

Phosphates in Detergents

Country case studies on P-detergents

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Legislation (1)

MANUFACTURING AND USE

- Directive no. 73/404/EEC – GD no. 527/2001 – biodegradability of detergents
- Recommendation no. 89/542/EC – GD no. 745/1999 – labelling
- Regulation no. 648/2004 – modified by the Directive no. 73/404/EEC and Recommendation no. 89/542/EC – not in Romania
- Recommendation no. 98/480/EC – good environmental practice for individual management
- GD no. 1530/2004 – ecological label for washing detergents

Legislation (2)

POLLUTION AND ENVIRONMENTAL PROTECTION

- Directive no. 2000/60/EC – Water Law no. 310/2004
- Directive no. 91/271/EEC – GD no. 188/2002 modified by the de GD no. 352/2005 – discharge limit values:
 - Technical norms NTPA 001 – “active anionic surfactants” and “phosphates” – in water resources
 - Technical norms NTPA 002 – “detergents” and “phosphates” – in sewage and municipal treatment stations

DLV and quality standards

Quality norms	Total phosphorus (mgP/l)	Detergents (µg/l)
<i>GD no. 188/2002 (Annex no. 3 – NTPA 001)</i>	1,0	0,5
<i>GD no. 188/2002 (Annex no. 2 NTPA 002)</i>	5,0	25
<i>MO no. 161/2006</i>	class I – 0,15 class II – 0,4 class III – 0,75 class IV – 1,2 class V > 1,2	class I – 100 class II – 200 class III – 300 class IV – 500 class V > 500

Legislative responsibilities

- **Ministry of Economy and Commerce** – production, classification, diversity, safety strategies
- **National Authority for Customer Protection** – labeling, commercialization, good instructions for environment, user's protection
- **Ministry of Environment and Water Protection** – protection of water resources, mechanisms and politics for reduction of pollution in waters, monitoring of water quality

Type of detergents

1. Taking into consideration the state:
 1. solids – with variable content of phosphorus (0-20%)
 2. liquids – without phosphorus ?
2. Taking into consideration the composition (National Institute for Statistics):
 - anionic,
 - cationic
 - non-ionic
3. Taking into consideration the use (no in Romania)
 - Laundry/Washing detergents,
 - Industrial detergents
 - Dishwashing detergents

Romanian producers

1. Unilever – collaborate with the authorities
2. Procter and Gamble
3. Henkel
4. **Romanian Organization of the detergents and cosmetic producers**

The production and use of detergents in Romania

■ Production:

- 2000: 77 436 tonnes
- 2004: 160 915 tonnes

■ Use:

- 2000: 97 030 tonnes
12 g/day/inhabitant
- 2004: 182 856 tonnes
23 g/day/inhabitant

Detergents production - Unilever

- Detergents with phosphates – 43 421 tonnes in 2005
- **Detergents without phosphates – 20 000 tonnes – only export in Germany and Holland**
- Starting 2007 – Unilever produce only detergents without phosphates (less then 0,2%)

