Selection and Prioritization of infrastructure projects serving sustainable development – The UNECE experience

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Outline

- The Big Picture for Sustainable Transport Development @ UNECE
- Selection and prioritization of transport infrastructure projects
- What UNECE brings to the table?
- Summary

The Big Picture @ UNECE

Global and regional trends
Pillars of sustainability

Trends: Global and in UNECE countries

Global

- Integration and regionalization
- Migration and internal mobility
- urbanization

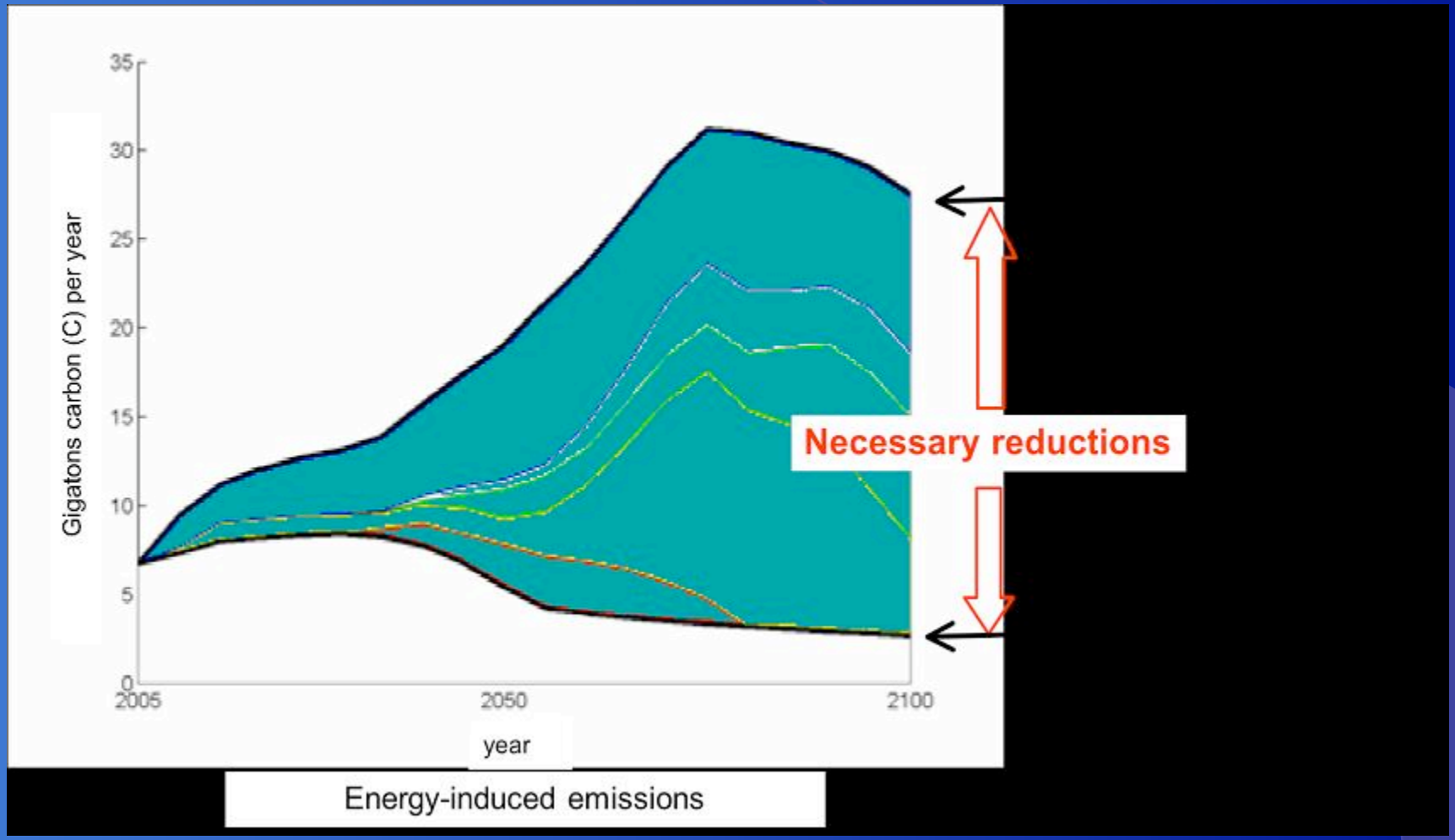
UNECE countries

- EU, NAFTA, spaghetti bowl
- Over-flowing in some, new in other regions
- 80%+ in cities by 2050
- Aging: 30 % of people over 65 by 2060 (EU)

