Economic Policy Instruments

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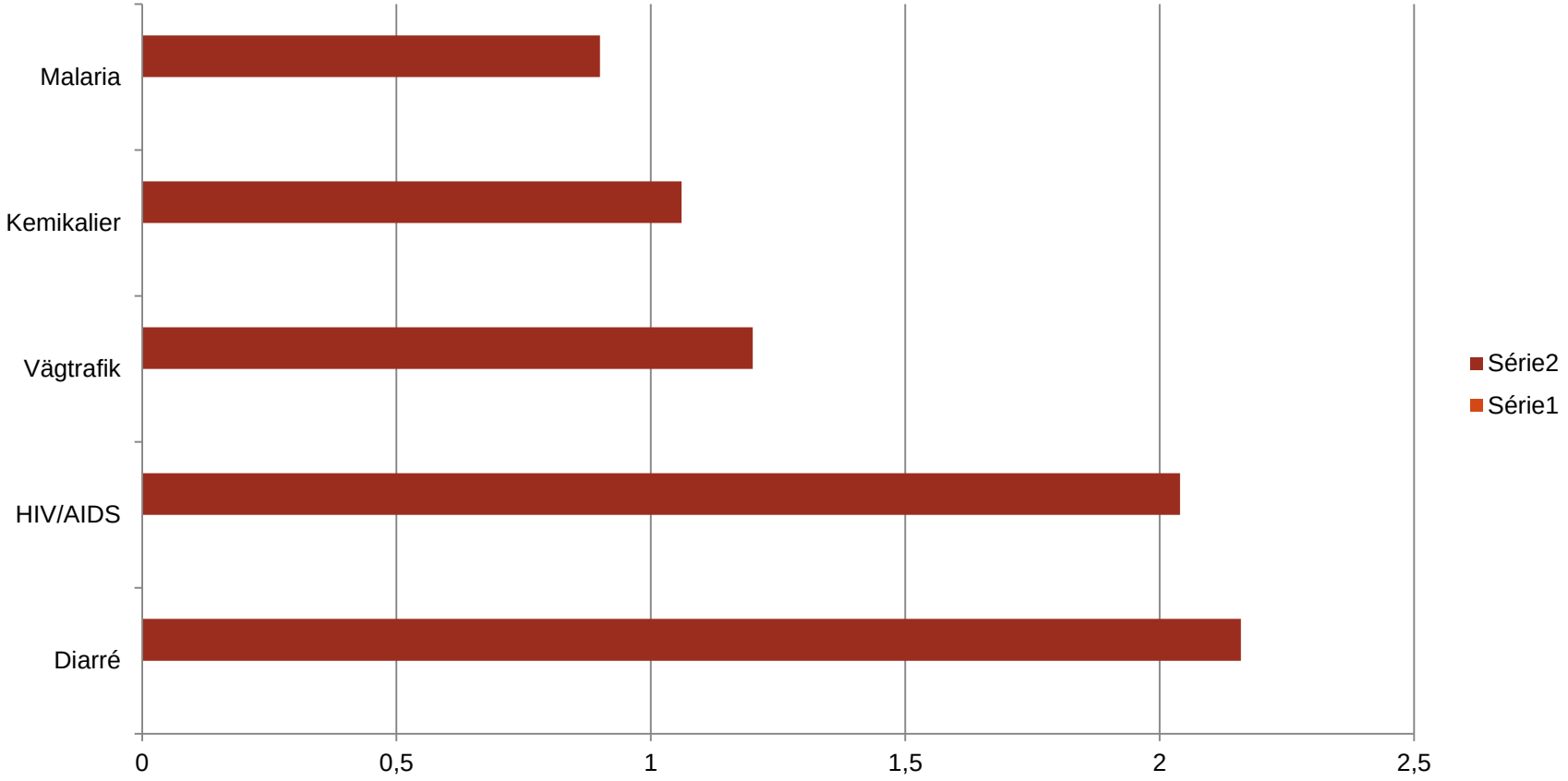
Causes of death globally – a comparison,
million deaths per year



Economic valuation, Health

Own calculation (WHO, low values):

~ 2000 Bln USD per year

Turnover of chemicals industry:

~ 3-4000 Bln USD per year

(Based on: USA 7,4 M USD/lost life (EU 3,6 M, ECHA 2016 5 M !!) Global GDP/capita (PPP) is ¼ of that of USA)

Content

1. On what can policy instruments be targeted?
2. Different types of policy instruments
3. Criteria for evaluation of policy instruments
4. Examples of economic policy instruments

What should (… could!) be targeted?

