

Clean Development Mechanism and Malta.

Saviour Vassallo
MEPA, Designated National Authority
April 2007



- Q. climate change – why act?
- A. watch 'The Inconvenient Truth',
read the Stern Review and the IPCC report,
listen to Al Gore, Richard Attenborough ...,
and think about the future of our children.

- Q. what can we do?
- A. A LOT.

The international framework

UN Framework Convention on Climate Change

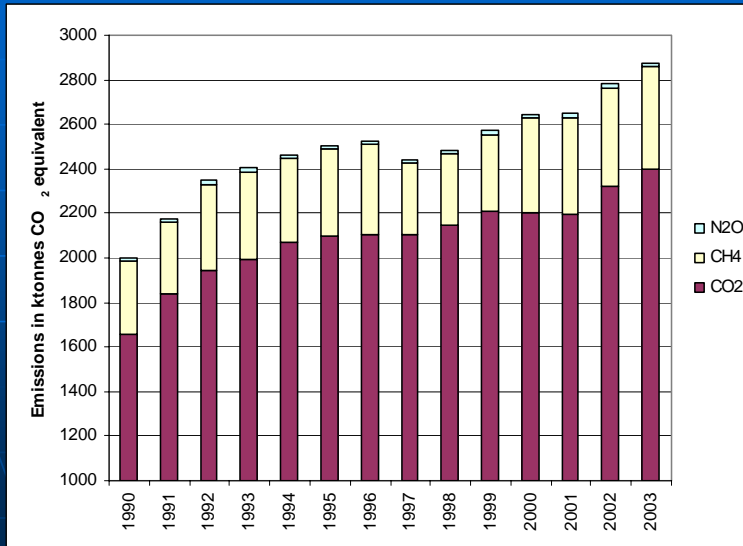
- The ultimate objective is to:
 - achieve, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.
- The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.

Kyoto Protocol

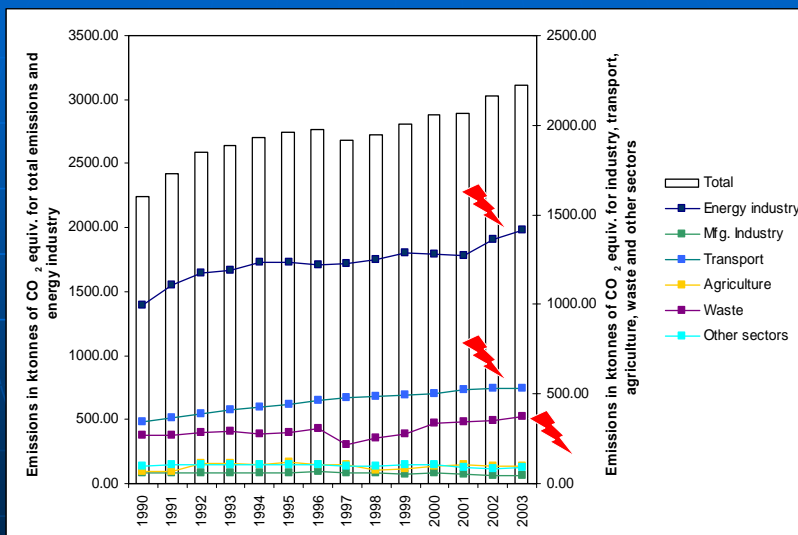
- Sets out binding quantitative emission reduction or limitation targets for Annex I Parties (developed countries and countries with economies in transition).
- Addresses the following greenhouse gases: *carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride* from *energy, industrial processes, solvent use, agriculture, waste* and *LULUCF*.
- Includes market based implementation mechanisms – ‘flexible’ mechanisms – that allow for a cost-effective achievement of the set targets.

What are WE emitting?

