

Resource efficiency and eco-innovation

Opportunities and challenges for Eastern Europe and the NIS region

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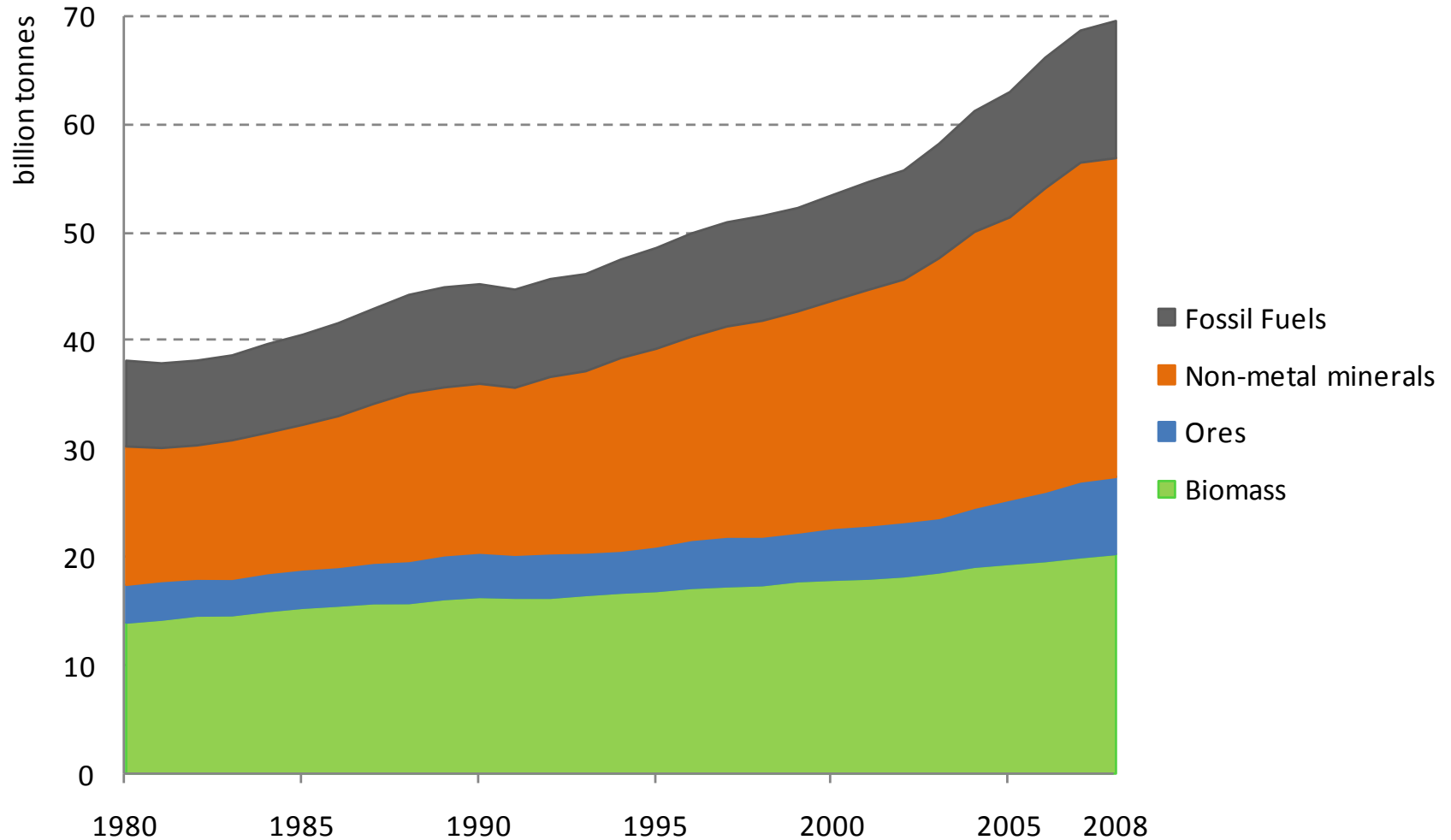


5 Working Papers as background: all focused on Europe and NIS region

- Decomposition analysis of energy intensity (*Overseas Dev. Institute*)
- Resource use and resource efficiency (*SERI*)
- Promoting energy and resource efficiency (*UNIDO*)
- Changing production and investment patterns (*UNIDO*)
- Eco-innovation: trends and policy challenges (*Technopolis Group*)



The global challenge: rapidly increasing resource consumption



Environmental problems ...