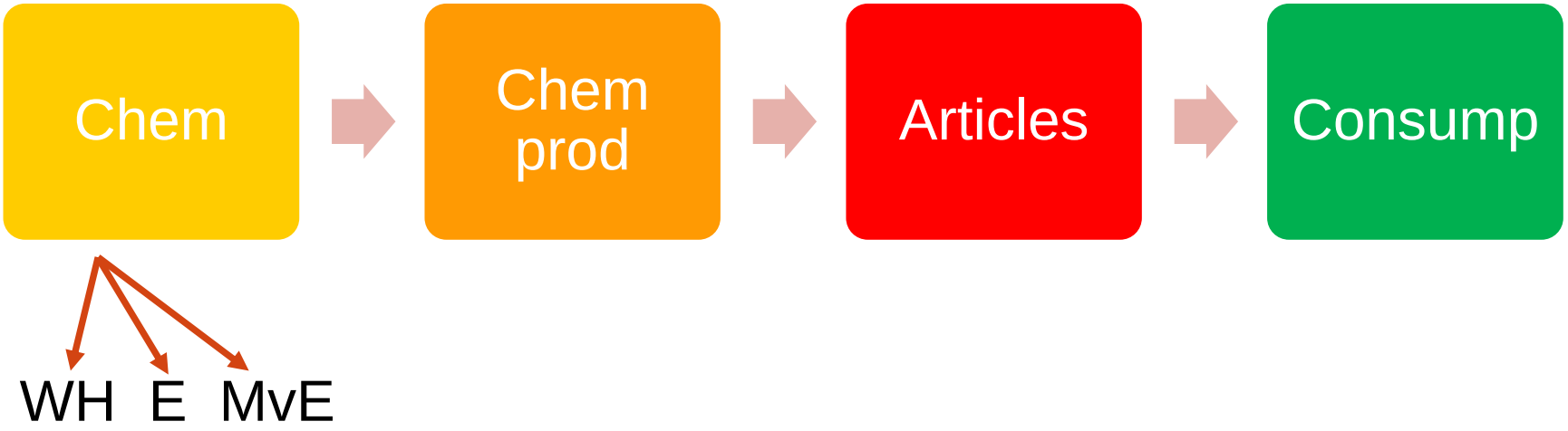
welfare

exposure

emissions or use

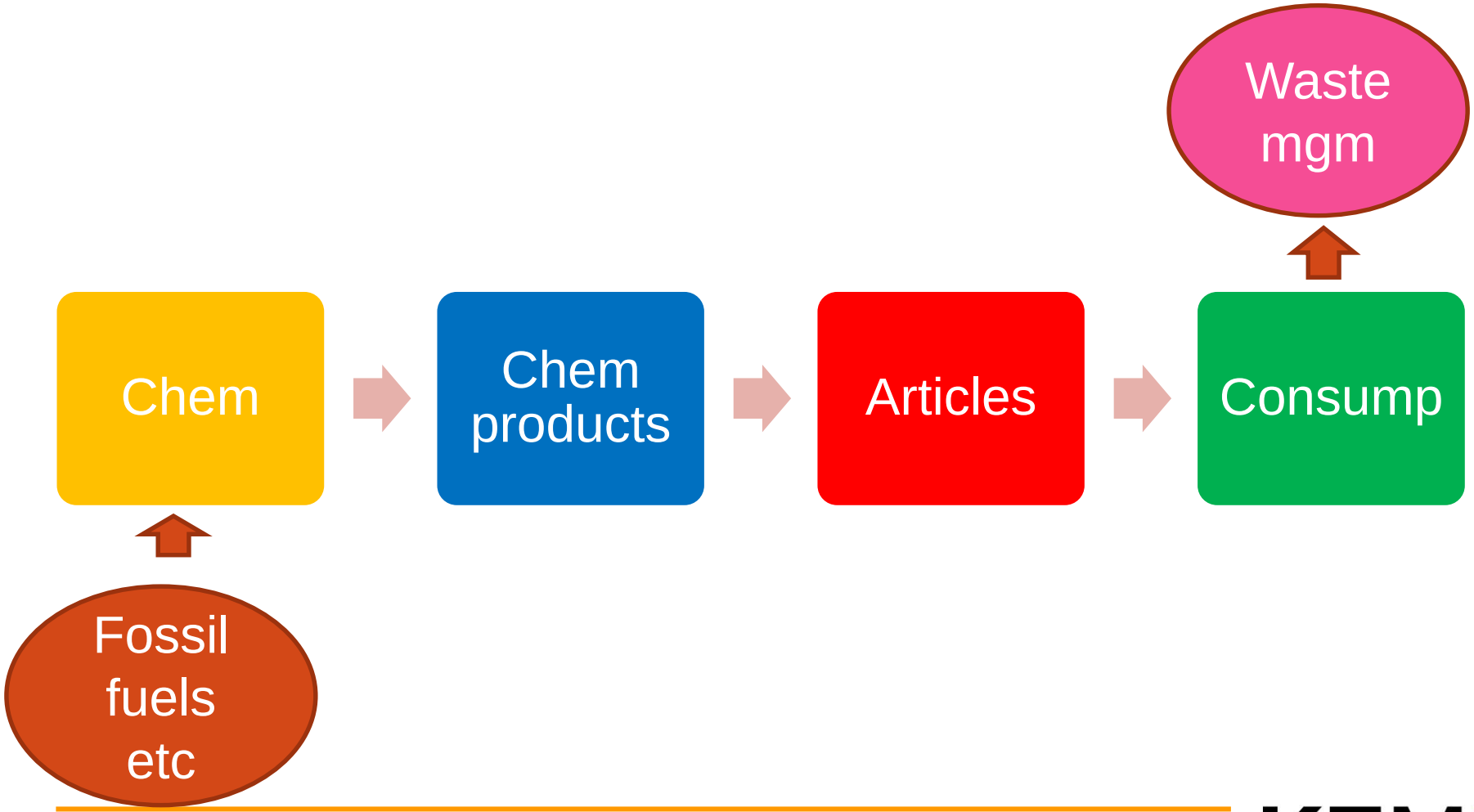
production

Flows of chemicals through the society



WH=health of workers, E=environment, MvE=Man via environment

A somewhat more complex picture



Quantitative and technical policy instruments (administrative, physical)

- Ban (total or with exceptions), (Restrictions)
- Quotas, Licenses, Authorisations
- Physical planning
- Demands for putting on the market
- Regulation of technology, (Restrictions)
- Workplace security regulation, Restrictions
- Quality demands for products, (Restrictions)
- Producer responsibility

Other policy instruments

- Define ownership, rights and duties – voluntary solutions
- Government buys land
- Government buys goods and services

- ❑ Certification
- ❑ Demand information
- ❑ Supply information
- ❑ Research

Which are included in Reach?

Economic policy instruments

Indirect effect on physical variables via prices (incentives)

- Tradable permits (emissions, use, production, etc)
- Taxes and fees (- " -)
- Deposit-refund system (containers)
- Subsidies

Need for a functioning tax administration

Which policy instrument is best?

COMBINATIONS!

Taxes and fees

- **Taxes: Main purpose to affect behaviour**
- **Fees: Main purpose to finance**

- **Taxes: Revenues are used in the government budget**
- **Fees: Revenues used for cost recovery (dírectly or earmarked depending om how it is collected)**

