

GREENHOUSE GAS EMISSIONS FROM ROAD TRANSPORT

ERS5 Working Group

OECD Report

(forthcoming)

January 8, 2001

Study Objectives

- Present CO₂ Trends in Road Transport
- Catalogue Reduction Measures in OECD Nations
- Review Analysis Methodologies
- Anticipate Future CO₂ Trends in Road Transport
- Make Recommendations to Analysts and Policy Makers

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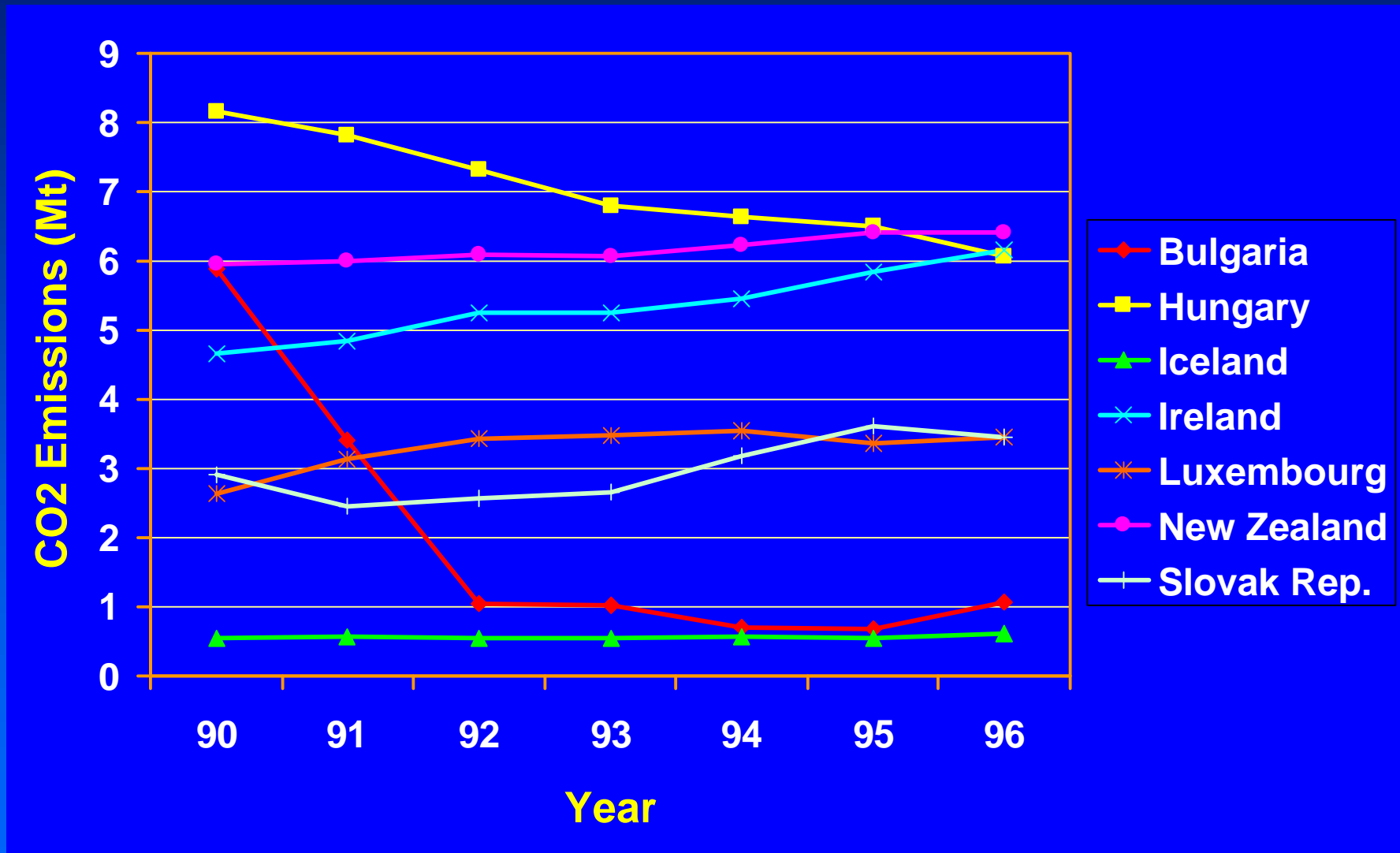
CO₂ Emissions and Transport Share

REGION	TOTAL CO ₂ EMISSIONS (billion tonnes)		TRANSPORT SHARE (%)	
	<u>1990</u>	<u>1995</u>	<u>1990</u>	<u>1995</u>
OECD	10.4	10.8	26.1	27.6
- North America	5.3	5.7	27.3	30.2
- Europe	3.7	3.6	22.7	25.3
- Pacific	1.36	1.47	21.5	23.1
WORLD TOTAL	21.4	22.2	19.3	20.2

Source: World Energy Outlook, 1998 edition (IEA, 1998)