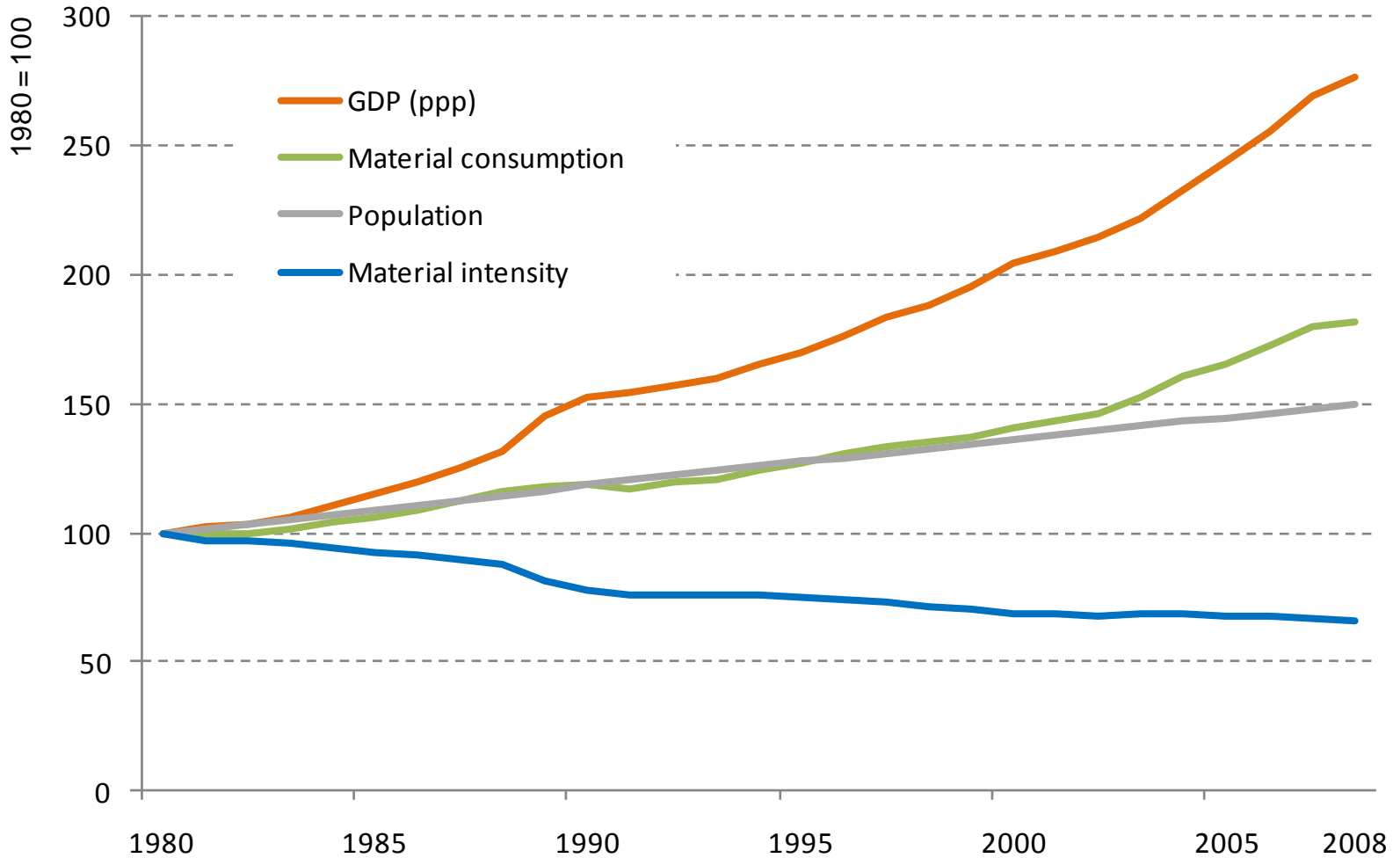
caused by **extensive resource use** related to production and use of products: climate change, water scarcity, air pollution, biodiversity loss, ...