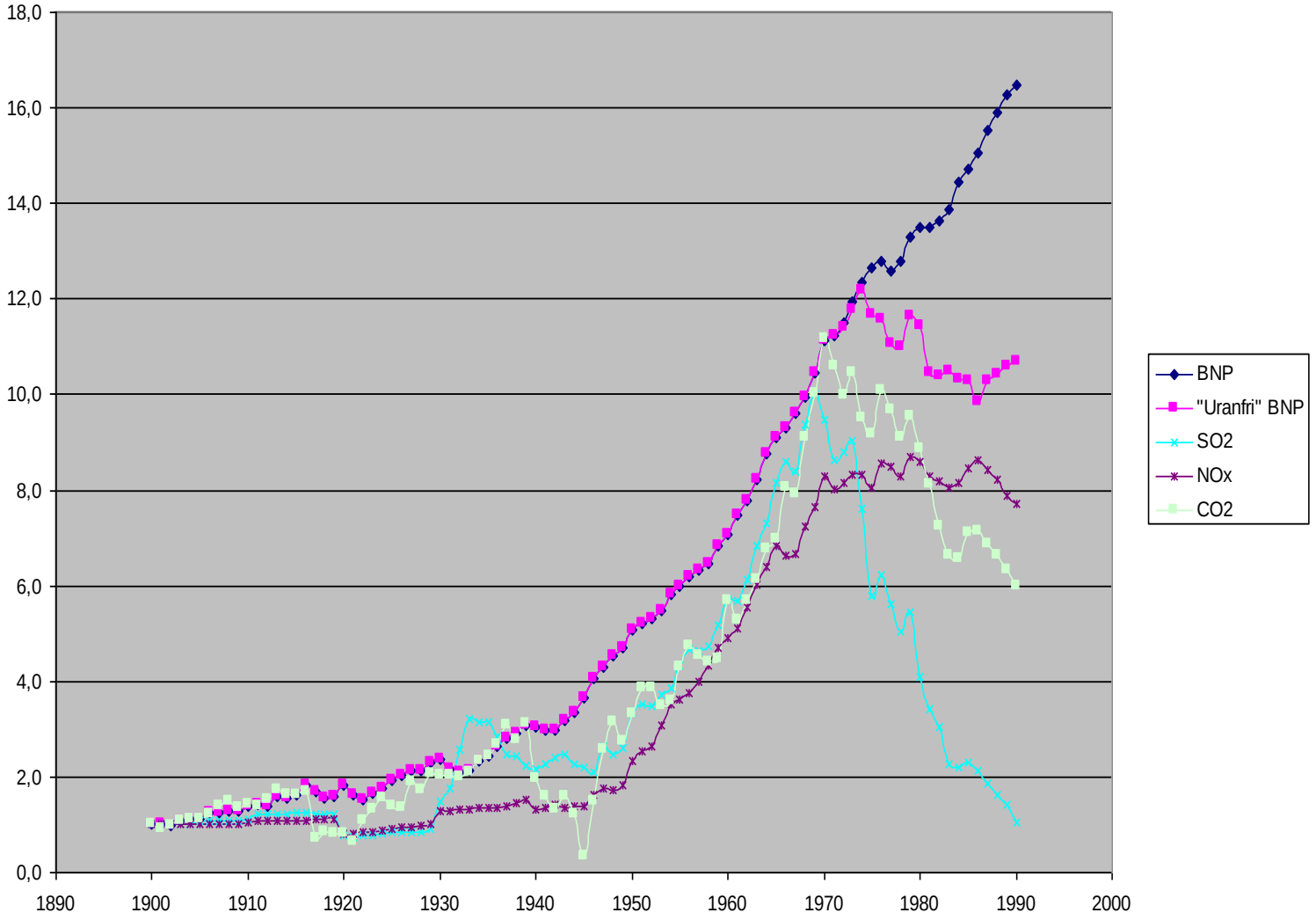
Criteria for choice of policy instruments

- Goal attainment
- Cost efficiency *(Lowest possible cost to reach a goal, MC1=MC2=MC3)*
- Dynamic efficiency and Flexibility
- Administrative costs and Control costs
- Distributional effects and Political acceptance

Economic policy instruments in the environmental sphere in Sweden

- **CO^2 (ca 1 SEK/kg) plus energy taxes**
- **SO^2 (30 SEK/kg)**
- **NO^x (40 SEK/kg, fee)**
- **Differentiated tax on gasoline with respect to Pb**
- **Water levies**
- **Deposit-refund systems for bottles and cans**
- **Subsidies or tax reductions (agriculture, energy sector)**

