

SUMMARY of ISSUES for COAL INDUSTRY RESTRUCTURING in CEE/CIS REGION

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Eight Session, Geneva, 2-3 February 2006

CONTENT

- ***UNECE Activities on Coal Industry Restructuring***
- Summary of Western Europe Experience
- CEE/ CIS Region
 - Questionnaire-Major Indicators
 - Economic, Social & Environmental Consequences
 - Major Tools
 - Comparison with Western Europe Experience
- Conclusion

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COAL INDUSTRY RESTRUCTURING

- **The term “restructuring”** is meant in its broadest sense of policies and measures that aim to make the coal sector competitive and profitable and to raise their efficiency and environmental record to good international levels

Source: WEC

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UNECE ACTIVITY

on CEE/CIS COAL INDUSTRY RESTRUCTURING

Key aim:

- to assist countries in the restructuring of their coal sectors to improve economic efficiency and market orientation

(particular attention is paid to facilitating the integration of CEE and CIS countries into European and global economies)

- The program on the “market adaptation and restructuring of coal industry” were included in the Meetings of UNECE
 - Working Party on Coal (1990-1996),
 - Ad Hoc Group of Experts on Coal and Thermal Power(1997-2002),
 - Ad Hoc Group of Experts on Coal in Sustainable Development (since 2003)

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UNECE ACTIVITY on CEE/CIS COAL INDUSTRY RESTRUCTURING

- The program on the “market adaptation and restructuring of coal industry” includes
 - identify and examine the problems related to the process of transition to market conditions of the coal industry in CEE and CIS region
 - general policies on restructuring and its social and environmental consequences
 - exchange of information
 - development of market infrastructure and increasing the market size of coal energy market,
 - Drafting and implementing new mining legislation and regulations

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UNECE ACTIVITY on CEE/CIS COAL INDUSTRY RESTRUCTURING

Work accomplished:

- Since 1990 a large number of Workshops/Seminars were organized on the subject to provide advisory assistance to countries in transition in
 - preparing and implementing restructuring policies and measures,
 - Legislation and regulatory mechanism,
 - Environmental regulations,
 - Social policies.

- In 2001 restructuring process of 12 transition countries were reviewed for the period of 1990-2000 :

Bosnia &Herzegovina, Bulgaria, Czech Republic, Hungary, Kazakhstan, Poland, Romania, Russian Federation, Slovakia, Slovenia, Turkey and Ukraine.

ENERGY/GE.1/2001/4

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UNECE ACTIVITY

on CEE/CIS COAL INDUSTRY RESTRUCTURING

in 2002 -2003:

- **QUESTIONNAIRE** on *“Economic and Social Impacts of Restructuring of the Coal Industry of the Transitional Economies”*

prepared by UNECE secretariat in cooperation with UNDESA
ENERGY/GE.1/2003/8

➔ **Asks detailed information (only 5 responses)**

in 2004

- **QUESTIONNAIRE** on *“the Major Indicators of Coal Sector Restructuring”*

prepared by UNECE secretariat
ENERGY/GE.1/2004/8

- ➔ **Asks 6 major indicators (only 7 responses)**

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SUMMARY of WESTERN EUROPE EXPERIENCE

in 1952

- European Coal and Steel Community Treaty entered into force

DURING THE FIRST 10-15 YEARS:

Cornerstones of European Economy: **Coal** & steel sectors

The Main Source of Primary Energy: **COAL**

in 1960s



Restructuring of Coal Sector

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SUMMARY of WESTERN EUROPE EXPERIENCE

- Countries heavily affected from restructuring

- Belgium
- France
- Germany
- Netherlands
- Spain
- United Kingdom

Source: IEA Clean Coal Centre Study

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SUMMARY of WESTERN EUROPE EXPERIENCE

Domestic coal production

- **UNECONOMIC**
- **UNCOMPETITIVE**
- **LESS ENVIRONMENTALLY FRIENDLY**
- **UNSAFE**

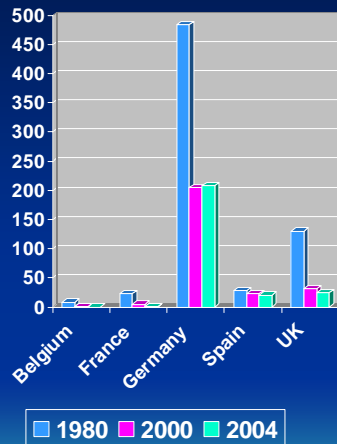


- * Sharp decrease in coal demand
 - Closure of a large number of coal mines,
 - Decline in domestic production & work-force
 - Rise in coal imports
- * More competitive energy regulatory framework
- * Financial support for minimizing Social & Environmental consequences
 - Subsidize domestic production
- * Rise in awareness of environmental impact of coal usage
- * Introduction of new, advanced technologies
- * Simultaneous changes in the electricity sector
 - Favouring gas-fired power stations