with **negative impacts** on the **quality of life** of people

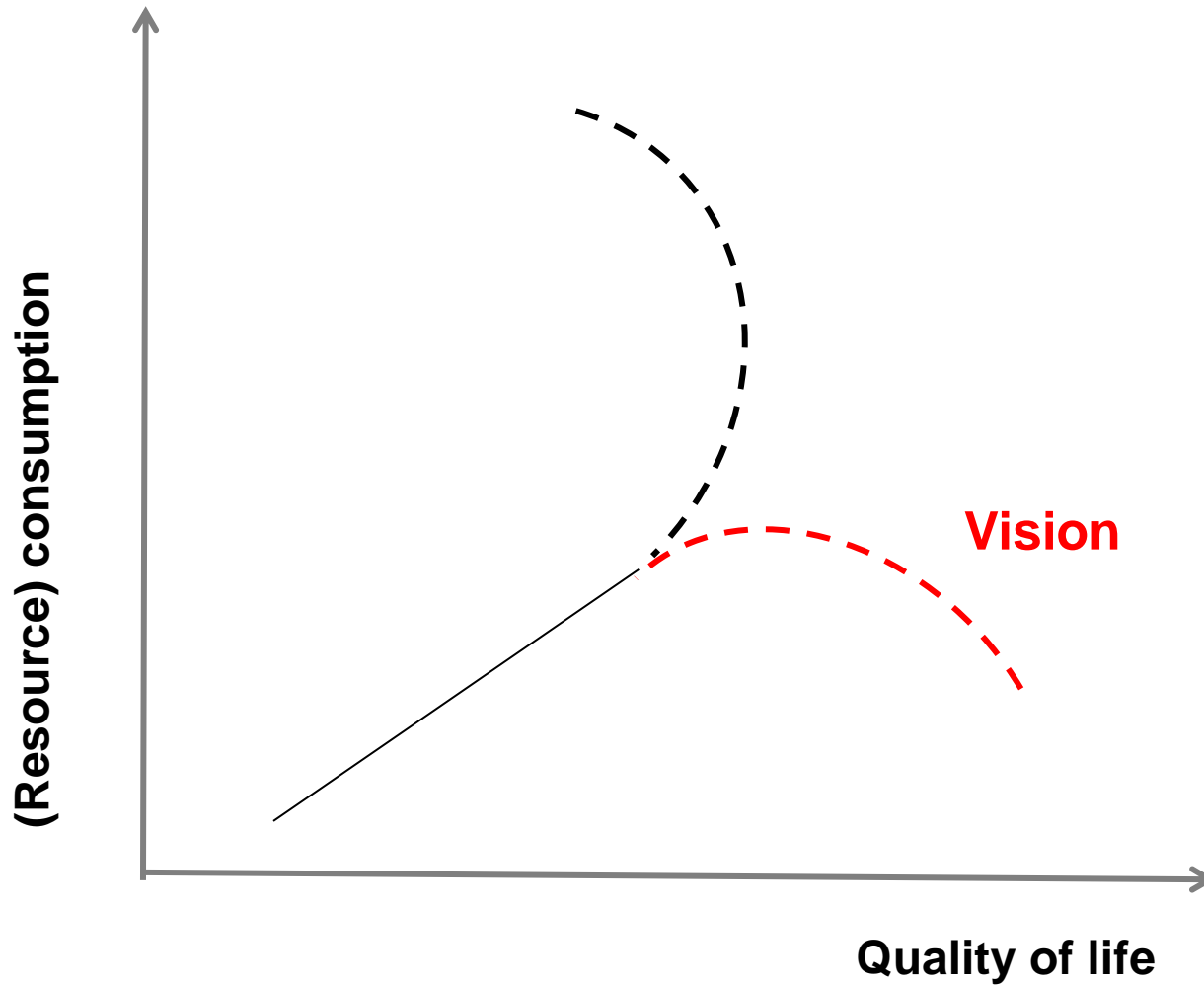


Global “relative de-coupling”, but absolute growth in consumption





Future of (resource) consumption and quality of life





The resource efficiency challenge

Mitigate environmental problems by significantly improving resource efficiency and **reducing resource use in absolute terms** (“absolute de-coupling”)

