



CDM in the Republic of Macedonia

CC and the Kyoto Protocol in the Republic of Macedonia

- In **1998** Republic of Macedonia became a party to the UN Convention on Climate Change
- In **January 2000**, the Climate Change Project Office was set up within the Ministry of Environment and Physical Planning
- In **March 2003**, Republic of Macedonia adopted the First National Communication on Climate Change. Preparation of the INCC in a final stage of adoption
- In **2004** Republic of Macedonia ratified the Kyoto Protocol to the UNFCCC and became party in **2005**
- In **2007** Macedonian Government adopted the National Strategy for Clean Development Mechanism, 2008-2012

CC and the Kyoto Protocol in the Republic of Macedonia

Level of activities

- Legislative
- Strategic
- Bi- and multi- lateral
- Technical (identification of possible CDM projects)

CDM: a definition

➤ Art 12 Kyoto Protocol:

“The purpose of the clean development mechanism shall be to assist Parties not included in Annex I in achieving sustainable development and in contributing to the emission reduction objective of the Convention, and to assist Parties included in Annex I in achieving compliance with their quantified emission limitation and reduction commitments”

CDM: eligibility requirements

➤ Annex I Parties:

- voluntary participation;
- establishment of the National CDM Authority;
- ratification of the Kyoto Protocol.

Additional requirements:

- establishment of the assigned amount of emissions under article 3 of the KP;
- have in place a national system for the estimation of greenhouse gases;
- have in place a national registry to record and track the creation and movement of credits and annually report such information to the secretariat;
- have in place an accounting system for the sale and purchase of emission reductions.

CDM: eligibility requirements

➤ Non Annex I Parties:

- voluntary participation;
- establishment of the National CDM authority;
- ratification of the Kyoto Protocol.

CDM: project requirements

➤ CDM project requirements:

- additionality;
- sustainable development;
- no diversion of official development assistance;
- special simplified procedures for small-scale CDM projects;
- no nuclear power facilities;
- sinks accepted under specific conditions.

CDM: participants

- 1) Project developers/operators
- 2) CDM investors/CER purchasers
- 3) Host governments and Designated National Authorities (DNAs)
- 4) Designated operational entities (DOEs)
- 5) The CDM Executive Board (EB)
- 6) COP/MOP
- 7) Other stakeholders