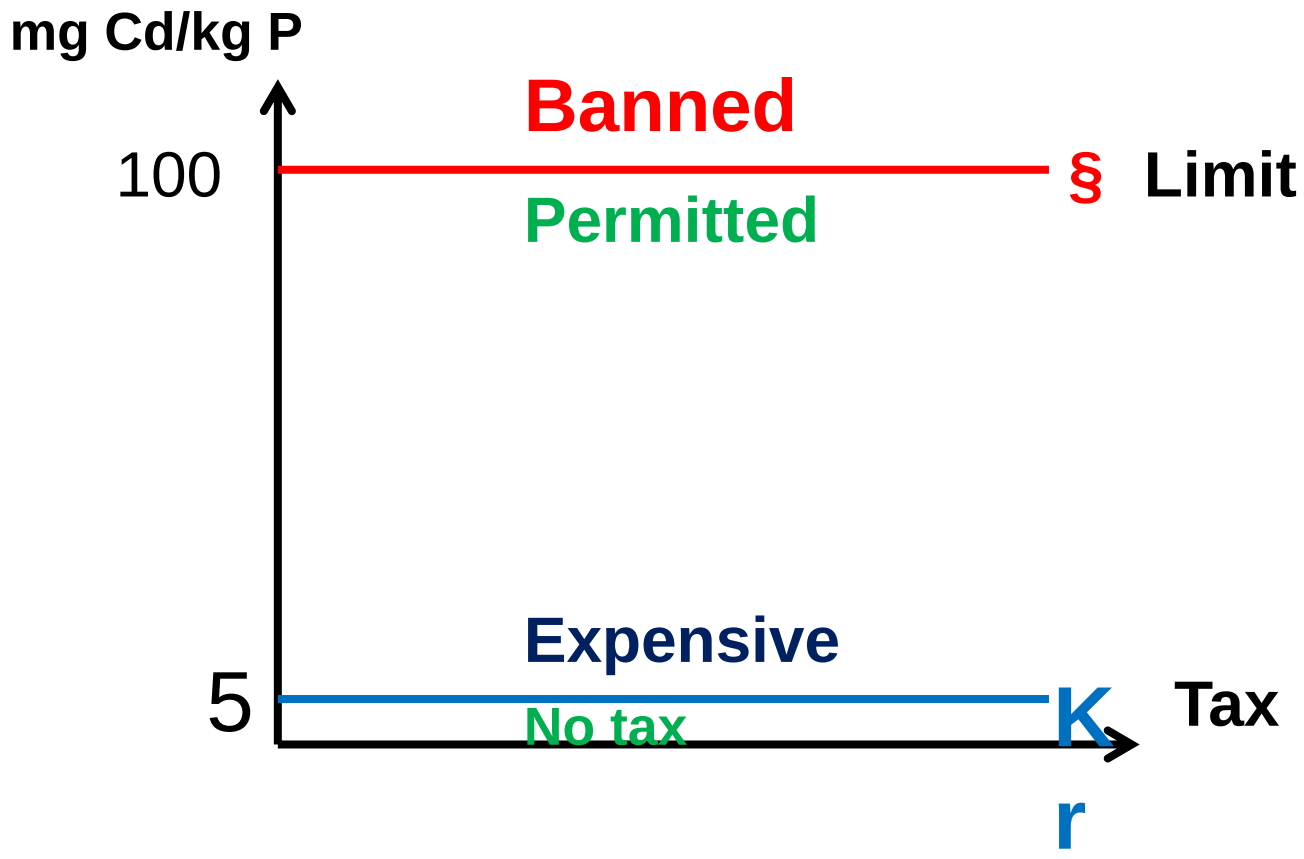
Historical trends for GDP, CO_2, SO_2, NO_x



