Multilateral Assessment of NC6, BR1 and National GHG Inventory Submission

Ukraine on its Way Towards Achieving QEWERT

CONTENT

- 1. National inventory system
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- 3. Quantified economy-wide emission reduction target
- 4. Policy and measures
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NATIONAL INVENTORY SYSTEM OF UKRAINE

State departments (sectoral and regional) State and commercial corporations State and commercial enterprises

Ministry of Ecology and Natural Resources of Ukraine

- suggestions to legal arrangements;
- design of GHG emission reduction strategy and mitigation actions within the general ecological strategy of Ukraine;
- national GHG inventory system improvement;

Climate Policy Department

- national GHG inventory system functioning supply:
 - planning;
 - organization of NIR preparation;
 - activity data collection;
 - data archieving;
 - organization of scientific researches;
 - QA/QC, NIR upload to web page for public assessment;
 - •NIR submission to the Secretariat of UNFCCC;
 - •administration of carbon unit registry.



Inter-agency
Committee for
UNFCCC
Implementation



National Center for GHG Emission Inventory

NIR preparation executor







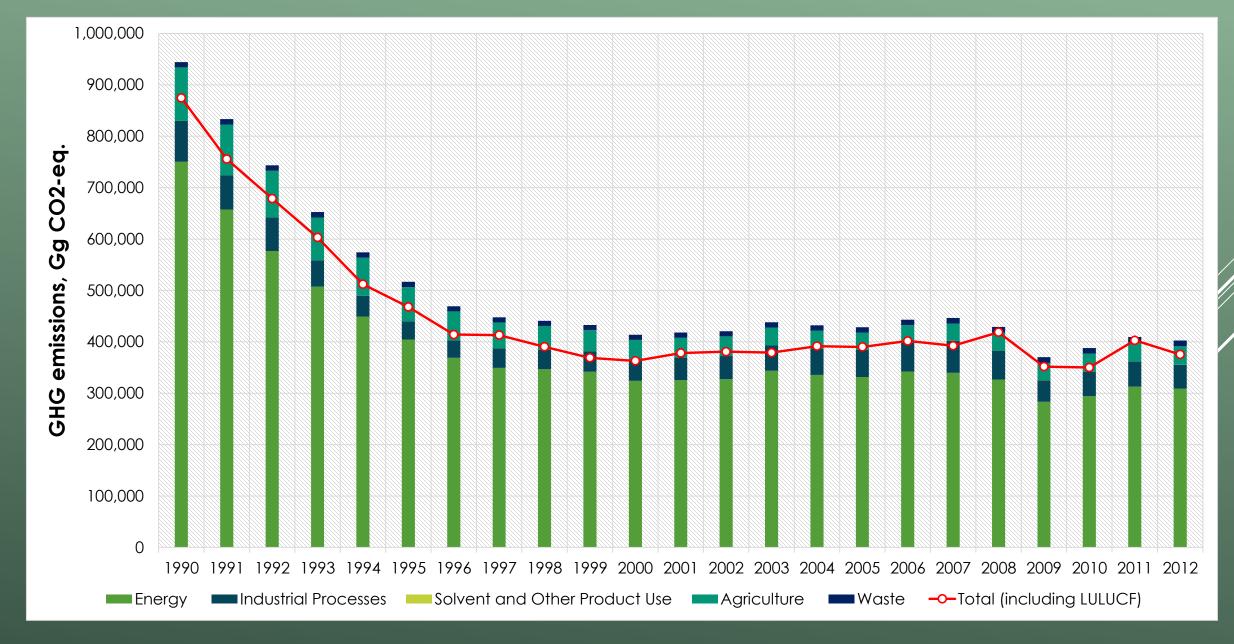
Scientific-research institutes

Independent experts

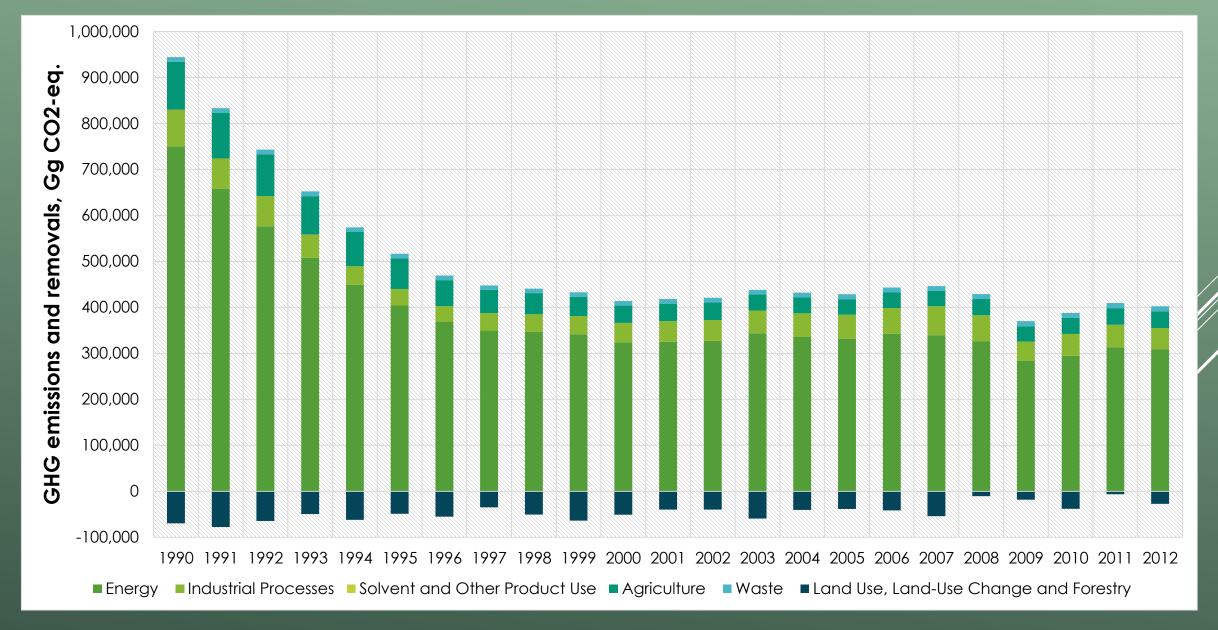
Commercial scientifictechnical companies

NIR preparation co-executors

GHG EMISSIONS TREND



GHG EMISSIONS TREND



GHG EMISSIONS TREND, Gg CO₂-eq.

Sectors	1990	2000	2008	2009	2010	2011	2012	Change compared to 1990, %
Energy	750 348,41	324 141,02	326 779,16	283 355,89	294 651,07	312 943,98	309 081,09	-58,81
Industrial Processes	79 842,20	42 280,27	56 152,75	42 100,52	47 676,67	48 862,58	46 009,22	-42,37
Solvent and Other Products Use	4,69	6,84	30,82	104,54	123,07	178,56	176,44	3 664,29
Agriculture	103 602,53	37 372,46	35 283,89	33 610,32	34 563,26	36 298,60	36 033,19	-65,22
Waste	10 554,82	10 040,51	10 851,90	10 917,87	11 048,56	11 234,29	11 366,02	7,69