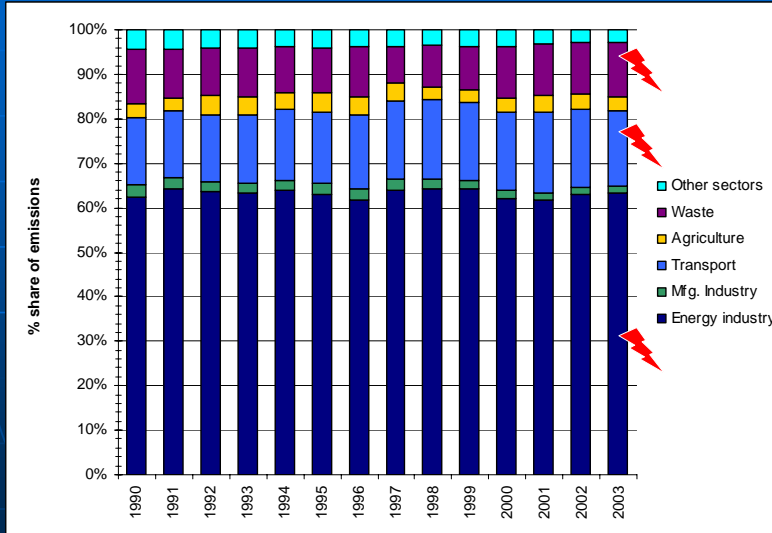
Malta's greenhouse gas emissions – trends by gases



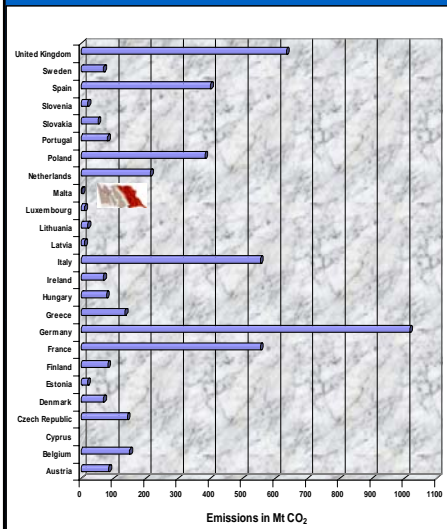
Malta's greenhouse gas emissions – trends by sectors



Malta's greenhouse gas emissions – trends by sectors



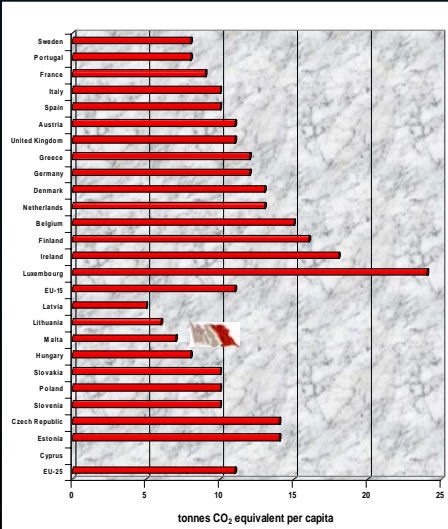
Malta's greenhouse gas emissions – how we compare (total emissions)



Total GHG Emissions for EU Member States in 2002 (Mt CO₂ equivalents)

Austria	84.6	Lithuania	20.2
Belgium	150.0	Luxembourg	10.8
Cyprus	---	Malta	2.8
Czech Republic	142.8	Netherlands	213.8
Denmark	68.5	Poland	382.8
Estonia	19.5	Portugal	81.6
Finland	82.0	Slovakia	51.9
France	553.9	Slovenia	20.4
Germany	1016.0	Spain	399.7
Greece	135.4	Sweden	69.6
Hungary	78.0	United Kingdom	634.8
Ireland	68.9		
Italy	553.8	Total EU-15	4123.3
Latvia	10.6	Total EU-25	4852.4

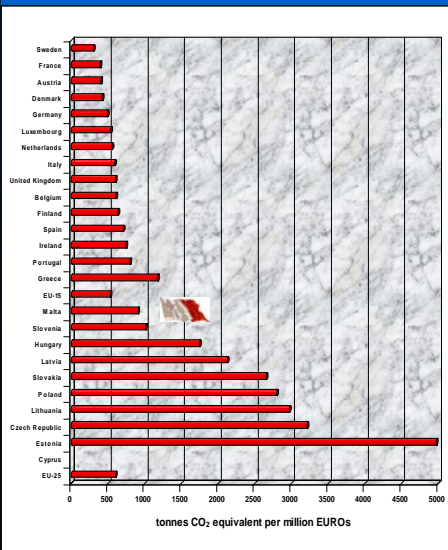
Malta's greenhouse gas emissions – how we compare (per capita emissions)