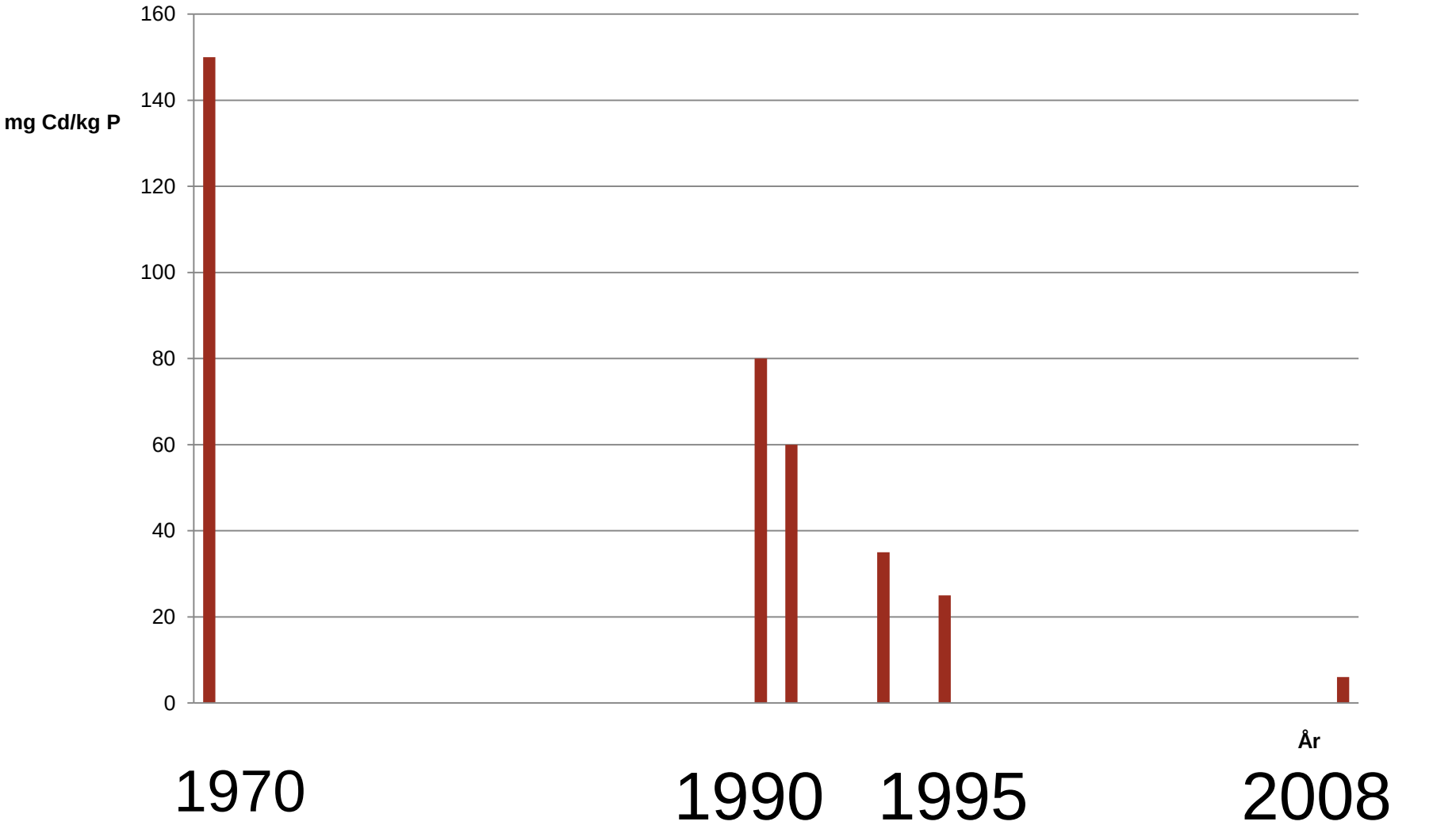
Economic policy instruments in the chemicals sector in Sweden

- Cd i P-fertilisers (30 000 SEK/kg, not from year 2010)
- N-fertilizers (1.80 SEK/kg, not on imported feed)
- Pesticides (agric.) (30 SEK/kg active substance)
- Batteries (Hg, NiCd)

Var styr styrmedlen?