DNA under the MoEPP- Single Model Ministry

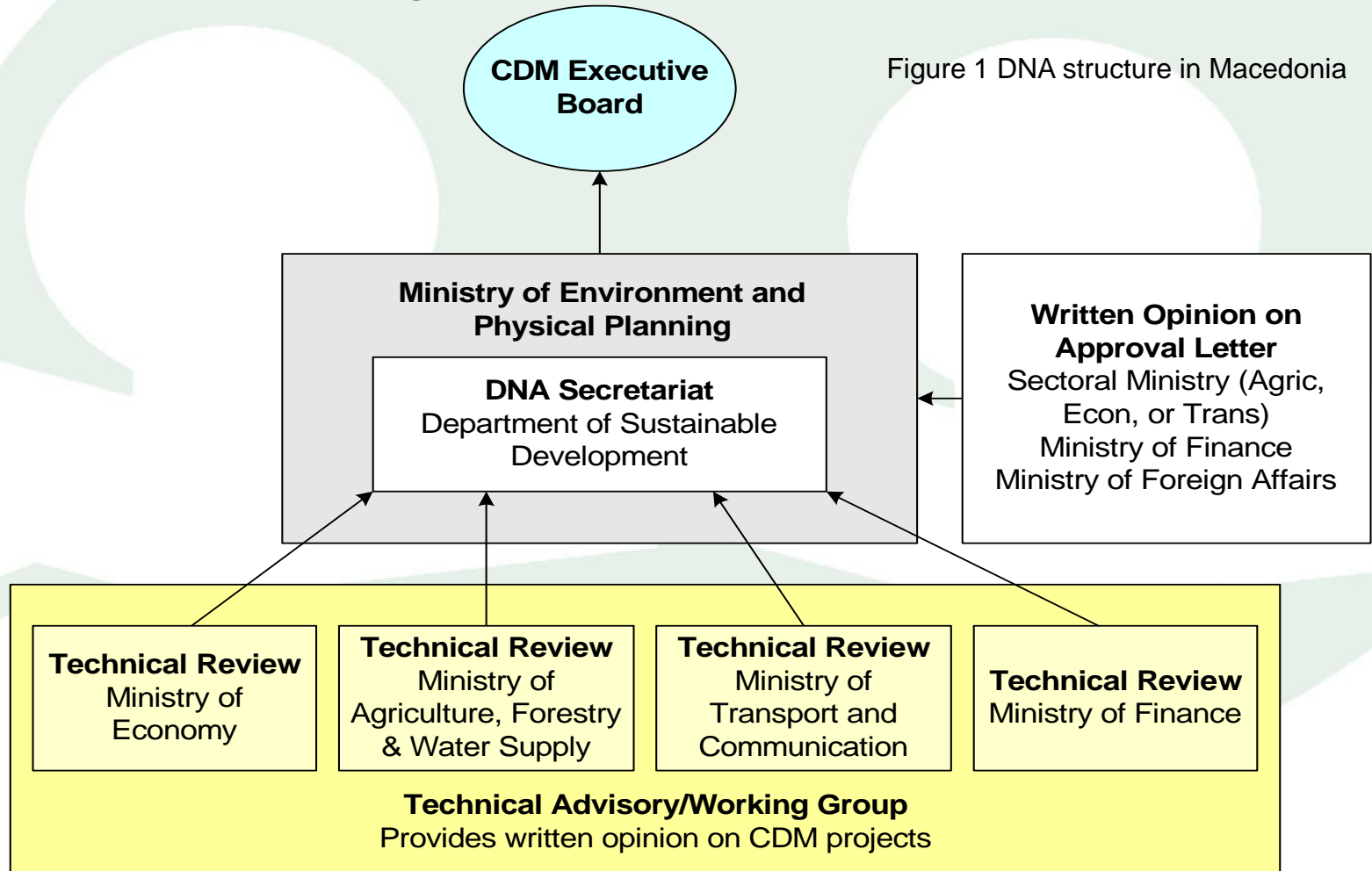


Figure 1 DNA structure in Macedonia

DNA: role

- The DNA is the national body which evaluates potential CDM projects and provides written approval confirming that the project activity is voluntary, complies with national and international criteria and assists in achieving sustainable development of the host country.

DNA: functions

➤ Regulatory functions:

- establish and enforce national rules for project eligibility, submission, and approval;
- confirm compliance with national sustainable development goals;
- certify compliance with other country-specific regulations and criteria, such as EIA;
- issue host country approval letter;
- report to the UNFCCC Secretariat on the CDM activities annually

DNA: functions

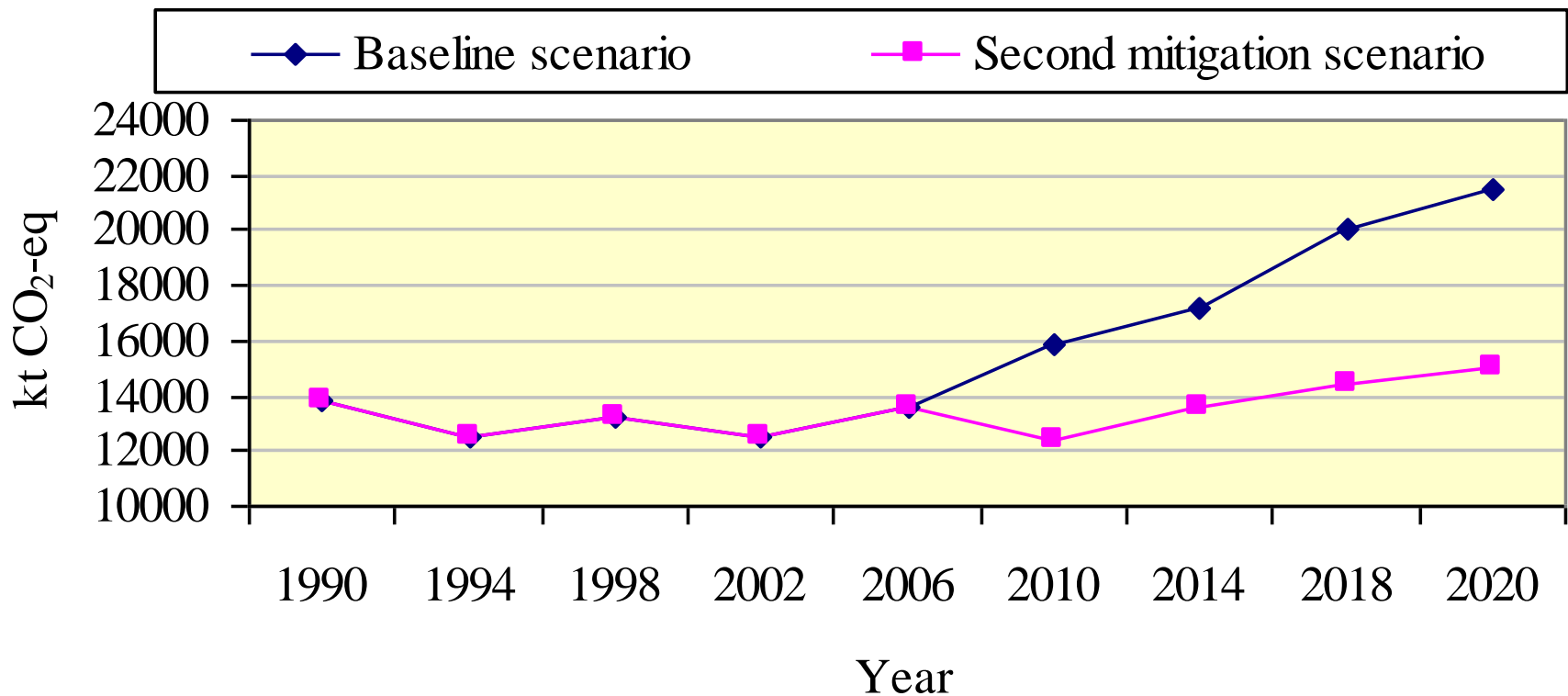
➤ Promotional functions:

- make available information on the CDM project cycle, DNA structure and project review procedures;
- be a contact point for financial lending institutions;
- provide technical assistance to project developers for the preparation of project proposals and for contract negotiations with investors;
- attract donors for capacity building for CDM projects and financing;
- organize promotional activities.

DNA Approval Procedure

Step	Time-frame	Voluntarily/Mandatory
Step I: Initial Screening and Endorsement of the Project Idea Note (PIN) <ul style="list-style-type: none"> - Review of the PIN - Issuance of Letter of Endorsement 	15 working days 10 5	Voluntarily
Step II: Final Review and Approval/Rejection of the Project Design Document (PDD) <ul style="list-style-type: none"> - Initial Screening of PDD - Review by Technical Advisory Group - Technical Review Summary and Recommendation to the Minister of MoEPP - Decision by the Minister of the MoEPP - Draft Letter of Approval - Inter-ministerial Review of Approval/Rejection Letter - Final Approval/Rejection Letter 	30 working days 2 10 4 2 3 5 4	Mandatory

Total GHG emissions 1990-2020



Baseline Scenario / Second Mitigation Scenario

2020-value (kt CO₂-eq): 21500/15000

Average annual growth rate (%): 3.6/1.4

Grid factor (kt CO₂-eq/kWh): 1.2 in 1990, increases slightly/ decreases for 22%, to 0.9

currently predicted emissions growth rate = 3.6% ("currently predicted" e stopka na porast predvidena so baseline scenarioto)

"substantial deviation below the currently predicted emissions growth rate, in the order of 15-30 percent" (Barcelona statement)
stopkata na porast so mitigation scenario da bide vo rang 2.52% do 3.06%

Ova e ne e problematicno da se ostvari za nas, zatoa sto nastata stopka na porast za mitigation scenario e 1.4%

Zabeleska 55% i 9% se absolutni porasti na emisiite vo 2020 vo odnos na 1990 godina, spored baseline i mitigation scenario soodvetno. No "absolutni porasti" ne se spomenuvaat vo statment na EU za developing countries. Tamu se operira so "emissions growth rate" znaci so stopki na porast na emisiite.

CDM potential

- Total annual GHG emissions are at the level of approx. 15 MtCO₂eq/yr.
- Macedonia's economy is characterized by relatively high level of energy consumption and GHG emissions per unit of GDP (one of the highest among Central and Eastern European countries)

CDM potential

- High ratio of GHG emissions to economic output (GHG or carbon intensity) signals about high cost-effectiveness of potential CDM projects as it implies that large volume of GHG emission reductions can be achieved per 1 US\$ of investments.
- Preliminary analyses of the carbon potential in the Republic of Macedonia estimate the aggregate potential in terms of CO₂eq up to 6 MtCO₂eq per year.
- Considering that the market price of emission reduction ranges between 6 and 9 EUR/ton of CO₂eq the resulting potential carbon investment can be expected to range between 35 and 55 million EUR per year