GHG Emissions per capita for EU Member States in 2002 (t CO2 equivalent per capita)

Sweden	8	Latvia	5
Portugal	8	Lithuania	6
France	9	Malta	7
Italy	10	Hungary	8
Spain	10	Slovakia	10
Austria	11	Poland	10
United Kingdom	11	Slovenia	10
Greece	12	Czech Republic	14
Germany	12	Estonia	14
Denmark	13	Cyprus	---
Netherlands	13		
Belgium	15		
Finland	16		
Ireland	18		
Luxembourg	24		
Avg. EU-15	11	Avg. EU-25	11

Malta's greenhouse gas emissions – how we compare (per GDP emissions)



GHG Emissions per GDP for EU Member States in 2002 (t CO2 equivalent per million Euros)

Sweden	303	Malta	910
France	395	Slovenia	1016
Austria	403	Hungary	1747
Denmark	424	Latvia	2127
Germany	489	Slovakia	2657
Luxembourg	539	Poland	2800
Netherlands	553	Lithuania	2971
Italy	588	Czech Republic	3213
United Kingdom	604	Estonia	4978
Belgium	611	Cyprus	---
Finland	635		
Spain	706		
Ireland	747		
Portugal	800		
Greece	1177		
Avg. EU-15	533	Avg. EU-25	605

Targets

Kyoto Protocol – targets for 2008-2012

- Annex I Countries: 5% reduction in emissions.
- EU 15: 8% reduction in emissions by EU-15 (burden-sharing agreement).
- EU 10: Individual reduction targets for EU-10 (6% or 8%).
- Malta and Cyprus: no quantified targets (non-Annex I status) (however various quantified emission targets under EU *acquis* – ex. emissions trading scheme).

Kyoto Protocol – targets for post-2012

- Annex I parties: quantified targets under discussion.
- EU: 20% independent reduction in emissions (new burden-sharing agreement).
- EU: 30% reduction for Annex I parties.
- Malta and Cyprus: quantified targets (?) (certainly under EU burden-sharing) (probable change in status under Protocol)

Energy policy – current

European Union current targets

- 12% of primary energy from renewable sources by 2010
- 22.1% of electricity from renewable sources by 2010
- 9% energy savings between 2008-2017
- 2% Biofuels share in road transport fuels by 2005, 5.75% by 2010

Malta current targets

- Renewables 5% revised to 1.37% (0.31% if no wind farm; 0.89% in Malta's NAP)
- Energy efficiency 9% between 2008-2017
- Biofuels 0.03% by 2005

Energy policy – future

European Union future targets

- Increase share of renewable energy sources to 20% (of gross inland consumption)
- Biofuels - minimum share of 10% of petrol & diesel consumption in transport
- Increase energy efficiency to 20% by 2020
- Expand scope of directive on energy performance in buildings

Malta future targets (?)

Electricity demand projection (NAP 2008-2012)

Table 4: Projected Net Electricity Demand (million MWh)

<i>GDP (million ML 2000)</i>	2008	2009	2010	2011	2012
Gross Domestic Product	1,815.5	1,857.3 +2.3%	1,900.0 +4.7%	1,943.7 +7.1%	1,988.4 +9.5%
<i>Electricity Demand (million MWh)</i>	2008	2009	2010	2011	2012
Electricity Demand, from Correlation	2.515	2.586	2.656	2.727	2.797
Additional Demand from New Projects	0.122	0.127	0.175	0.180	0.185
Total Gross Electricity Demand	2.637	2.712	2.832	2.907	2.983
Impact of Demand Reduction Measures	0.026	0.054	0.085	0.117	0.149
Contribution of Renewable Energy	0.021	0.021	0.025	0.025	0.050
Total Net Electricity Demand to be met by EneMalta	2.589	2.637 +1.8%	2.722 +5.1%	2.766 +6.8%	2.784 +7.5%

decoupling conventional electricity generation (and emissions) from economic development

ETS emissions projections (NAP 2008-2012)

- Malta proposing:
2.96 million tonnes per year
= 2.19 million for Enemalta + 0.77 million for NER
- Commission decision:
2.14 million tonnes per year
= 0.82 million tonnes per year less (OUCH!!)