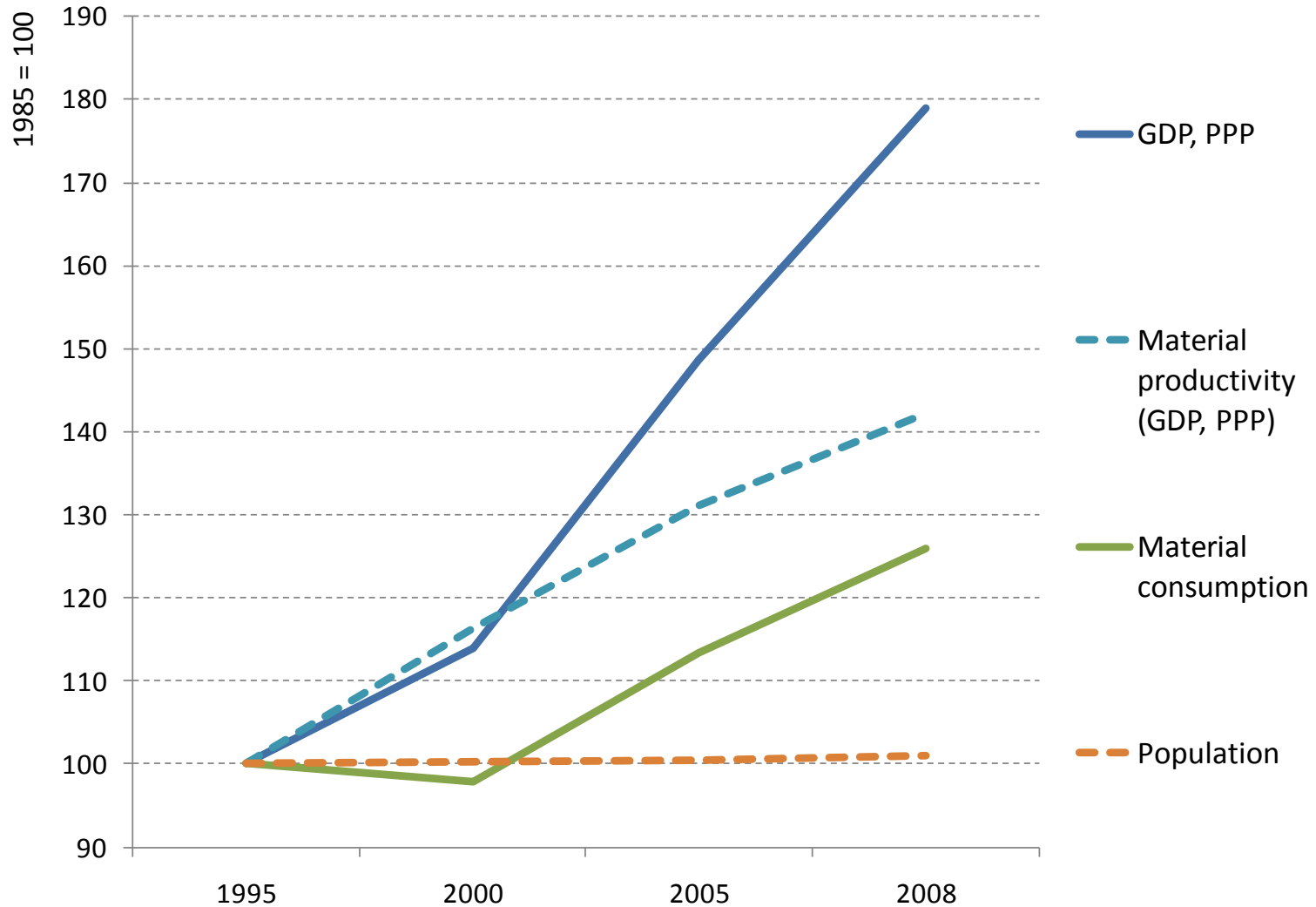
Exploit the economic opportunities of this resource efficiency strategy, such as

- Savings of energy and material costs
- Expanding new markets for eco-efficient products
- Creation of new jobs and social innovations