CDM potentials by sectors

Sector	Sub-sector	Carbon potential per year, ktCO _{2eq}
Average energy saving potential gains per sectors ¹	Residential	1.650
	Commercial+Institutional	135
	Industrial+Agricultural	625
	Street lighting	5
	TOTAL	2.500
Renewable Energy	Hydro	405
	Biomass	45
	Solar	10
	Wind	NA
	Geothermal	150
	TOTAL	610
Waste Sector (MSW + Manure treatment)		310
LULUCF		580
TOTAL		4.000

Energy sector

- **Priority Areas:**
 1. Rehabilitation of large power plants
 2. Fuel Switching to Natural GasCHP
 3. Industrial Efficiency Improvements
 4. Hydro Power Geothermal Energy

Energy sector: energy efficiency and renewable energy

- electricity production from thermal plants will be dominant which makes projects that promote efficiency of energy use and renewable energy highly attractive from CDM perspective in the Republic of Macedonia
- In particular, it is estimated that combined margin (CM) emission factor for Macedonian electricity grid accounts for *0.915 tCO₂/MWh*.

Energy sector: energy efficiency and renewable energy

- It means that a hypothetical **renewable** energy project (hydro, wind or geothermal) with expected annual electricity generation at the level of 60,000 MWh/yr can generate approximately 54,900 CERs annually or 274,500 CERs during 2008-2012.
- By selling this amount of CERs additional financial resources in the range of **2.74 mln USD** can be mobilized at 10\$/CER

Other sectors

- Reduction of GHG emissions (**mitigation scenarios**) in other sectors can be achieved through improving energy efficiency in industrial sector and households, promotion of sustainable transport, implementation of methane recovering and flaring systems in selected landfills, implementation of biogas recovering and flaring systems in selected pig farms etc.

Letters of no-objection

- "Engine for producing electrical power from biogas-biomass from animal and plant origin in east Macedonia, Karbinci) Постројка за добивање електрична енергија од биогаз-биомаса од анимално и растително потекло во источна Македонија, Карбинци
- "Combined cycle power plant of TE-TO AD in Skopje" , Постројка за производство на енергија во комбиниран циклус ТЕ-ТО во Скопје
- 6 MW Hydro Power Bundle Project in Northern part of the country
Здружен проект за хидроелектрани од 6 MW
- Wind farm (Фарма на ветерници-Штип), Inval Macedonia (198 MW , 66 турбини од по 3 MW)
- Wind farm (Ветерна фарма Богданци), ЕЛЕМ, 45 MW

Letters of approval

- Rehabilitation of 6 hydro power plants, ELEM Makedonija, rejected
Рехабилитација на 6 хидроелектрани
Статус: Одбиен од регистрација
- 30MW cogeneration plan, KOGEL Skopje, waiting
Когенеративна постројка од 30 MW,
Когел, Скопје
Статус: Чека за регистрација

Energy sector

- In addition, the World Bank has identified several potential projects under this mechanism for creating some of the PINs, but they are not delivered to the MoEPP of Macedonia, yet.
- More details about identified WB Projects, please visit www.moepp.gov.mk (section on CDM)

***Energy sector* -additional PINs**

- Several PINs were developed during the preparation of the NS for Kyoto Protocol:
 - 1. St Petka (Matka 2) 36 MW hydropower project**
 - 2. Rehabilitation of small run-of-river hydropower plants project**
- More details about identified UNDP Projects, please visit www.moepp.gov.mk (section on CDM, National Strategy on CDM for the first commitment period 2008-2012)

CDM: pros and cons (I)

➤ From the developing country perspective:

Advantages:

- reduce greenhouse gas emissions;
- meet sustainable development goals;
- promote additional foreign investment;
- increase green technology transfer;
- use of better techniques, technologies and processes;
- increase environmental awareness.

CDM: pros and cons (I)

➤ From the developing country perspective:

Disadvantages:

- Foreign investors may dominate and exclude domestic entrepreneurs;
- CDM investment could affect national development strategies;
- CDM timeframe may not assist long-term development strategies.

The suitable framework for hosting CDM

- ratify the Kyoto Protocol;
- establish the DNA for CDM approval;
- determine national priorities and goals for CDM investment through the draft of a national strategy;
- set SD criteria for CDM;
- revise national legal framework accordingly;
- verify EIA scope of application to CDM projects;
- promote local education and training, publicity about CDM, stakeholder consultation and public participation in national decision processes on CDM projects.



Thank you for the attention

t.grncarovska@moepp.gov.mk

02 3066 930/109