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SUMMARY of WESTERN EUROPE EXPERIENCE

- Coal Production by 1980, 2000 & 2004



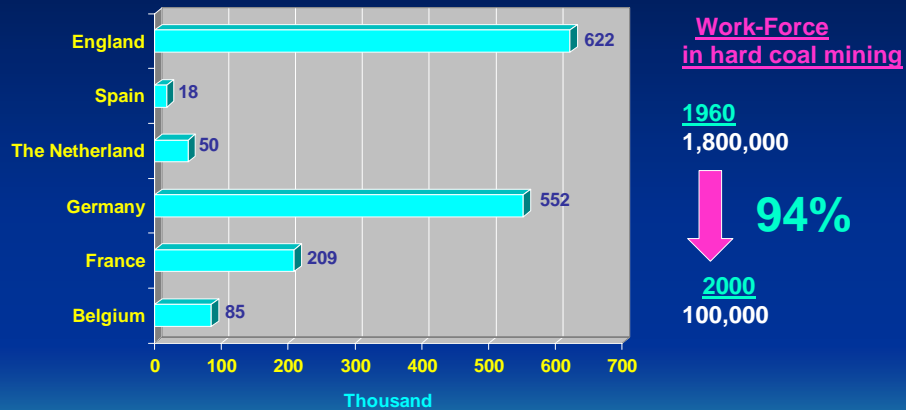
* Coal production ceased
in Netherland in the mid-1970s

1960s- 2004 for hard coal production
From 450.000 tonnes to 66.8 Million tonnes

85% ↓

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SUMMARY of WESTERN EUROPE EXPERIENCE - *Work-Force Loss (1960-2000)*



Source: S.Walker, IETS

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SUMMARY of WESTERN EUROPE EXPERIENCE - *Financial Support*

Since 1965

- State aid *for supporting domestic production & minimizing social & regional Impacts of restructuring of coal industries*
- The EU Structural Funds *for supporting domestic production & minimizing social & regional Impacts of restructuring of coal industries*

e.g.

1994-2001

- 60 million € state aid for the countries UK, Spain, Germany and France

* *But gradual withdrawal of the state (1407/2002/EC)*

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SUMMARY of WESTERN EUROPE EXPERIENCE

- European Coal and Steel Community input
- EU's competition and regional structural reform policies

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CEE/CIS REGION

CEE Countries

- Albania
- Bosnia & Herzegovina
- Bulgaria
- Croatia
- Czech Republic
- Estonia
- Hungary
- Latvia
- Lithuania
- Macedonia
- Poland
- Romania
- Slovakia
- Slovenia
- Yugoslavia

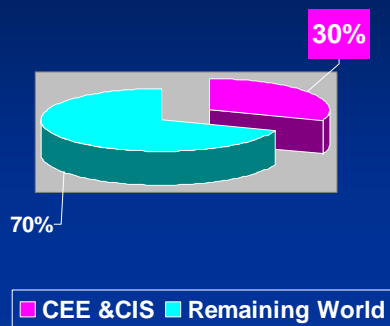
CIS countries

- Armenia
- Azerbaijan
- Belarus
- Georgia
- Kazakhstan
- Kyrgyzstan
- Moldova
- Russia
- Tajikistan
- Uzbekistan

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CEE/CIS REGION

- Proved Coal Reserves by 2004



CEE & CIS Region : 275 Billion tonnes
WORLD : 909 Billion tonnes

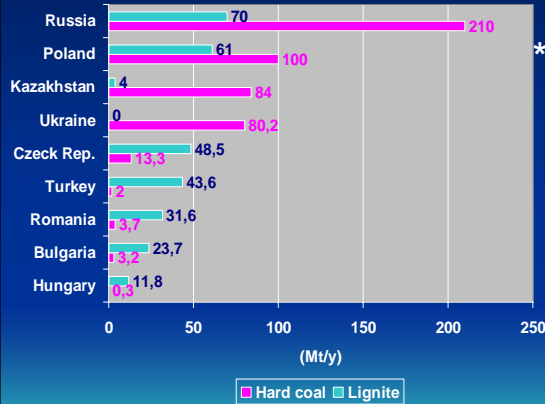
Source: WEC

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CEE/CIS REGION

-Major Coal Producers

By 2004 :
Production capacity > 10 Million tonnes/year



* 15% of total World Coal Prod.