Eco-innovation offers a promise of combined economic and environmental benefits

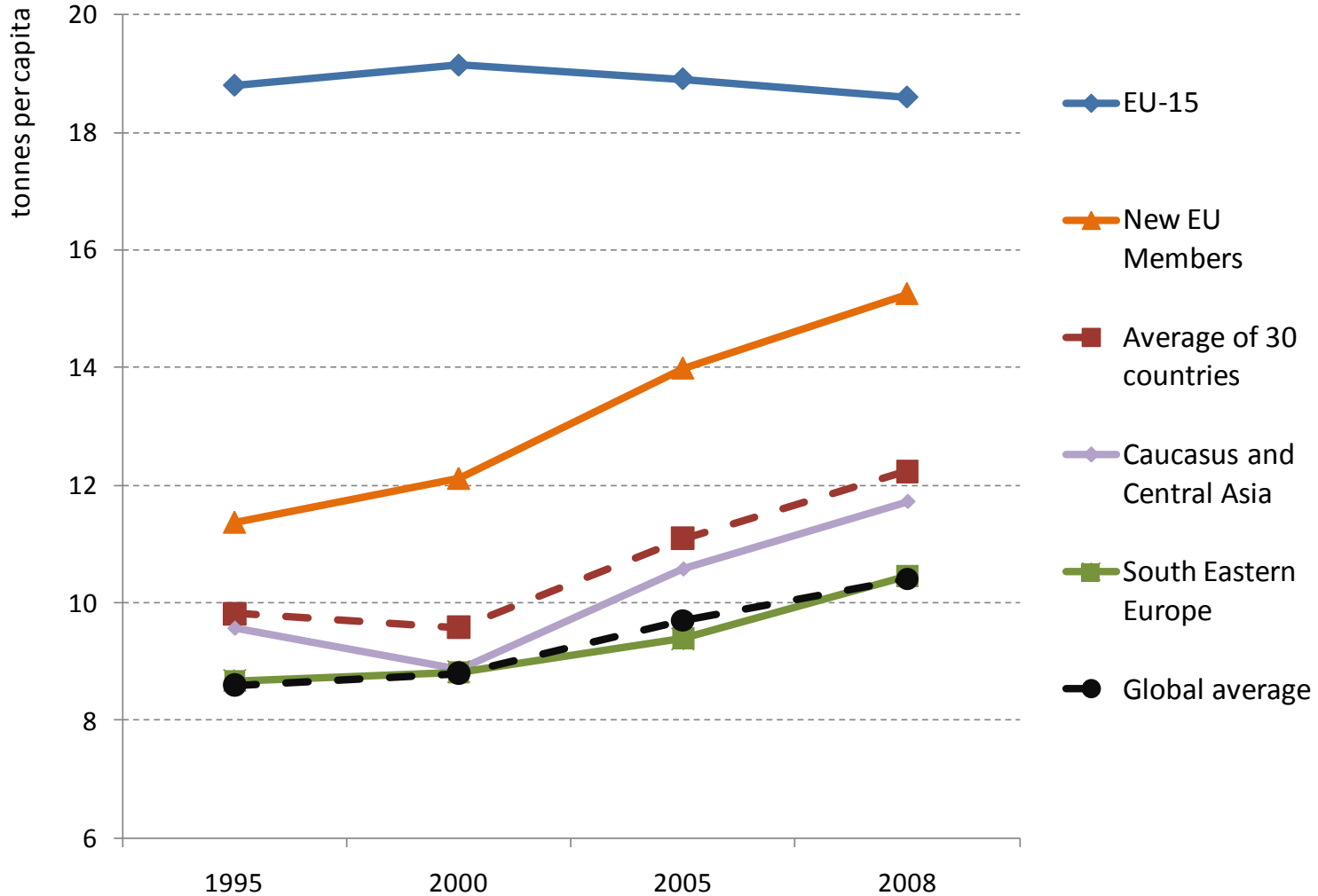


Material productivity in EE and