Concentration of cadmium i P-fertilizers



KEMI
Kemikalieinspektionen
Swedish Chemicals Agency

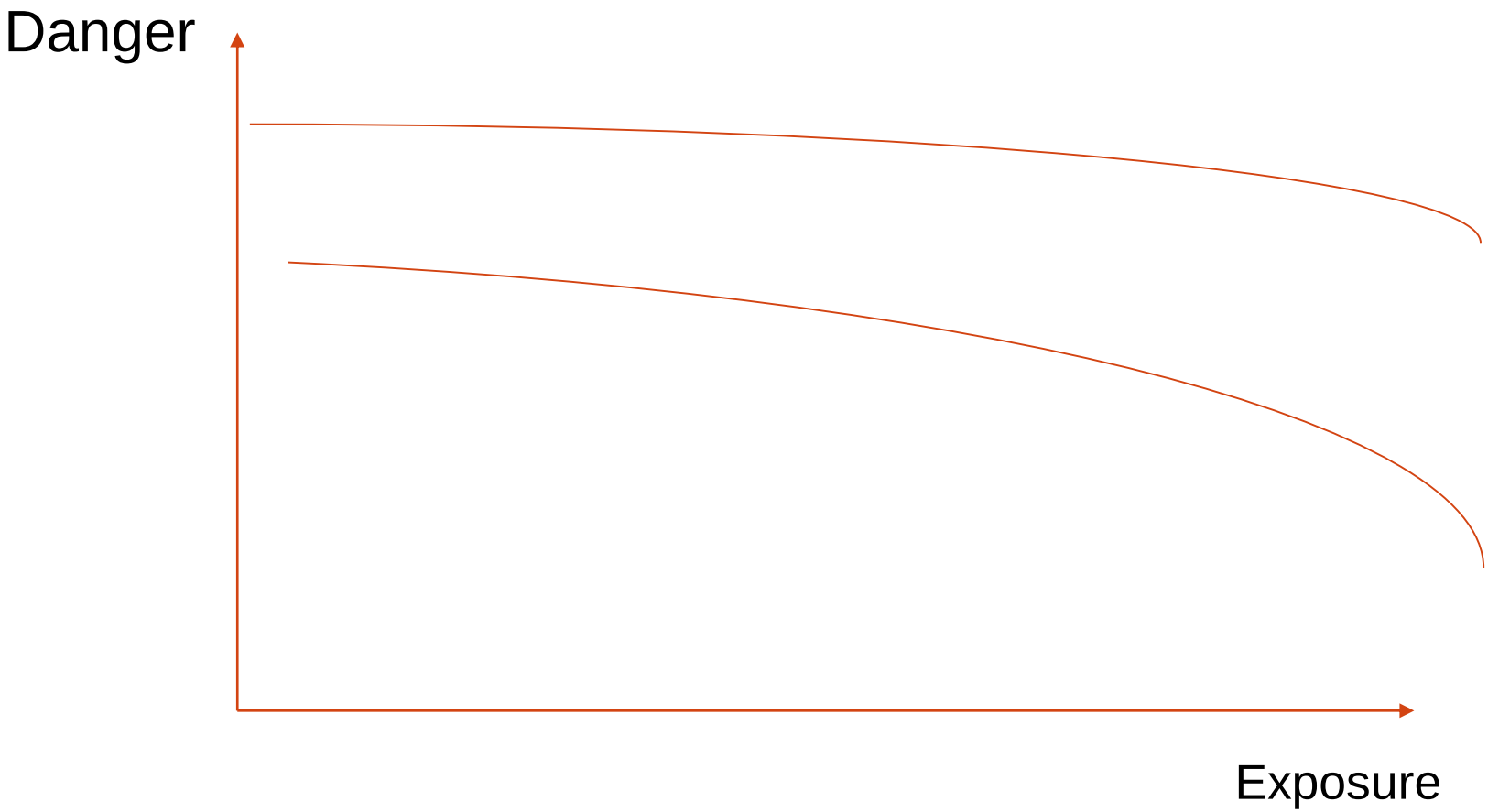
Economic policy instruments in the chemicals sector in other countries

(not relating to fossil fuels)

Some examples:

• **CFC**	**Austr., Denm., Norw., Hung.**
• **Plastic containers**	**Belgium**
• **Color & bioc. cont.**	**Canada, USA**
• **Tri(tetra)kloretyl.**	**Denm., Norw.**
• **Biocides**	**Denm., Norw., Finl.**
• **Antib. & gr. h. in feed**	**Denm.**
• **Dangerous waste**	**Icel., South Korea, USA**
• **Some chemicals**	**USA, Russia, etc.**

Chemicals policy – need for policy



Summary

- ✓ **There are many policies available that can be used to affect the behavior of market actors**
- ✓ **There are some success stories for environmental policy including the use of economic instruments**
- ✓ **Regulation can be supplemented by economic policy instruments**