Source: BP and IEA Statistics

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CEE/CIS REGION

COAL INDUSTRY RESTRUCTURING

-Major Issues

- Started in the early 1990s
- At the beginning, coal industry predominantly under state control
- Adaption to market operation with tremendous sacrifices and extreme rapidity under unstable conditions
 - Adaptation to more competitive energy regulatory framework
- Complex social, employment and environmental task
- Lack of sufficient financial support from
 - State budget
 - International institutions

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QUESTIONNAIRE

Major Indicators of Coal Industry Restructuring

- Coal production
- Number of active coal mines
- Employment
- State subsidies
- Productivity
- Investment

Source: UNECE- ENERGY/GE.1/2004/8

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CEE/CIS REGION COAL INDUSTRY RESTRUCTURING - Decline in Coal Production

COUNTRIES	PRODUCTION (Mt)		% Change 1990/2004
	1990	2004	
Russia	395,4	280,2	-29,12
Poland	215,3	161	-25,22
Kazakhstan	131,4	88	-33,03
Ukraine	164,8	80,2	-51,33
Czeck Rep	101,4	61,8	-38,76
Turkey	47,1	45,6	-3,18
Romania	37,6	30,4	-19,15
Bulgaria	31,7	26,5	-16,40
Hungary	17,6	11,2	-36,36
Bosnia & Herzegovina	18,1	8,7	-51,93
Slovenia	5,1	4,8	-5,88
Slovakia	4,8	3	-37,5
TOTAL	1170,3	801,4	-31,52

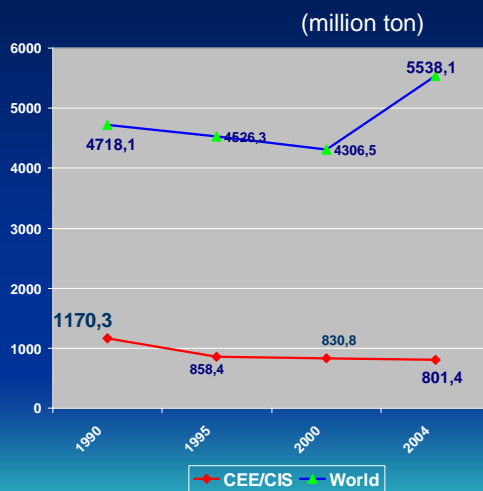
1990-2004

32% ↓

Source: UNECE & BP

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CEE/CIS REGION COAL INDUSTRY RESTRUCTURING - Decline in coal production



1990-2004

CEE/CIS Region: 32% ↓

World : 17% ↑

Source: UNECE & BP Statistics

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CEE/CIS REGION COAL INDUSTRY RESTRUCTURING - Decline in Employment

Countries	NUMBER OF EMPLOYEE (Thousands)				%Change 1990/2004
	1990	1995	2000	2004	
Bosnia& Her.	30,1	8,9	17,5	n.a	
Bulgaria	n.a	37	20,3	16,1	
Czeck Rep	110	80,5	41	33,1	-70
Hungary	49	20,4	11,3	4,06	-92
Kazakhstan	88,9	77	51,1	n.a	
Poland**	388	274,5	155	127	-67
Romania	134	97	46,6	35,4	-74
Russia	559,1	360,5	242,2	224,9	-60
Slovakia	15,1	10,1	8	5,4	-64
Slovenia	7,6	5,5	4,2	3,05	-60
Turkey***	29,65	22,53	17,41	12,6	-58
Ukraine	609	527	n.a	300	-51

1990
1,901,450

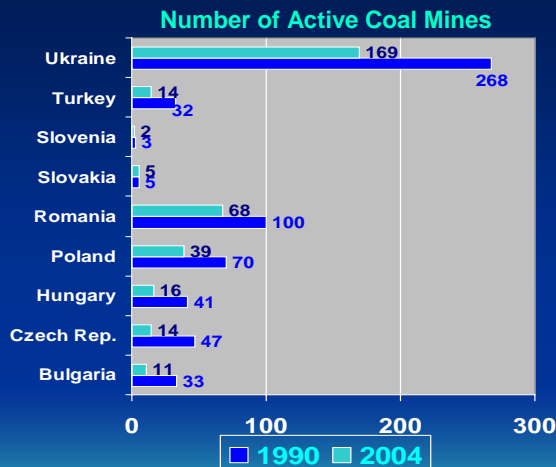
61%(*) ↓

2004
745,510

*except Bosnia & Herzegovina, Bulgaria and Kazakhstan
** Hard coal only
*** Turkish Coal Enterprises(TKI) only