NIS has improved by over 40% since 1995





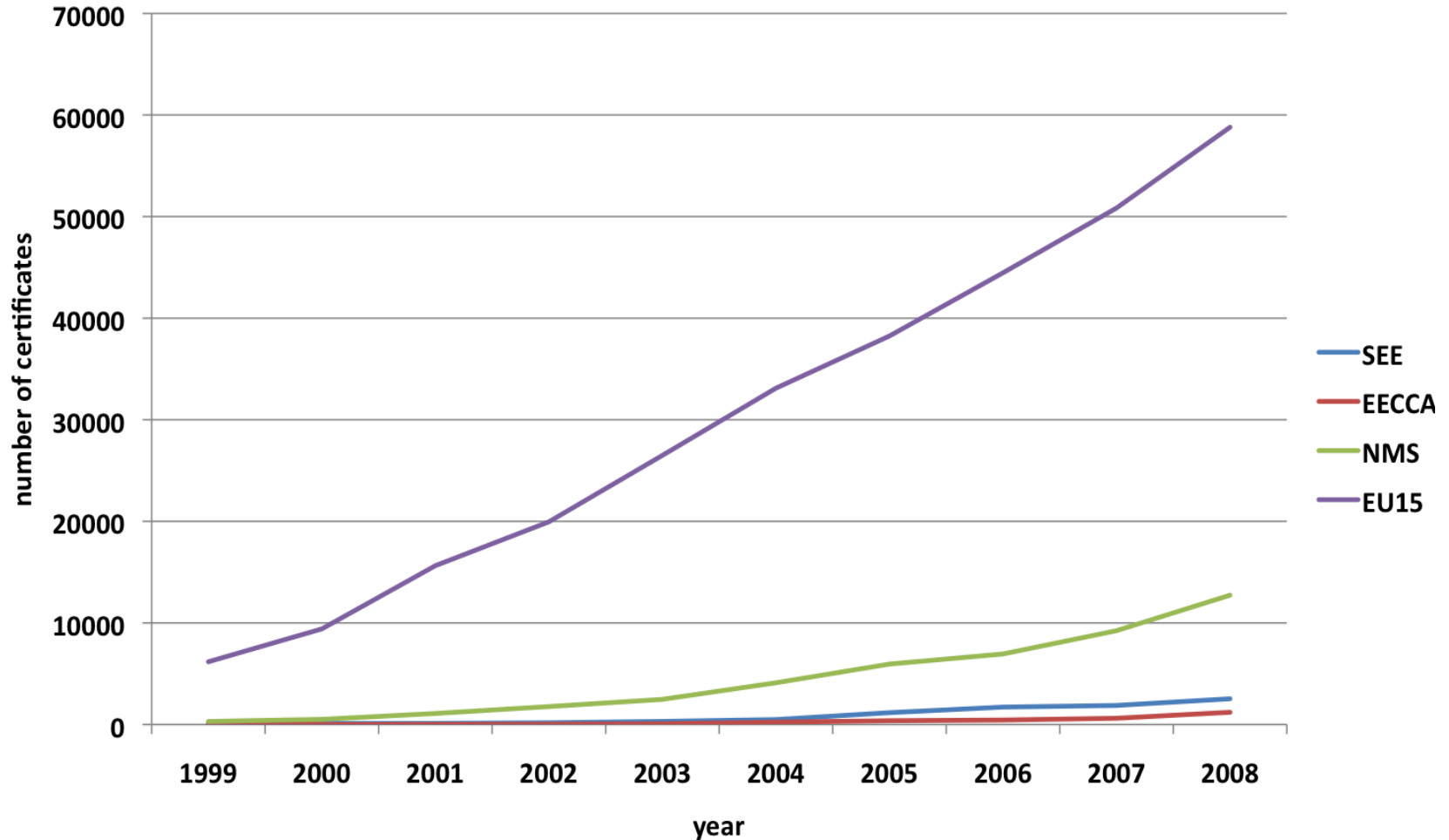
... but material consumption has also grown rapidly since 2000