Challenges: Global and UNECE countries

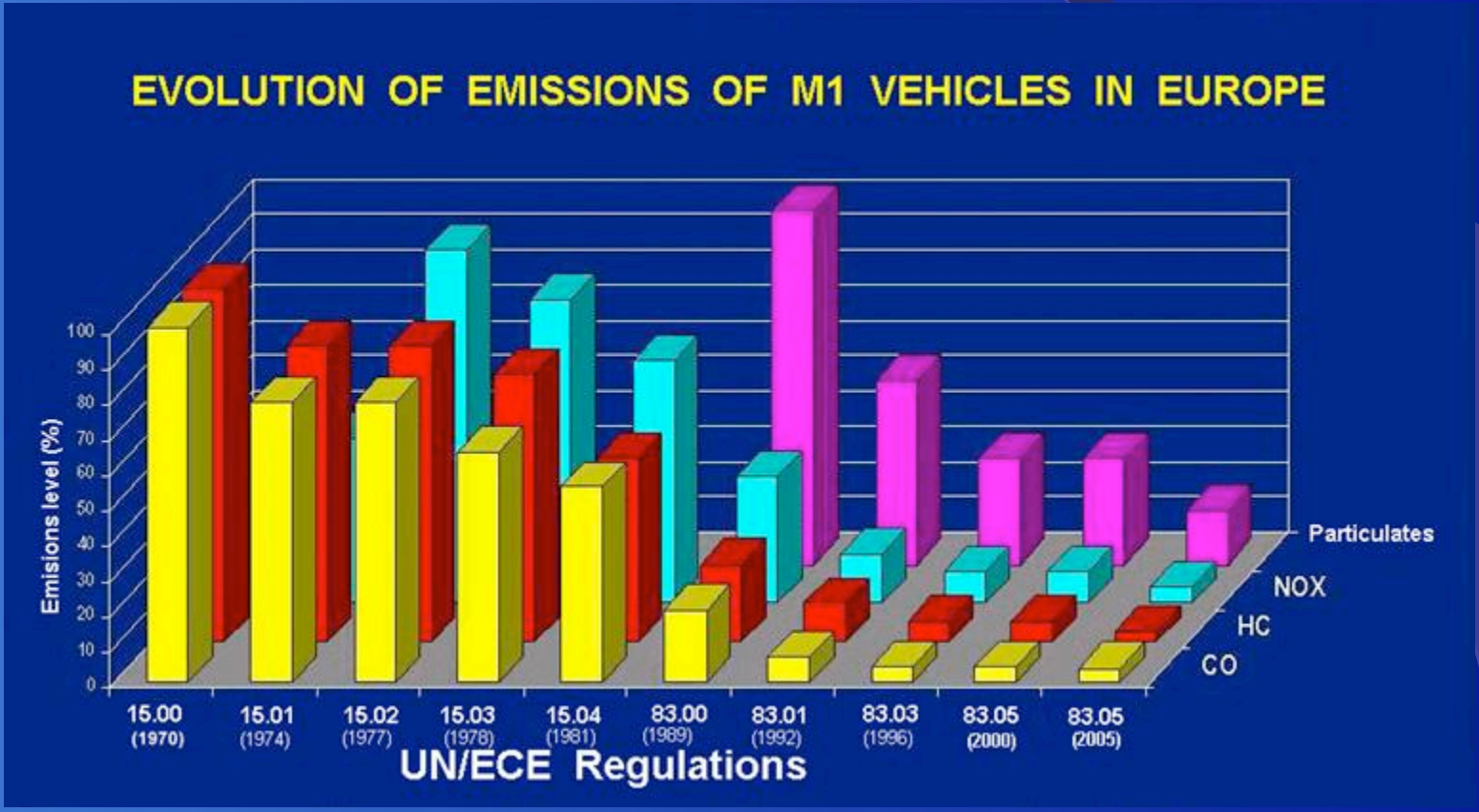
Global	UNECE countries
Trade and Transport Facilitation vs. Security	- EU external borders, transit, B/C performance, Euro-Asia link, **gaps in coverage** - Land transport security under-estimated
CO_2 abatement	- Scale of variations (euro vehicles – market access) - policy gap! - Local pollutants!
Traffic Safety	The best: targets monitored The worst: no political support

