



Partnership on Transparency
in the Paris Agreement



forestry, fisheries
& the environment

Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

Exercises using GACMO Day 2

Training workshop for Anglophone African countries:
Deep dive into tracking NDC mitigation commitments
under the Paris Agreement

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copenhagen
climate centre

supported by UNOPS



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Exercise 1 Mitigation options

Total GHG mitigation in Mauritius		In 2030				
Type	Reduction option	US\$/tonCO ₂	Sub-type unit	Emission reduction t CO ₂ /unit	Investment Million US\$	Annual costs MUS\$/year
Agriculture	Rice crop CH4 reduction	1.20	Rice crop CH4 red (1000 ha)	2.566	0.0	0.0
	Zero tillage	-334.37	1000 ha	86	0.0	0.0
	Cover crops	81.04	1000 ha	1.490	0.0	0.0
	Nitrification inhibitors (1000 ha)	67.69	1000 ha	790	0.0	0.0
	Covering slurry stores (1 slurry store)	937.83	1 slurry store	0.20	0.0	0.0
	Fat supplementation in ruminants diets (%DM fat added)	80.50	%DM fat added	3	0.0	0.0
	Tobacco curing	-20.80	100 t tobacco/yr	562	0.0	0.0
Biomass energy	Rice husk cogeneration plants	-16.23	1 MW cogeneration	12.285	0.0	0.0
	Biomass power from biomass residues	-107.51	1 MW CHP plant	4.000	0.0	0.0
	Bagasse power	-107.40	100 kt sugar cane/year	11.191	0.0	0.0
CCS	CCS plant	203.82	1 MW	5.412	0.0	0.0
Cement	Clinker replacement	3.94	1000 tonnes cement/day	168.144	0.0	0.0
Coal bed/mine methane	Coal mine methane	-14.25	10 Mm3 CMM/year	39.642	0.0	0.0
EE households	Efficient residential airconditioning	-105.16	1000 Airconditioners	1.285	0.0	0.0
	Efficient lighting with CFLs	-113.45	1000 Bulbs	63	0.0	0.0
	Efficient lighting with LEDs	-133.85	1000 Bulbs	128	0.0	0.0
	Efficient lighting with LEDs replacing CFL	-48.38	1000 Bulbs	15	0.0	0.0
	Efficient wood stoves	-933.25	1000 stoves	1.338	0.0	0.0
	Efficient charcoal stoves	-62.01	1000 stoves	293	0.0	0.0
	LPG stoves replacing wood stoves	158.90	1000 stoves	2.055	0.0	0.0
	Efficient electric stoves	-84.77	1000 stoves	256	0.0	0.0
	Induction based cooking	387.81	1000 stoves	19	0.0	0.0
	New passive home	-51.41	1000 new homes	14.005	0.0	0.0
EE industry	Efficient refrigerators	-8.90	1000 refrigerators	1.361.8	0.0	0.0
	Efficient electric motors	0.00	1 kW	1.1	0.0	0.0
	Energy efficiency in industry	0.94	10% red. of energy demand	34.859	0.0	0.0
EE own generation	Building materials	-18.90	1 million bricks	520	0.0	0.0
	Waste heat recovery at cement plant	-127.95	1 Cement plant	65.669	0.0	0.0
EE service	Waste heat recovery at steel plant	-137.16	1 Steel plant	60.480	0.0	0.0
	Efficient electric motors	-106.13	1 kW	1.1	0.0	0.0
	Efficient office lighting with CFLs	-102.73	1000 lights	65	0.0	0.0

There are 119 mitigation options available in GACMO.

Discuss which mitigation options are applicable for your country?

What are the sources of information for mitigation options?

Exercise 2 Grid Emission Factor for your country

Estimate (find in the literature) grid emission factor in tCO₂/MWh for your country

Insert resulting value in the Sheet “assumptions”

Exercise 3 Renewable energy capacity

Estimate (find in the NDC/BUR/NC) planned renewable energy capacity (e.g. wind, solar, hydro) in 2030 in your country.


Update electricity price in the sheet “Assumptions”.

Insert renewable capacity in 2030 in the Sheet “Main 30”.


What is the expected emissions reduction in 2030 (kt/y)?

Exercise 4 Efficient cookstoves

Estimate (find in the NDC/BUR/NC) planned efficient cookstoves installation in 2030 in your country



Update the price of fuelwood in US\$/kg in the relevant technology sheet



Insert number of efficient cookstoves in the Sheet "Main 30"



What is the expected emissions reduction in 2030 (kt/y)?

Exercise 5 Electric vehicles

Estimate (find in the NDC/BUR/NC) planned electric vehicles in 2030 in your country



Update the cost of EV in relevant technology sheet



Update annual distance in the relevant technology sheet



Insert EV in the Sheet "Main 30"



What is the expected emissions reduction in 2030 (kt/y)?

Exercise 6 Assumption

GDP Growth rate

What is the projected GDP growth rate until 2030, 2050?

Fill in the relevant cells in the “Growth” Sheet.