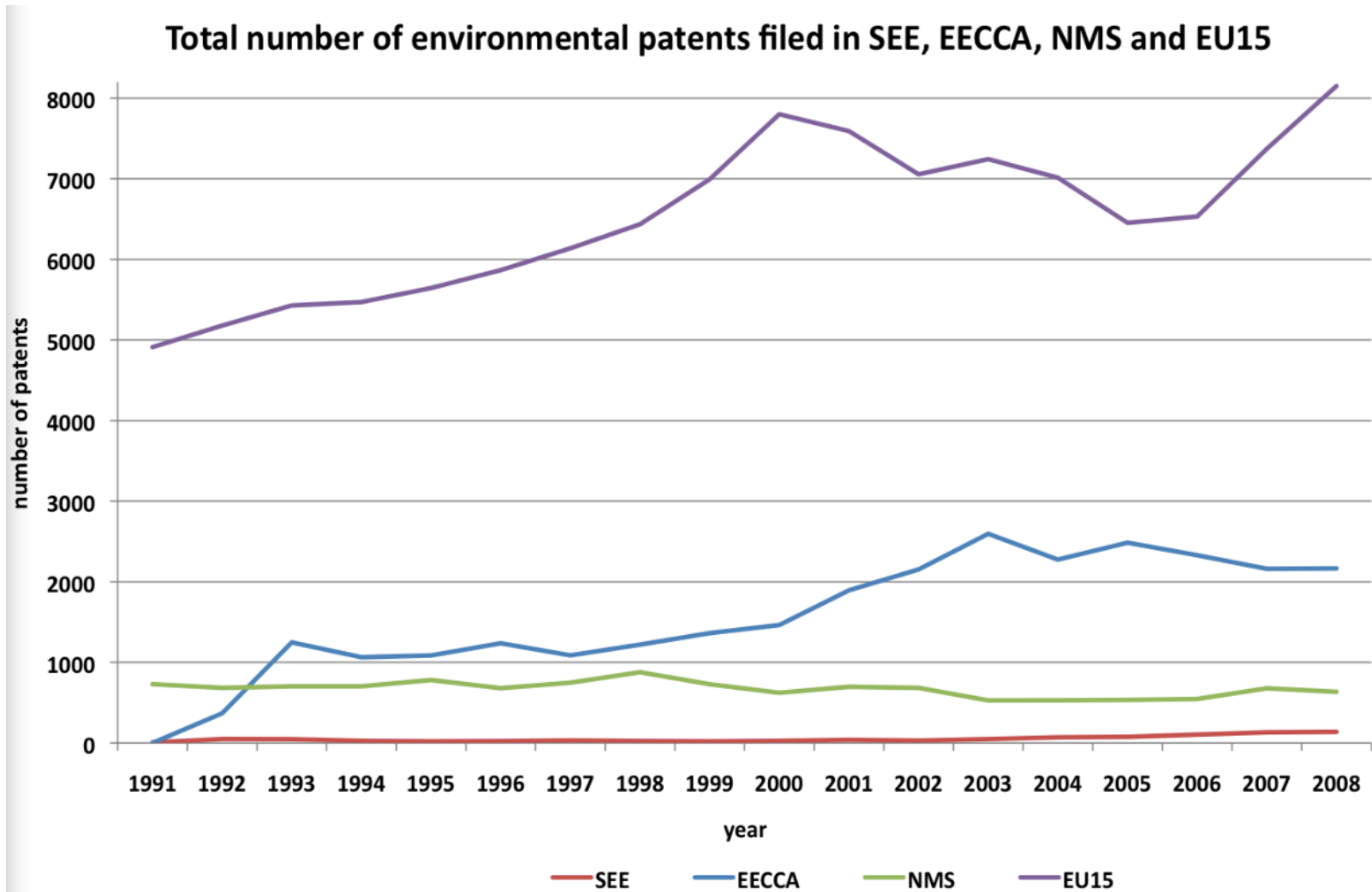
Environmental management systems expanding, but far below EU-15 level

Number of ISO14001 certificates registered in SEE, EECCA, NMS and EU15





Similar pattern regarding environmental patents





Conclusions from empirical studies

- The Europe and NIS region is **diverse** with different economic and social structures and diverse technology and innovation profiles
- **Improvements** in material and energy efficiency have been significant in the past 15 years, but levels are still far below EU-15
- Current development paths: **resource efficiency and eco-innovation gaps are not closing** → need for strong and consistent policy framework



Outline of a policy framework for Eastern Europe and the NIS

- Policies need to address the **whole life-cycle** of products from resource extraction via manufacturing to consumption and end-of-life
- **Coherent, multi-level governance system:** from local/regional to national to global policies
- **Policy mix:** material and energy/carbon taxes; technology transfer and standards; education and capacity building for eco-efficiency; etc.
- **Key sectors:** (renewable) energy; transport and housing infrastructure; manufacturing industries

Thank you for your attention!

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