Transport will have to contribute to CO2 abatement

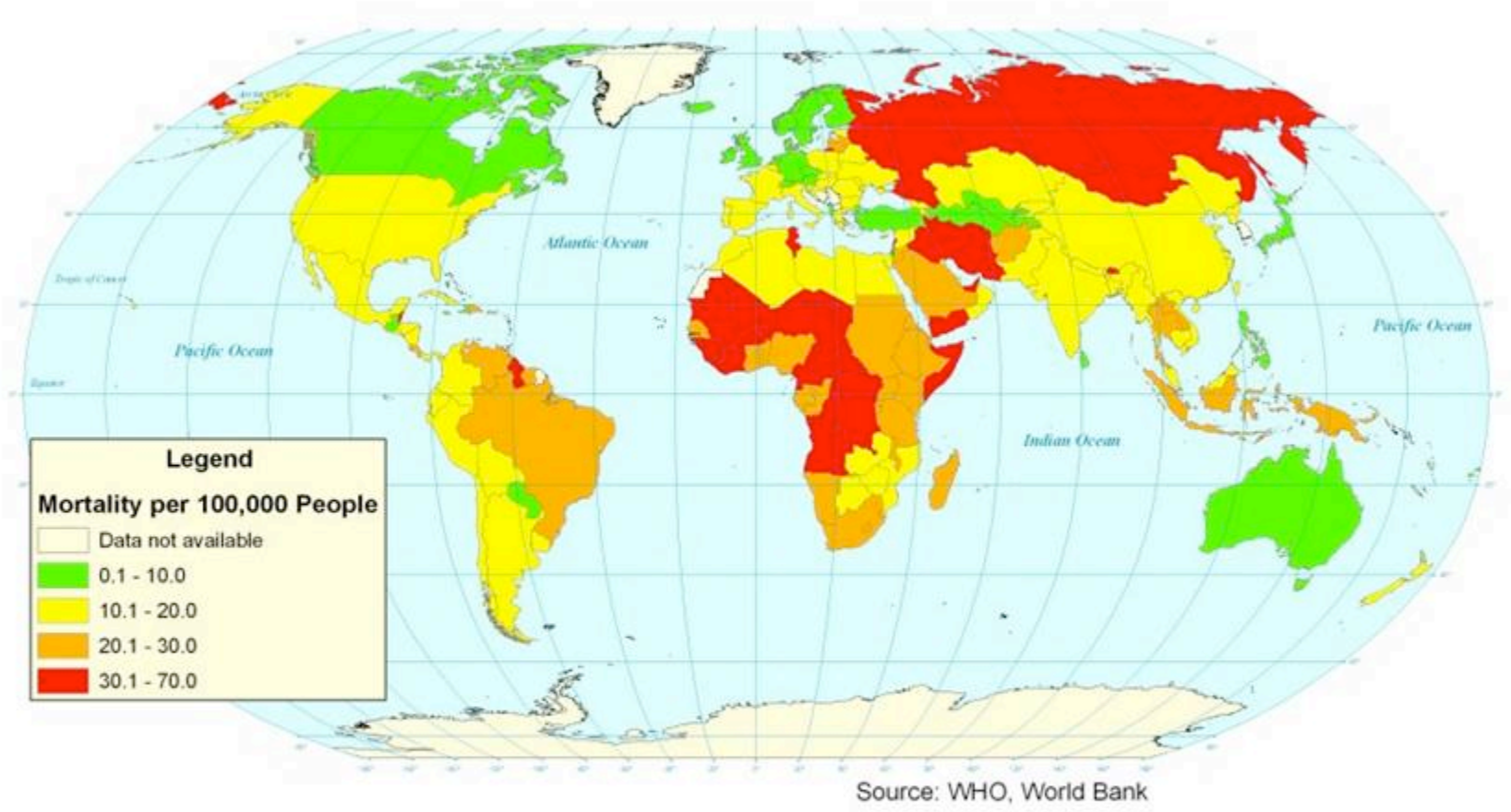


Vehicle emissions regulations (cars)

Reduction > 95% of classic pollutants (CO, NOx HC)
and > 85 % of particulates



UNECE has the best and the worst performers



Road Traffic Mortality per 100,000 People

Pillars of sustainable transport development

Access affordability safety emissions

Economic **social** **environmental**

THE PEP – the integrator

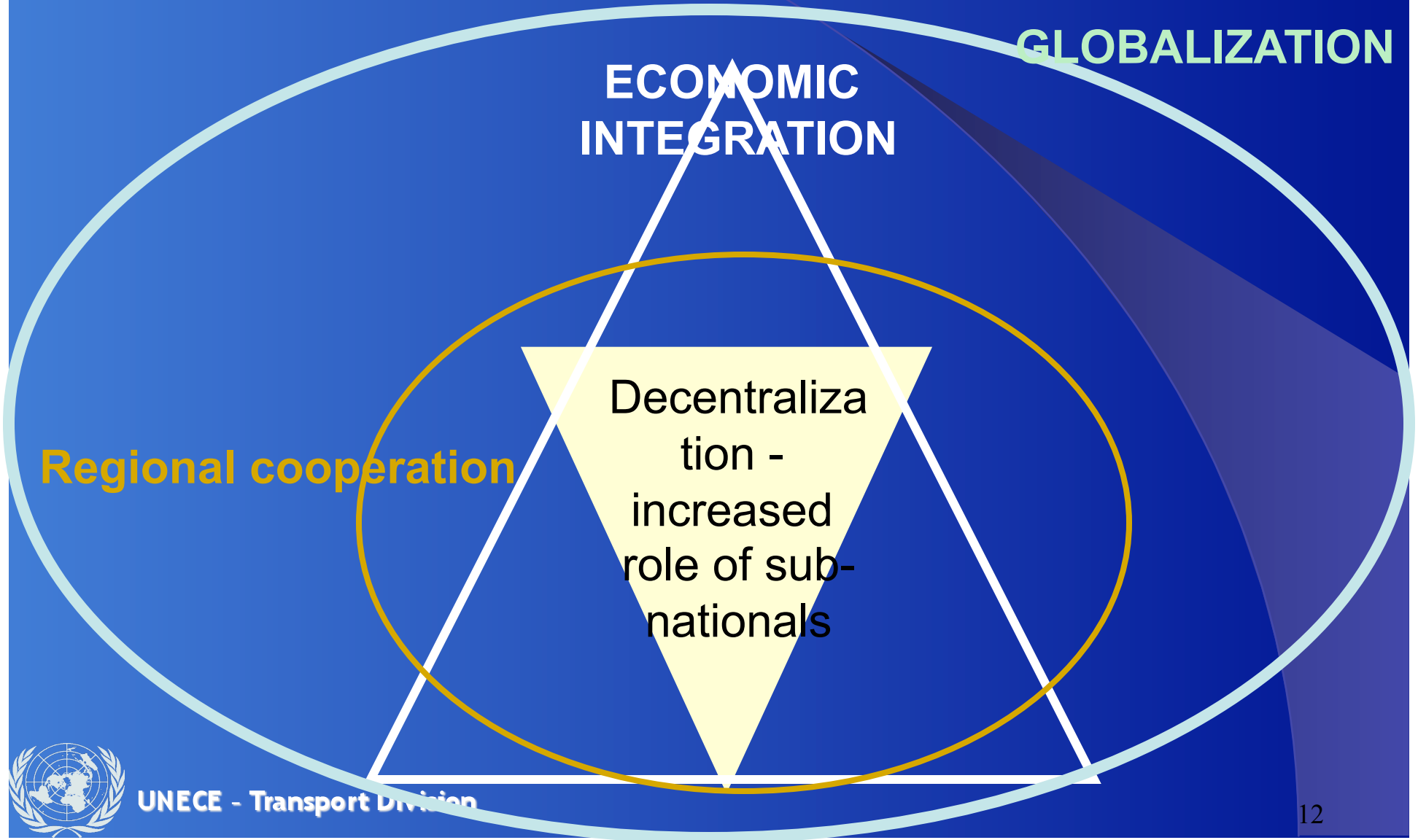
THE PEP provides:

- Unique framework for equal representation and full ownership by the transport, health and environment ministries;
- A pioneer process of cooperation among all stakeholders;
- Concrete capacity building and awareness raising activities.