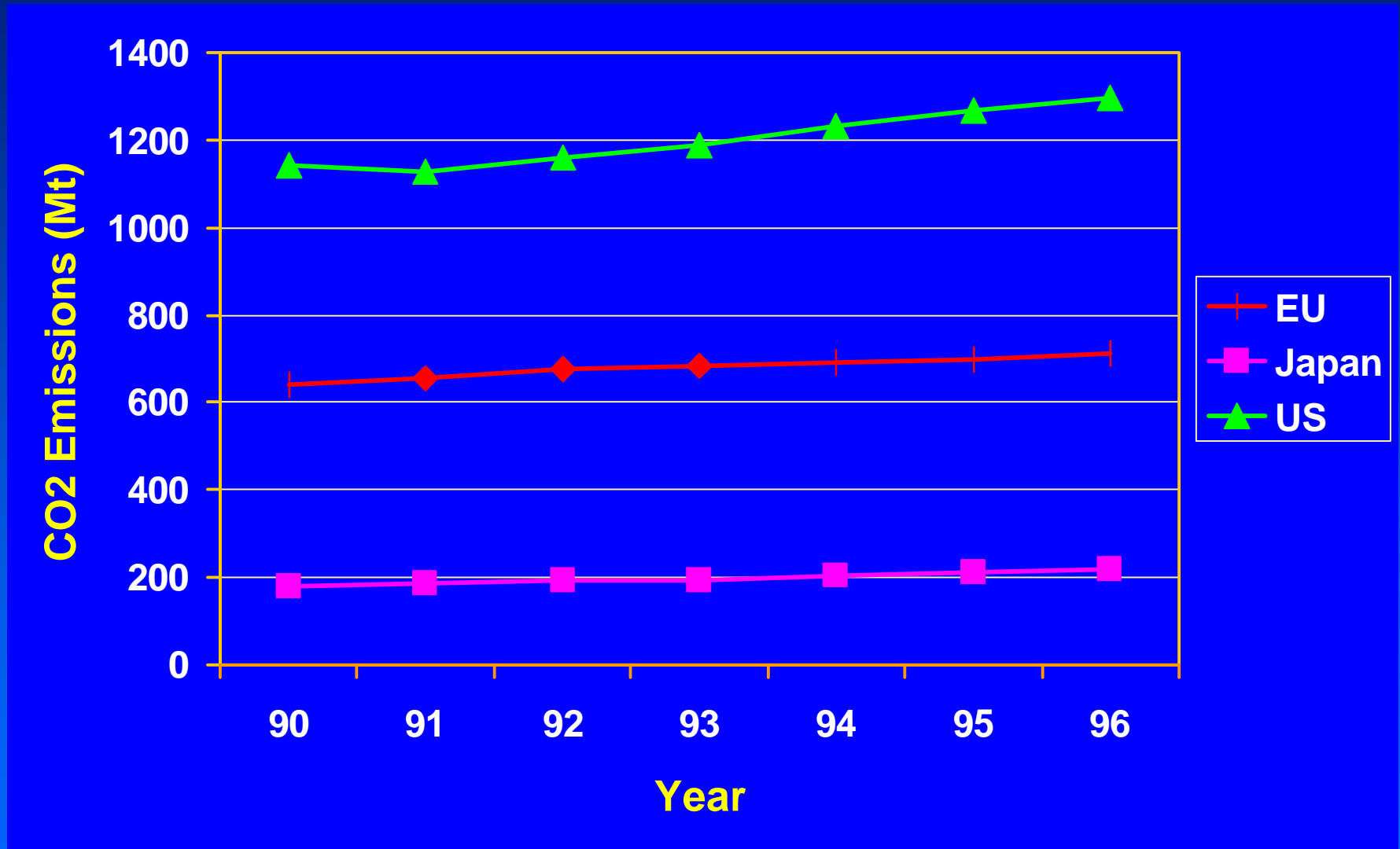
Trends in CO2 Emissions: Group 1

(0-8 M tonnes)



Trends in CO2 Emissions: Group 5

(200+ M tonnes)

