Natural Gas in El-Nasr Wool & Selected Textiles Co. – STIA	0.014

Preliminary list of NAMAs, cont.

#	Project	Est. red. By 2020 Mt CO2e
8	Fuel Switching from Solar to Natural Gas at the Egyptian Plastic and Electrical Industries (E.P.E.I) Co. Project	0.08
9	Egypt Household CFL Project	1.8
10	Energy Efficiency in Water Pumping Systems Project at Greater Cairo Drinking Water Company	0.56
11	Natural Gas Leaks Reduction on Gas Distribution Networks of the Ministry of Petroleum of the Arab Republic of Egypt submitted by Oneliria Trading LTD. Co.	2.4
12	Street Lighting Project – North Cairo Electricity Distribution Company	0.6

Thank you

Samir TANTAWI

Mitigation Manager
Egyptian Environmental Affairs Agency (EEAA)
Ministry of State for Environmental Affairs (MSEA)
samir.tantawi@eeaa.gov.eg
www.eeaa.gov.eg