Selection and Prioritization of transport projects

Shift of gravity in decision making
Shift of focus from national to multi-country analysis

Shift of gravity in decision making



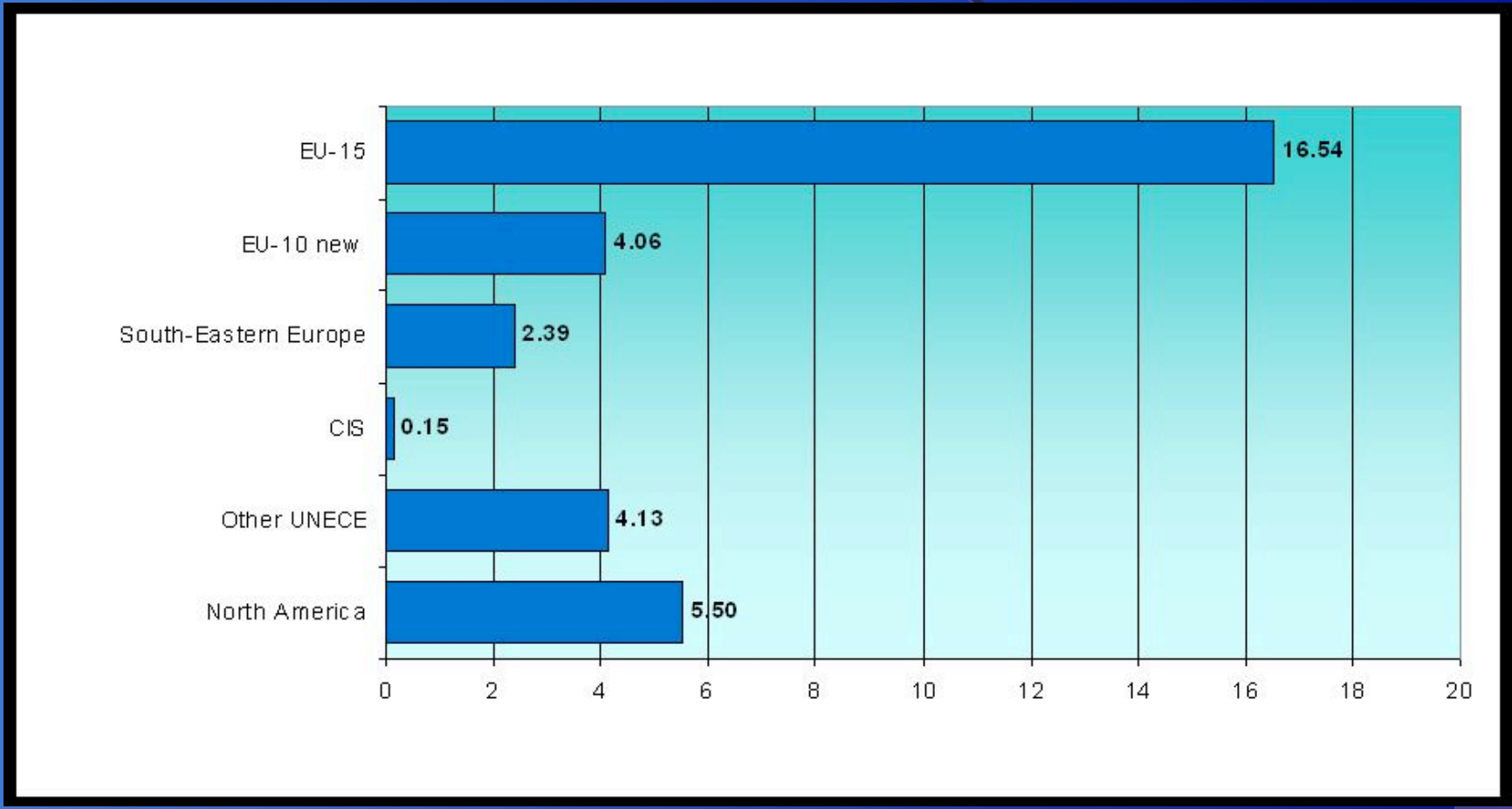
Shift of focus from national to multi-country planning

Initiatives:

TEM, G-24, TEN-T, TER, Pan-European corridors, TEN-T for 30, TEN-T and neighbours, Black sea highway, BAM, Trans-siberian Railways, TRACECA Corridors, EATL, Trans-Asian Highway, Trans-Asian Railways, EurAsec corridors, AGR, AGN…..

Huge development differences, e.g. motorway coverage

(Km of Motorways per 1000 km^2)



Shift of focus from national to multi-country analysis

- World Bank and other IFI guidelines
- TINA
- REBIS and TIRs
- UNECE – socio-economic analysis
- UNECE - bottlenecks