Total (excluding LULUCF)	944 352,64	413 841,10	429 098,53	370 089,14	388 062,63	409 518,00	402 665,95	-57,36
LULUCF	-69 737,10	-50 830,64	-10 407,14	-18 257,25	-37 993,13	-6 487,43	-27 240,83	-60,94
Total (including LULUCF)	874 615,54	363 010,45	418 691,39	351 831,89	350 069,50	403 030,57	375 425,12	-57,08

QUANTIFIED ECONOMY-WIDE EMISSION REDUCTION TARGET

Quantified economy-wide emission reduction target in Ukraine is determined at a level of **24** % of 1990 base year by 2020.

POLICY AND MEASURES

- ☐ Policy framework and cross-sectoral measures
- I. Decree of the President of Ukraine "On the Strategy for Sustainable Development" 'Ukraine 2020'
- II. National Action Plan on implementation of EU-Ukraine Association Agreement for 2014-2017

□ Energy& Environment

- 1. Energy strategy of Ukraine until 2030
- 2. National Action Plan for renewable energy for the period up to 2020
- 3. Law 'On Fundamentals (Strategy) of the State Environmental Policy of Ukraine until 2020'
- 4. Tax and customs codes for Ukraine: reduction of land tax/income tax for businesses in renewable energy
- 5. National Action Plan 2020 for energy efficiency
- 6. Cabinet of Ministers Decree "On approval of the action plan on Implementation of the Directive 2009/28/EC on the promotion of the use of energy from renewable sources"

☐ <u>Industry</u>

Environmental tax on CO2 emissions:
 UAH 0.22/t CO2 (approximately EUR 0.01 as at 30.05.2015) in 2011
 UAH 0.26/t CO2 (approximately EUR 0.012 as at 30.05.2015) in 2014

□ Forestry

1. National program "Forests of Ukraine 2010-2015"

POLICY AND MEASURES

List of key mitigation actions	Estimate of mitigation impact (kt CO2 eq)
	10 (1. 0010)
Projects under the Green Investment Scheme and Joint Implementation*	10 (in 2012) 120 (in 2020)
Sector energy efficiency and conservation programme for the period to 2017	7 000 (in 2012)
Sector energy emiciency and conservation programme for the period to 2017	19 000 (in 2020)
State target economic programme for energy efficiency and development of	19 000 (in 2012)
production of energy from renewable energy sources and alternative fuels	50 000 (in 202 %