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CEE/CIS REGION COAL INDUSTRY RESTRUCTURING - Decline in active coal mines



- 1990-2004 % change
- Bulgaria : - 36%
- Czech Rep. : - 70%
- Hungary : - 61%
- Poland : - 44%
- Romania : - 32%
- Slovakia : 0%
- Slovenia : - 33%
- Turkey : - 56%
- Ukraine: : - 37%

• From 599 to 338 mines

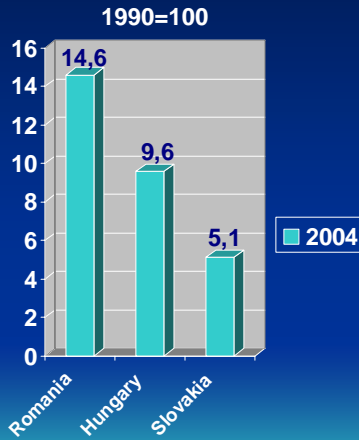
• 44% ↓

** in Poland Hard coal only
*** in Turkey TKI only

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CEE/CIS REGION COAL INDUSTRY RESTRUCTURING

- State subsidies



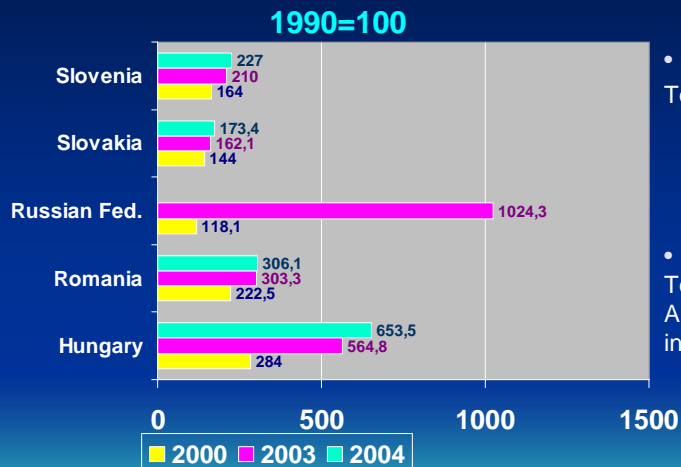
- No state subsidies
 - Czech Republic,
 - Slovenia
 - Turkey (lignite)
- in Bulgaria, state subsidy level in comparison with 2000 =100 : 31.3

* For the other countries : data unavailable

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CEE/CIS REGION COAL INDUSTRY RESTRUCTURING

- Total Productivity Growth



- in Bulgaria
Total Productivity Growth in comparison with 2000=100

➔ 148,4

- in Czech Rep.
Total Productivity Growth About 20% in comparison with 1990=100

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CEE/CIS REGION COAL INDUSTRY RESTRUCTURING

- Investment (million \$)

	1990	2000	2004
Bulgaria			34.3
Romania	231.15	30.6	35.3
Russian Fed.	4,941	319	811.5
Slovenia	28.7	19.3	20.5
Turkey*	46.3	6.4	17.9

* TKI only

- Lack of Sufficient Investments

- Jeopardize coal industry restructuring process
- Not push productivity upwards

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CEE/CIS REGION COAL INDUSTRY RESTRUCTURING

- *Economic Social and Environmental Consequences*

- Slowdown of regional economy
 - Economic decline
 - Hyper –inflation,
 - Loss of purchasing power
 - Absence of stable economic and fiscal laws
 - Collapse of payment system

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CEE/CIS REGION COAL INDUSTRY RESTRUCTURING

- *Economic Social and Environmental Consequences*

- Closure of coal mines & declining in production,
- Reduction of 61% of work-force

➡ Unemployment,

➡ Environmental damage

★ Industry succeeded in setting up market tools
and mechanism

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ECONOMIC, SOCIAL AND ENVIRONMENTAL CONSEQUENCES

- *Financing*

- Financing needed to deal with devastating economic, social and environmental consequences of the sizeable coal industry contraction
- Restructuring process financed by:
 - Domestic governments,
 - Selected international governments,
 - Financial institutions