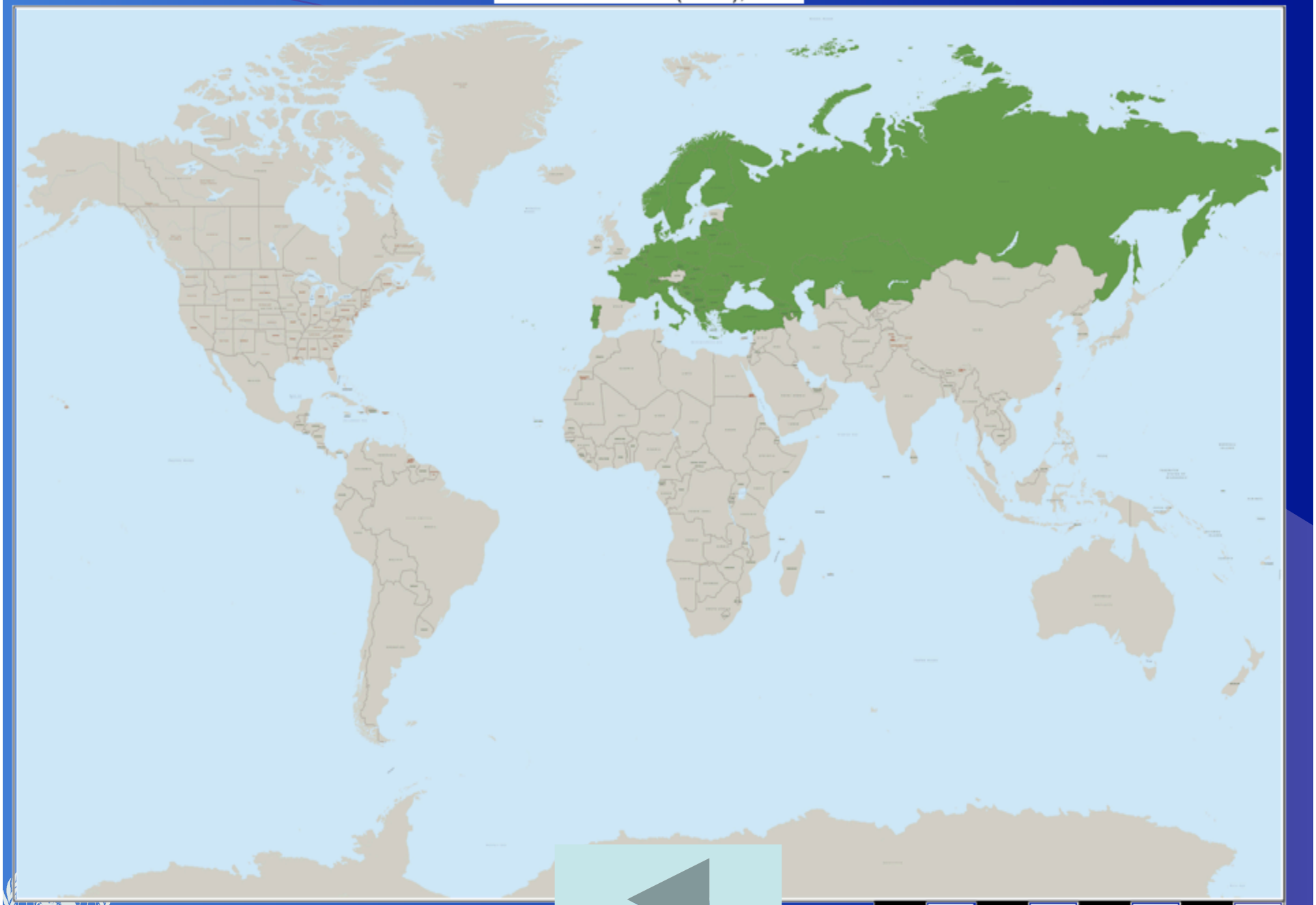
What UNECE brings to the table?

Investment planning tools
Infrastructure agreements
Traffic censuses
Analytical tools
Projects

The Investment Planning Tools

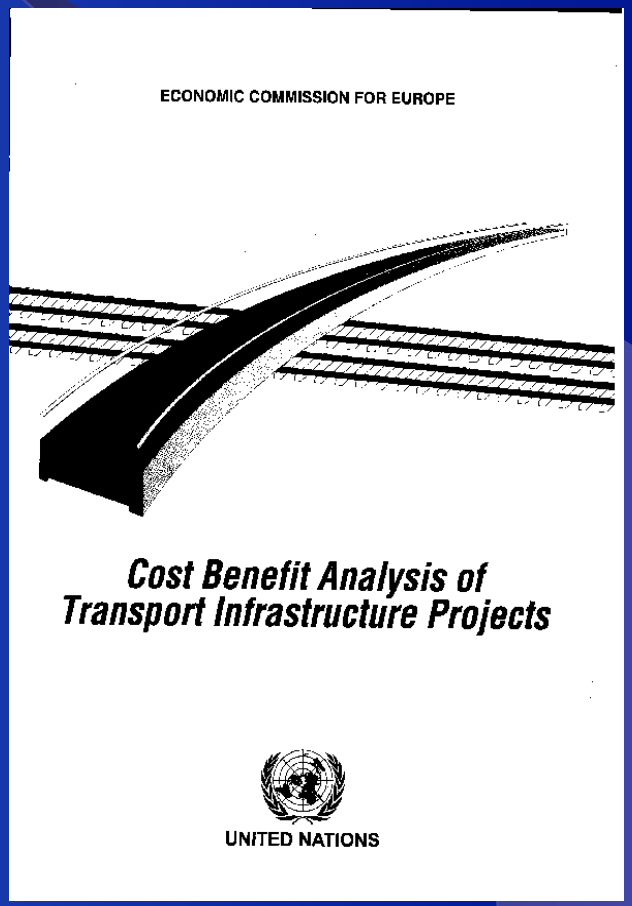
- The UNECE Governments have developed methodologies for **planning the "E" networks** – Modal infrastructure **agreements**: road, rail, river, inter-modal
- **Traffic Censuses**
  - On E-roads and E-railroads
- **Guidelines for Socio-Economic Cost Benefit Analysis**
- **Identification of bottlenecks and missing links**

E Road Network (AGR), 1975



Guidelines for Socio-Economic Cost Benefit Analysis of Project Appraisal

- EU, EBRD, EIB, WB and national best practices
- Guidance for project submission and comparisons
- Incl. safety, environmental, other policy aspects
- Common starting point