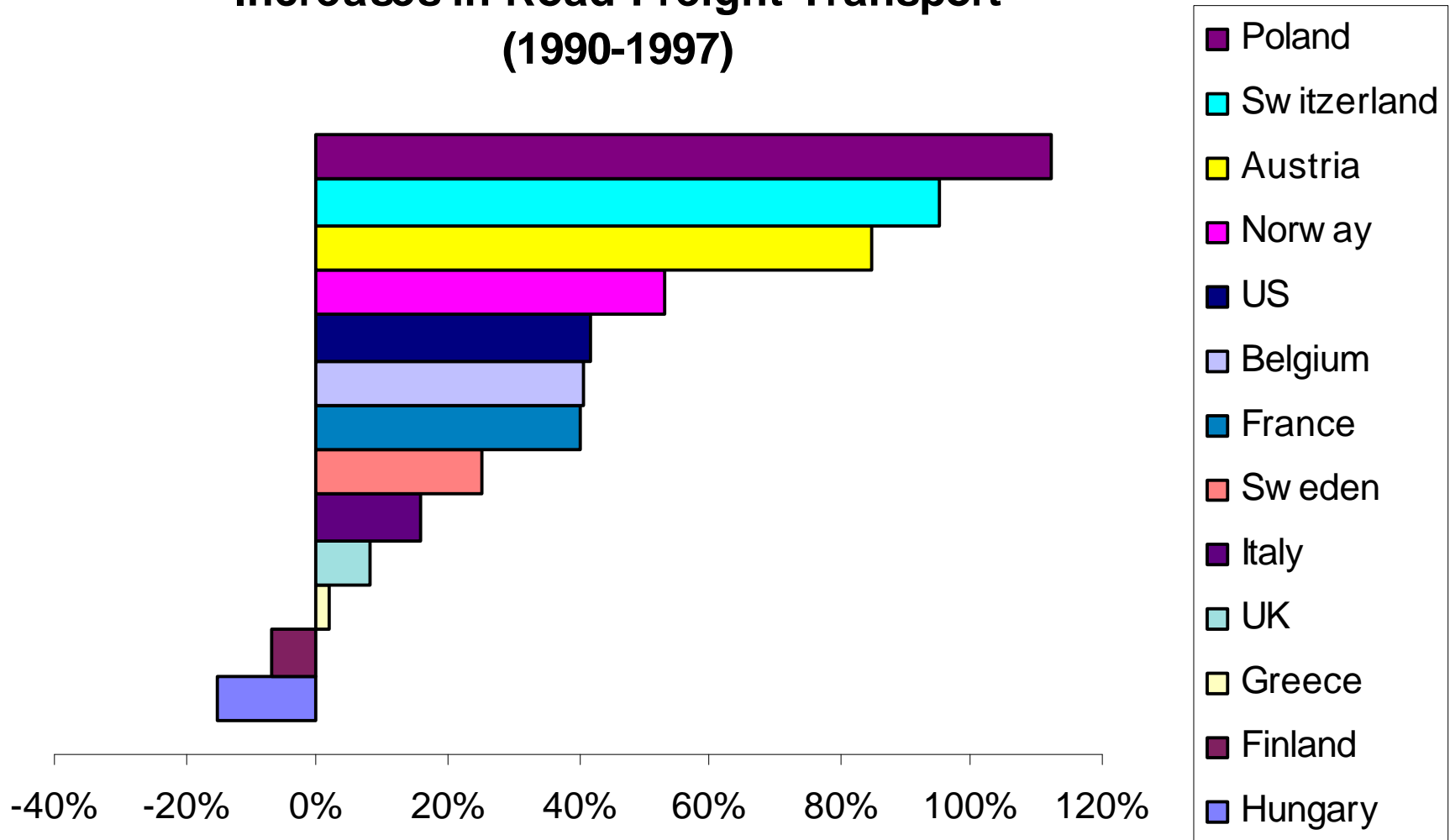


Select Countries Compared to Kyoto

Country	Road Transport Emissions Growth (90-96)	Kyoto Target	Proportional Reductions
Canada	11.8%	-6%	15.9%
France	8.4%	0%	7.7%
Italy	13.5%	-6.5%	17.6%
Japan	20.6%	-6%	22.0%
EU	11.3%	-8%	17.3%
US	13.6%	-7%	18.1%

Growth In Road Freight

Increases in Road Freight Transport
(1990-1997)



Partial Catalogue of Policies and Measures

- OECD Nations are implementing a wide variety of policies and measures
 - Improve Fuel Efficiency (Legislation, Voluntary Agreements, Fiscal Measures, Consumer Information)
 - TDM/TSM
 - Lower Carbon Fuels and Technologies
- What works in 1 country does not necessarily work in another
- Support for sustainability but fiscal measures face political hurdles
- “Scaling up” is problematic for local measures

Assessment Methods

- Many models are in use by OECD nations that are computationally rigorous
- All have conceptual and data limitations which introduce error
- There is a lack of *ex post* evaluation
- The comparability of models and results is difficult to assess

Outlook for CO₂ Emissions from Road Transport

- Range of Forecasts from OECD Nations
 - From stabilization to 2% annual growth through 2010
 - The higher estimates are the more likely
- Population will increase across the OECD
- Economic growth is expected through 2020
 - Increased vehicle ownership and travel
 - Increased freight activity, especially by road
 - Continued demand for and availability of fuel
- Fleet turnover rates will limit CO₂ reductions due to technology

Preliminary Conclusions and Recommendations

- Kyoto targets if applied to road transport will be very challenging
- Most effective policies seem likely to involve sets of measures, including
 - Low consumption vehicles Consumer Info
 - “Targeted” fuel economy imp. Fiscal measures
- Impacts of warming on transportation should be assessed
- Data, methods and evaluations of results must be enhanced