So what can we do?

- A: A LOT ...

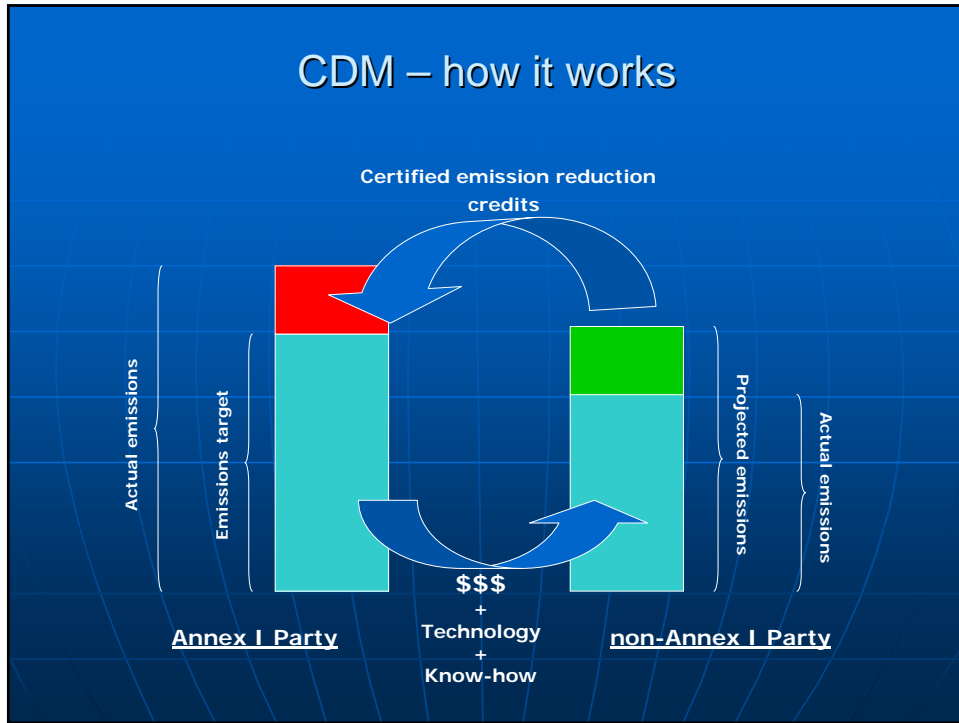
... And try CDM.