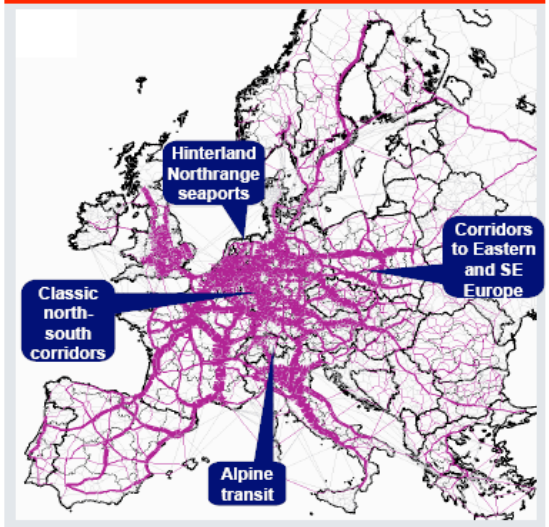
Bottlenecks

- Growing problem,
  - Not only congestion
  - But also missing links
- Methodology to identify
- Best practices in policy options

Further bottlenecks in European transport flows expected, growth forecasted mainly on key corridors

European transport flows 2004
(totals for rail, road and inland vessel)

European transport flows 2015
(totals for rail, road and inland vessel)



Source: ROMP: Factor 40 million t / mm, interzonal transport >50 km

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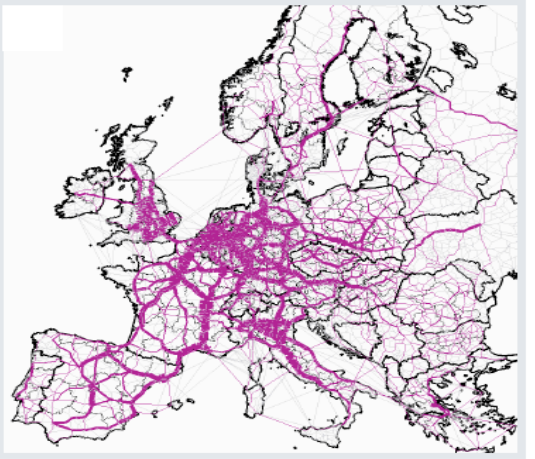

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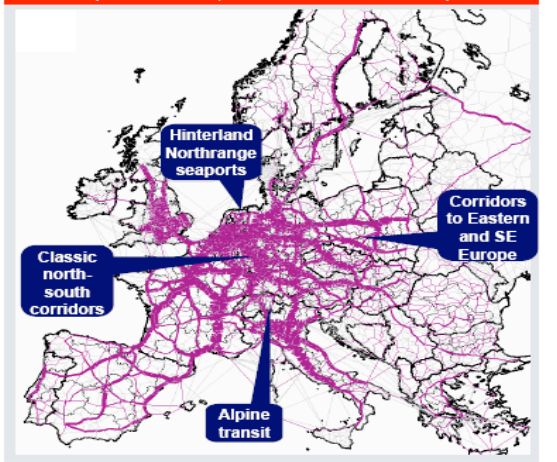

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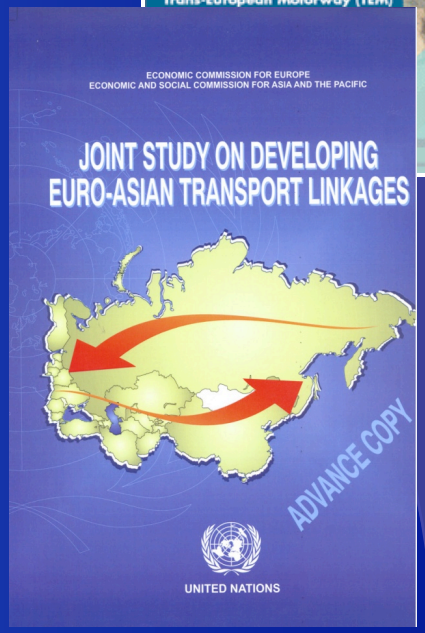
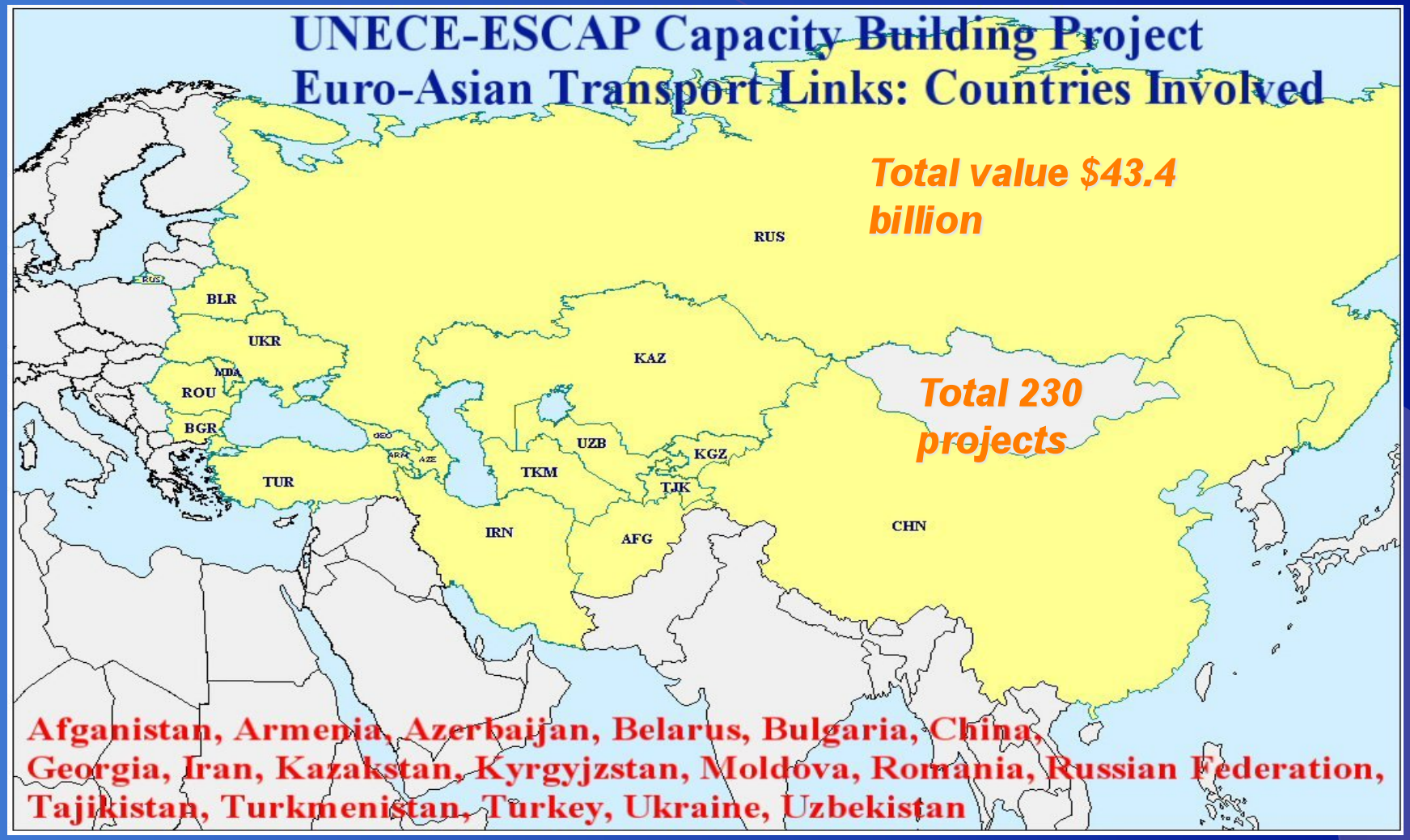
Multi-country investment planning – UNECE Regional Projects