^{*} Estimates of mitigation impacts only include impacts from projects under the green investment scheme

GHG EMISSION PROJECTIONS, KEY ASSUMPTIONS*

3 scenarios of Ukrainian economy development:

- Base scenario (the most likely one)
- Pessimistic scenario
- Optimistic scenario

	Units	1990	2000	2010	2020	2030		
Base scenario								
GDP**	bln UAH	399,3	170,1	262,7	349,4	548,7		
Compared to 1990	%	100,0	43,2	65,8	87,5	137,5		
Compared to 2010	%	152,0	64,7	100,0	133,0	208,8		
Pessimistic scenario								
GDP**	bln UAH	399,3	170,1	262,7	312,9	468,3		
Compared to 1990	%	100,0	43,2	65,8	78,4	117,3		
Compared to 2010	%	152,0	64,7	100,0	119,1	178,3		
Optimistic scenario								
GDP**	bln UAH	399,3	170,1	262,7	370,6	630,8		
Compared to 1990	%	100,0	43,2	65,8	92,8	158,0		
Compared to 2010	%	152,0	64,7	100,0	141,0	240,1		

UAH – Ukrainian Hryvnia

^{*} NC6

^{**} In prices of 2000

GHG EMISSION PROJECTIONS, KEY ASSUMPTIONS

Fuel consumption projections

Fuels	Units	Solid fuel (coal and peat)	Gaseous fuel (natural gas)	Liquid fuel (oil products)
Base scenario				
2010	t s.f. – metric ton of Standard Fuel (1 t s.f. equals to	46856,3	51160,1	15612,3
2020		66164,8	54115,1	19344,7
2030	7/10 toe)	87057,9	62291,2	22394,8
Pessimistic scenario				
2010	t s.f. – metric ton	46856,3	51160,1	15612,3
2020	of Standard Fuel (1 t s.f. equals to	63348,4	50886,0	18368,6
2030	7/10 toe)	84011,9	58997,5	21124,8
Optimistic scenario				
2010	t s.f. – metric ton of Standard Fuel (1 t s.f. equals to 7/10 toe)	46856,3	51160,1	15612,3
2020		67880,2	55943,5	19967,2
2030		90019,2	66639,0	22931,1

GHG EMISSION PROJECTIONS ACCORDING TO NC6 AND BR1

Without measures scenario:

• GDP in 2030 base scenario is calculated keeping the GHG emissions rate at the same level in all sectors, and the GHG emissions increase assumed to be proportional to gross value added increment. It is also assumed to have zero level emissions in LULUCF sector.

With measures scenario

• The scenario assumes the most likely changes in technical-economic indices of production technologies and resource consumption by the changes of scientific and technical progress, structural changes in Ukraine's economy, changes in internal and external markets of goods and services. It includes all the economically reasonable measures for GHG emission reduction, as well as development of sun and wind energy (economically and ecologically not justified).

With additional measures:

• The scenario additionally assumes that renewable energy development will be justified by economical and ecological appropriateness.

GHG EMISSION PROJECTIONS, kt CO₂-eq.

Sector	Without measures		With measures		With additional measures	
	2020	<u>2030</u>	<u>2020</u>	<u>2030</u>	<u>2020</u>	<u>2030</u>
Energy	386 840	607 310	334 086	423 377	326 583	401 343
Industrial Processes	61 819	97 051	71 825	67 817	71 825	67 817
Solvent and Other Products Use	442	693	365	450	365	450
Agriculture	45 895	72 052	43 100	43 800	43 100	43 800
Waste	11 267	11 492	6 000	9 000	9 000	6 000
Total (excluding LULUCF)	507 152	789 994	459 465	542 450	451 597	519 965
LULUCF	0	0	-11 340	-11 346	-11340	-17190
Total (including LULUCF)	507 152	789 994	448 125	531 104	440 257	502 776

DIALOGUE WITH PARTIES DURING MA

During the process of MA on NC6 and BR1 Ukraine received 19 questions:

- a) Four questions from Brazil (regarding GHG emission trend, projections and ERU units, as well as translation);
- b) One question from Sweden (regarding GHG emissions trend);
- c) Nine questions from China (different reporting fields, including GHG emission trends, QEWERT and carbon units);
- d) Five question from European Union (mainly regarding GHG emission projections and policies and measures).

19 questions were answered

THANK YOU

DYNAMICS OF CERTAIN DEVELOPMENT INDICATORS IN UKRAINE