The CDM Mechanism

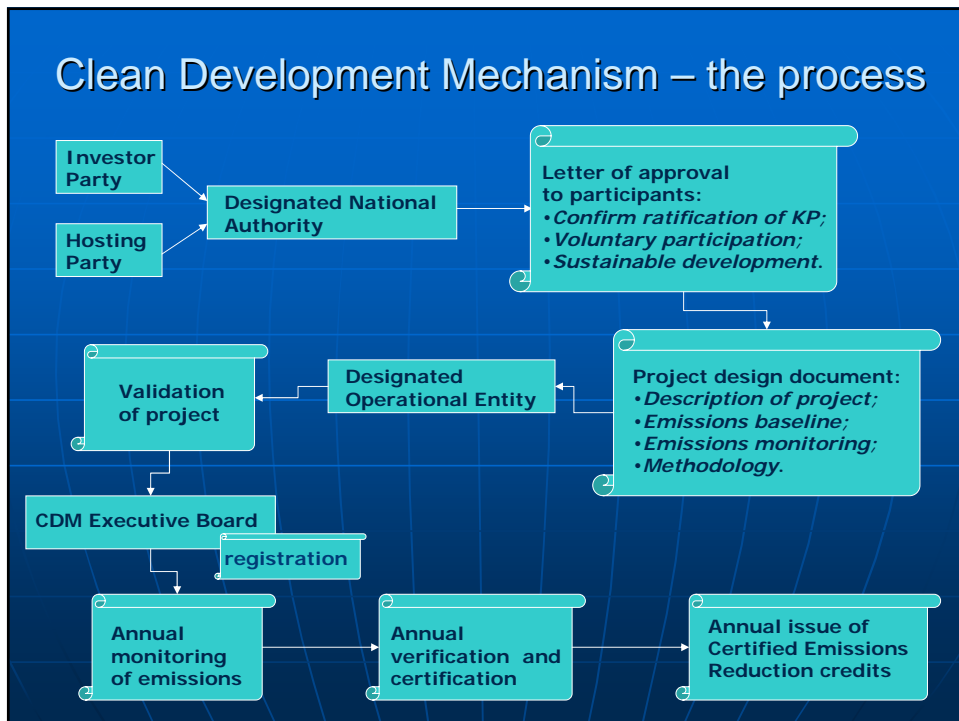
Kyoto Protocol – flexible mechanisms

- **International emissions trading:** tradeable emissions permits that can be traded between parties.
- **Joint implementation mechanism:** projects that result in real reductions in greenhouse gas emissions can be financed by Annex I parties in other Annex I parties.
- **Clean development mechanism:** projects that result in real reductions in greenhouse gas emissions can be financed by Annex I parties in non-Annex I (developing countries) parties. The certified emission reductions generated can be used by Annex I Parties to help meet their own emissions targets.
Has expanded to include unilateral projects.

CDM – how it works



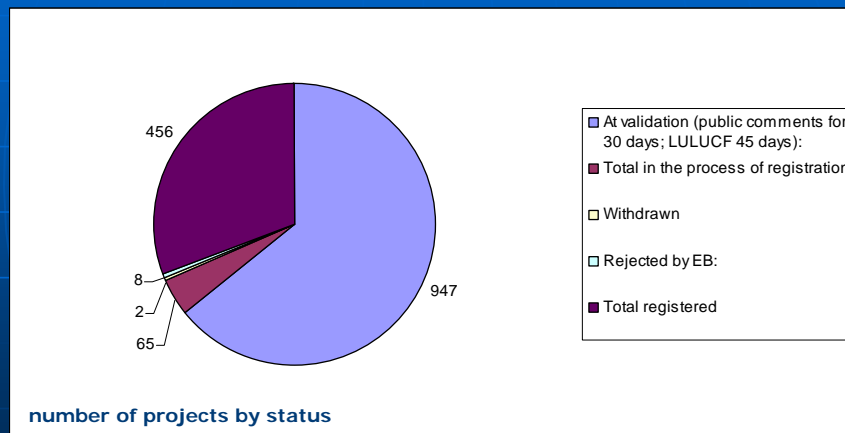
Clean Development Mechanism – the process



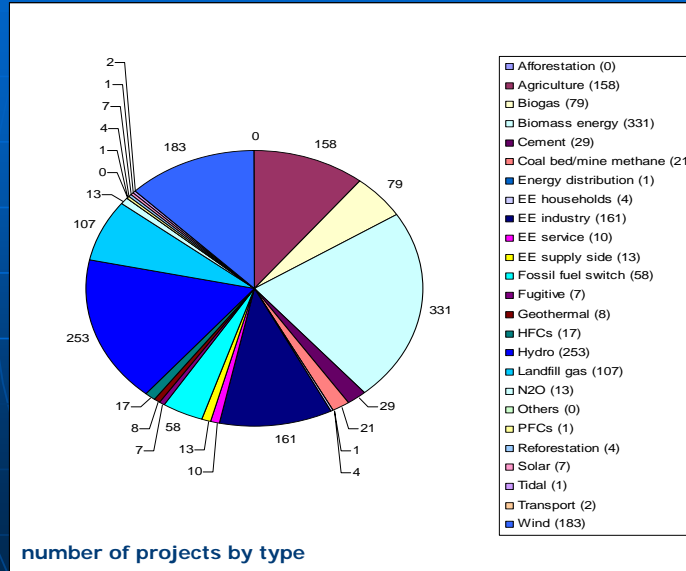
Clean Development Mechanism - principles

- Rules laid down in Marrakesh Accords.
- Projects must result in real, measurable, long-term climate benefits in the form of reductions (or removals) of emissions:
 - Baseline determination;
 - Monitoring of emissions (reductions);
 - Verification of reductions.
- Emission reductions or removals must be additional to any that would have occurred without the project:
 - Would the project have taken place in absence of CDM?