Investment planning tools used in:

- TEM - TER Master Plan
- Euro-Asian Transport Linkages



EATL Project



EATL Ministers / Declaration, 2008

70th Session of the UNECE Inland Transport Committee

Euro-Asian Transport Links
Ministerial Meeting

19-21 February 2008 | Geneva, Switzerland

New issues: Ports and their hinterlands

- Traffic trends for containers
- Policy responses to congestion
- Solutions
  - Short term: efficiency improvement, reduction of harmful environmental impacts
  - Long term: challenging the orthodoxy: a new hinterland model
- Good practices

Alternative supply chain route between Asia and Austria via Danube and port

Good practice: direct rail services from China to Europe
(Source: Deutsche Bahn AG (2008))

Lessons learnt

Corridor and network planning

- Geographic coverage
- National – bilateral - regional – global interests
- White elephants

Solving bottlenecks

- Sustainability opportunity

Congested Highways 1988

US Department of Transportation
Federal Highway Administration
Office of Freight Management and Operations
Freight Analysis Framework

National Highway System Estimated Peak Period Congestion

(1998)

NHS Highways
- Below Capacity
- Approaching Capacity
- Exceeding Capacity

Potentially Congested Highways 2020

US Department of Transportation
Federal Highway Administration
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Freight Analysis Framework

National Highway System Estimated Peak Period Congestion

(2020)

NHS Highways
- Below Capacity
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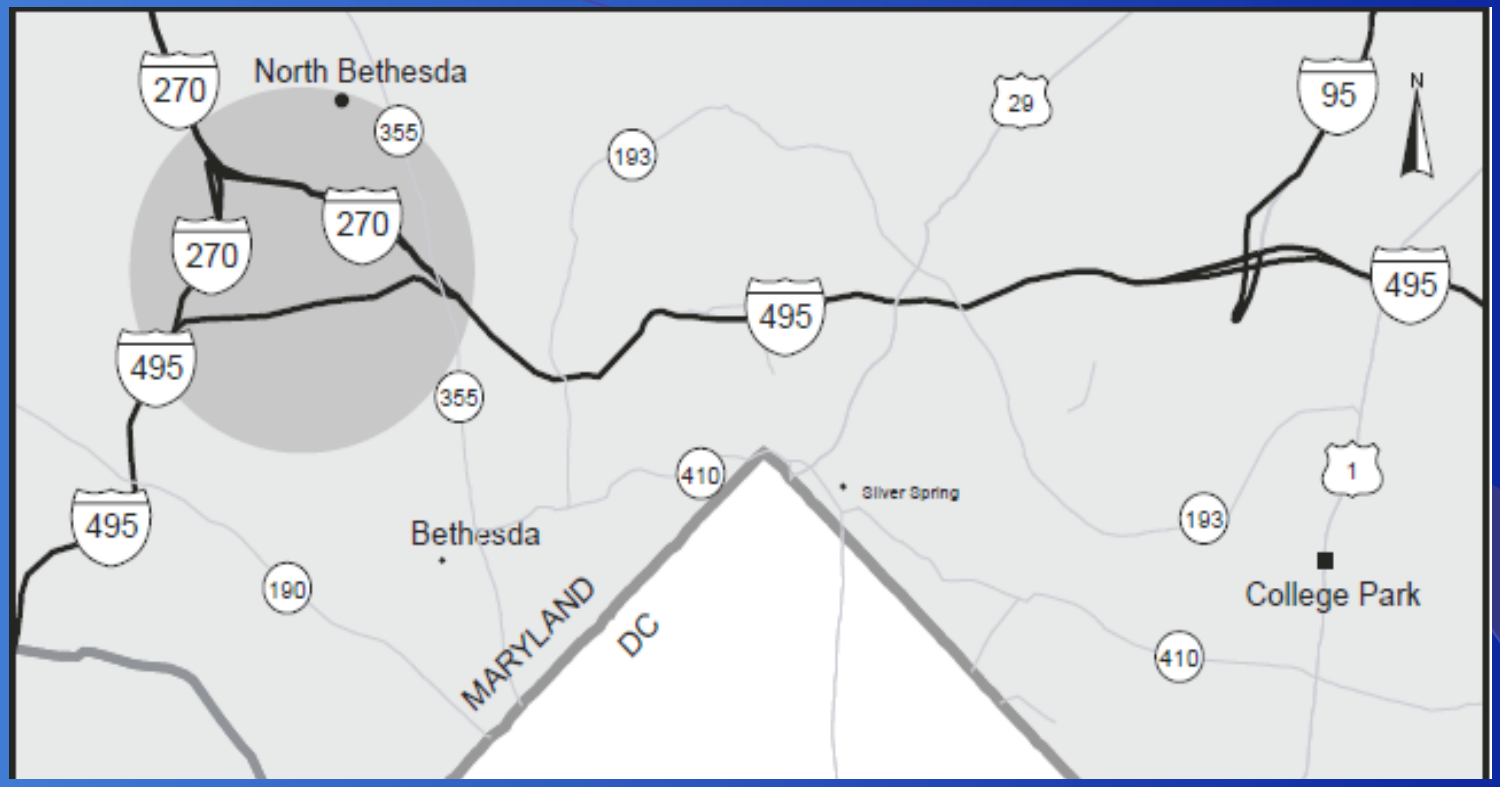
Washington, DC - I-495 (Capital Beltway) at the I-270