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ECONOMIC, SOCIAL AND ENVIRONMENTAL CONSEQUENCES

- *Financing*

- Related measures and incentives included:
 - Financing early retirement,
 - Acquisition of skills outside the industry areas &/or coal related depressed region,
 - Training
 - Incentives for attracting new employers in the coal industry areas,
 - Tax & other financial schemes,
 - Small business plan,
 - Landscape restoration,
 - Reduction of polluting emissions

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CEE/CIS REGION COAL INDUSTRY RESTRUCTURING

- Major Tools

- Privatization
- Foreign direct investment
- International support on policy advice & loans
- Drafting & implementing long-term policies
- Introducing new technologies
- Productivity growth
- Mine safety
- Liberalization of coal prices

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CEE/CIS REGION COAL INDUSTRY RESTRUCTURING

-Foreign Direct Investment (Million \$)

	1990	1995	2000	2003
CEE				
Bosnia & Herzegovina	..	-	146	382
Bulgaria	4	90	1002	1419
Czech Republic	132	2562	4986	2583
Hungary	311	4741	2777	2340
Poland	89	3659	9343	4124
Romania	-	419	1037	1840
Slovakia	18	308	1925	571
Slovenia	4	151	136	339
CIS				
Kazakhstan	..	964	1283	2088
Russian Fed.	-	2065	2714	7958
Ukraine	..	267	595	1424

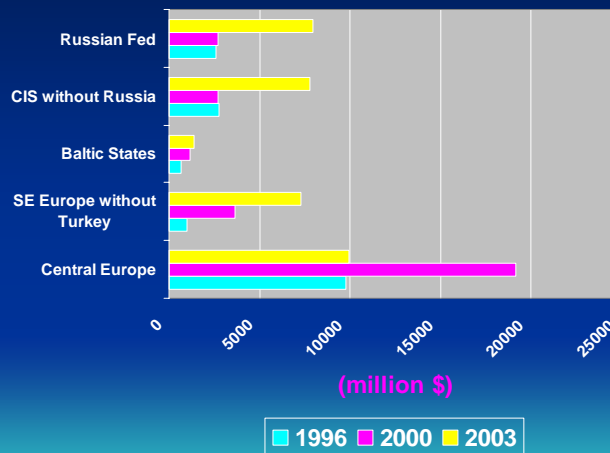
- Finance for purchase of new equipment
- Facilitates tech. transfer
- For attracting direct foreign investment
 - Properly set up legal and regulatory framework
 - Economic & political stability

Source: Economic Survey Of Europe, 2005 No.1

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CEE/CIS REGION COAL INDUSTRY RESTRUCTURING

-Foreign Direct Investment



Source: Economic Survey Of Europe, 2005 No.1

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CEE/CIS REGION COAL INDUSTRY RESTRUCTURING

-International support on policy advice & loans

- **EU PHARE** programme for CEE: → undertakes & finances feasibility studies, further institution building and EU approximation of national legislation and provides policy recommendations
- **EU TACIS** programme for CIS →
- **UNECE** Ad hoc Group of Experts on Coal in Sustainable Developments and its predecessors → Undertakes studies/seminars on mining legislation, coal industry restructuring, clean coal technologies, in the region
- **World Bank** → Undertakes feasibility studies & offer policy advice in conjunction with loans. (Russia, Ukraine, Poland, Romania)
- **IMF** → Supported CEE/CIS economies with loans to support monetary & macro-economic
- **IEA- CIAB** → Surveys coal industry developments in CEE/CIS

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CEE/CIS REGION COAL INDUSTRY RESTRUCTURING

- *Comparision with Western Europe Experience*

- Started about 30 years later
- Have been centrally-planned economies for a number of decades
- Required transparent, well-functioning legal, regulatory and policy framework
- Rapid
- Unstable conditions
- Non-availability of sufficient financial & social support

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CONCLUSION

- Started in the early 1990s
- Each country
 - Advancing in different pace
 - has different strategies
- Although too many obstacles industry succeeded in setting up market tools and mechanism

- But as a result of large number work-force reduction
 - Devastating economic & social consequences

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CONCLUSION

- According to projections:
 - coal demand & production will increase in CIS countries, but decrease in CEE countries

- Although coal industry's decline in the region was significant,

COAL REMAINED ESSENTIAL

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CONCLUSION

- Review based on major indicators for some countries in CEE/CIS Region,
- Overall evaluation of the region depends on availability of questionnaire responses from all countries !
- needs broaden restructuring indicators

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SUMMARY of COAL INDUSTRY RESTRUCTURING IN CEE/CIS REGION

• **THANK YOU FOR YOUR ATTENTION !**
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