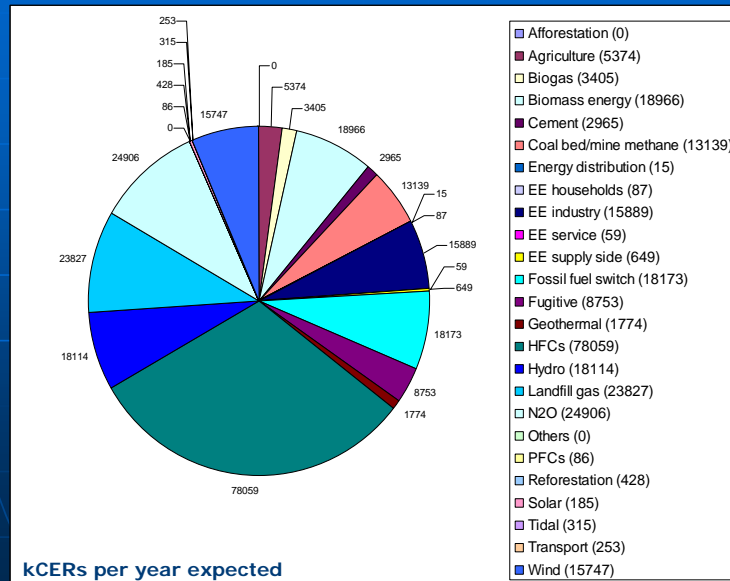
Clean Development Mechanism – state of play



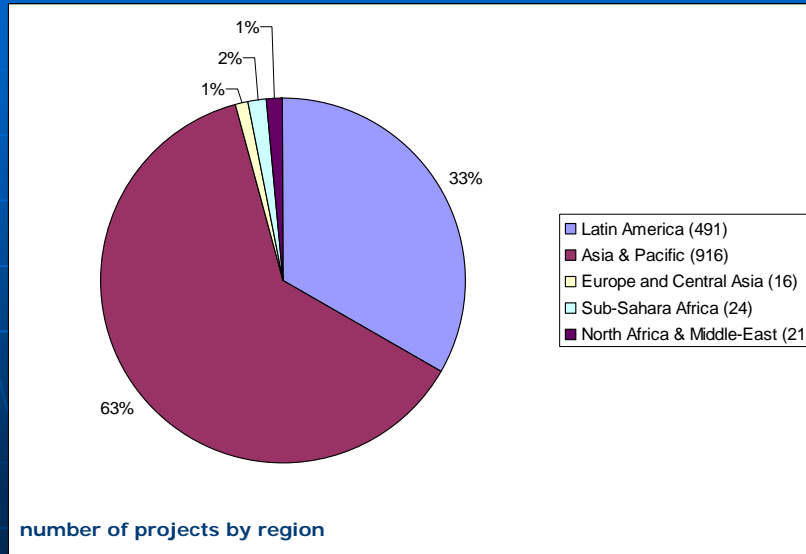
Clean Development Mechanism – state of play



Clean Development Mechanism – state of play



Clean Development Mechanism – state of play



Malta and CDM – considerations (1)

- Scale of projects: small-scale vs large-scale (investor interest? bundling as solution?).
- Additionality with respect to *acquis* obligations.
- 'conflict' with EU emissions trading scheme: credits from CDM projects in installations falling within EU ETS must not be double-counted (reductions cannot be 'traded' as EU ETS allowances and as CDM credits).
- Probable future change in status during lifetime of CDM projects – changing to JI?.

HMMMMM!!!...

Malta and CDM – considerations (2)

BUT...

- Finite EU funding
: CDM (and JI) as alternative source of financing?
- Emission targets – energy, transport, waste
- Energy targets – renewables, energy efficiency
: can CDM (and JI) help to reach?
- ETS installations that over-emit have to:
 - buy allowances, or
 - pay fines (EURO100 per tonne) + buy allowances (NAP decision - OUCH!!).
: can CDM (and JI) help our power plants?

Thank You.