VITAL STATISTICS

I-495 at the I-270 Interchange

Annual Delay: 19,492,000 hours

	2002	2025 (estimated)
Vehicles Per Day	243,425	382,230
Peak Period Delay (minutes per vehicle per trip)	16.4	48.2 (without improvements)
Annual Traffic Growth	1.98%	

Benefits of Improvements

2004-2026

Allowing for a three-year construction period and a 20-year project life, bringing the I-495 at the I-270 interchange up to level of service D would significantly reduce congestion, thereby smoothing the flow of traffic and:

SAVING THE ENVIRONMENT

emissions (in tons)

	No Improvements	With Improvements	Percentage Change
Carbon Monoxide	639,846	233,984	-63.4
Volatile Organic Compounds	67,540	27,853	-58.8
Nitrogen Oxides	23,144	23,642	2.2*
Carbon Dioxide	7,377,028	1,333,213	-81.9

SAVING TIME

minutes per vehicle per trip
(averaged over construction period and project life)

	No Improvements	With Improvements	Percentage Change
Peak Period Delay	32.9	6.7	-79.6

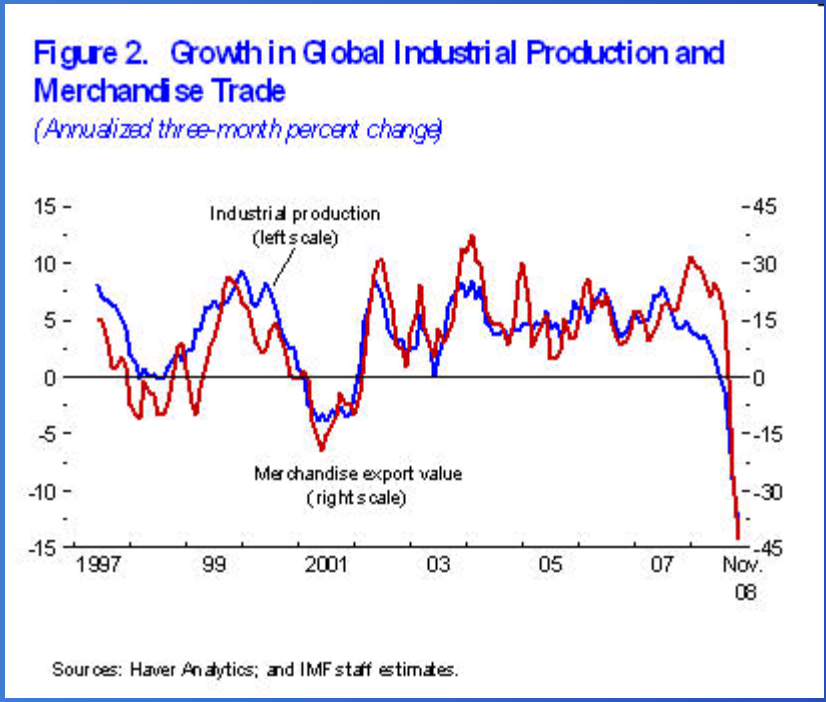
SAVING FUEL

Total Fuel Savings (gallons)	619,878,414
Percentage Reduction	81.9%
Savings Per Commuter (gallons over the life of the project)	121.2

SAVING LIVES

Fewer Total Crashes	5,942
Fewer Fatalities	24
Injury Reduction	2,918

Economic crisis challenge and opportunity



- … in a sustainable way,
- But still too much focus on subsidies
- Lack of shared responsibility

Summary

- UNECE countries: forerunners
- UNECE:
  - Centre of regulations and multilateral agreements and
  - Promoter of regional investment planning
- UNECE Analytical tools are at your disposal
- Need for
  - Political commitment
  - Global harmonization - infrastructure development
  - Universal coverage of legal instruments
  - Broader use of available analytical tools
    - Investment planning methodology
    - Identification of bottlenecks and missing links

Thank you for your attention!

www.unece.org/trans