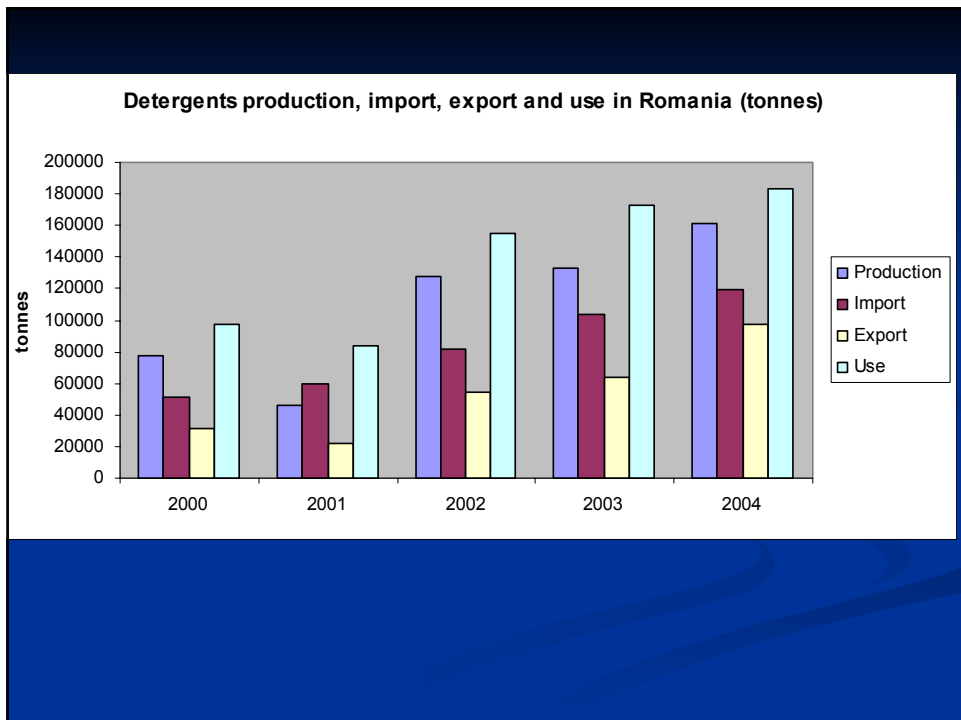
Detergents import in Romania

- Import:
 - 2000 – 51 343 tonnes
 - 2004 – 160 915 tonnes
 - Danube countries: - 2000 – 39 681 tonnes
- 2004 - 77 122 tonnes
 - Other countries - 2000 – 11 662 tonnes
- 2004 – 42 152 tonnes

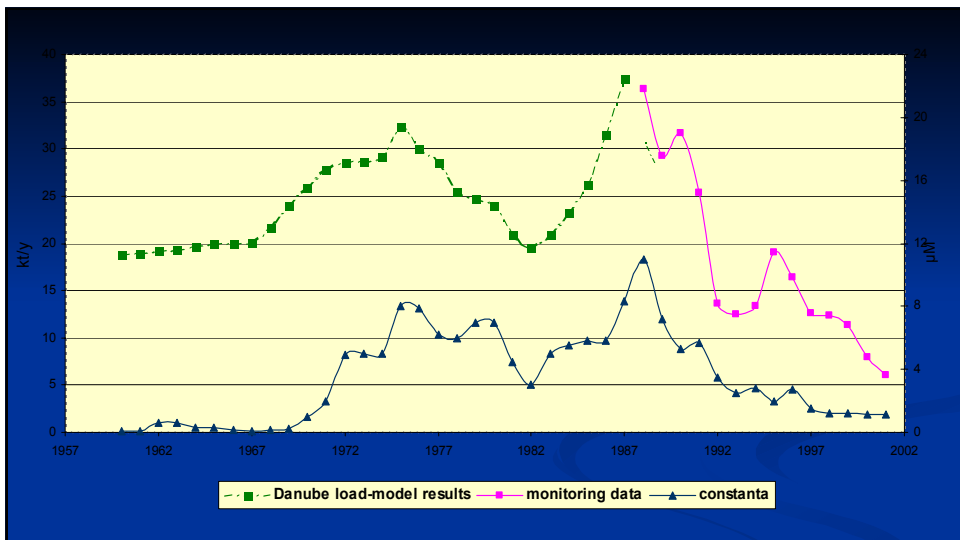
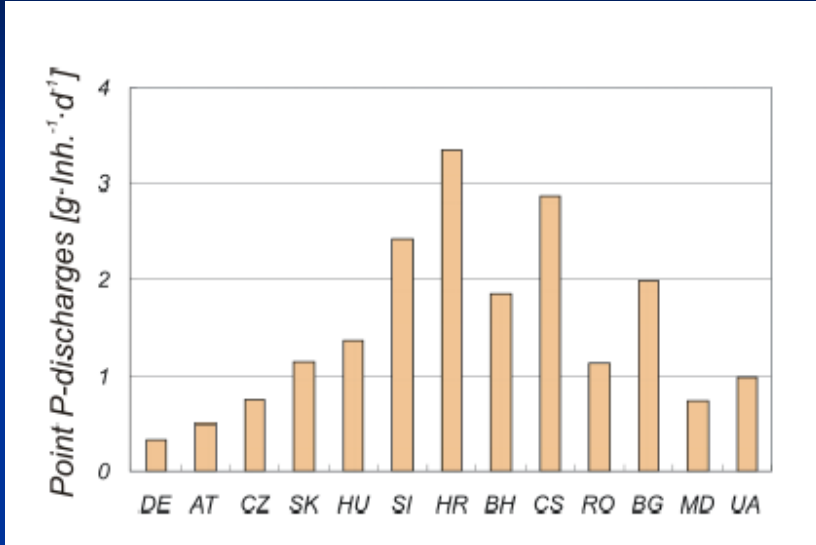
Detergents export from Romania

■ Export:

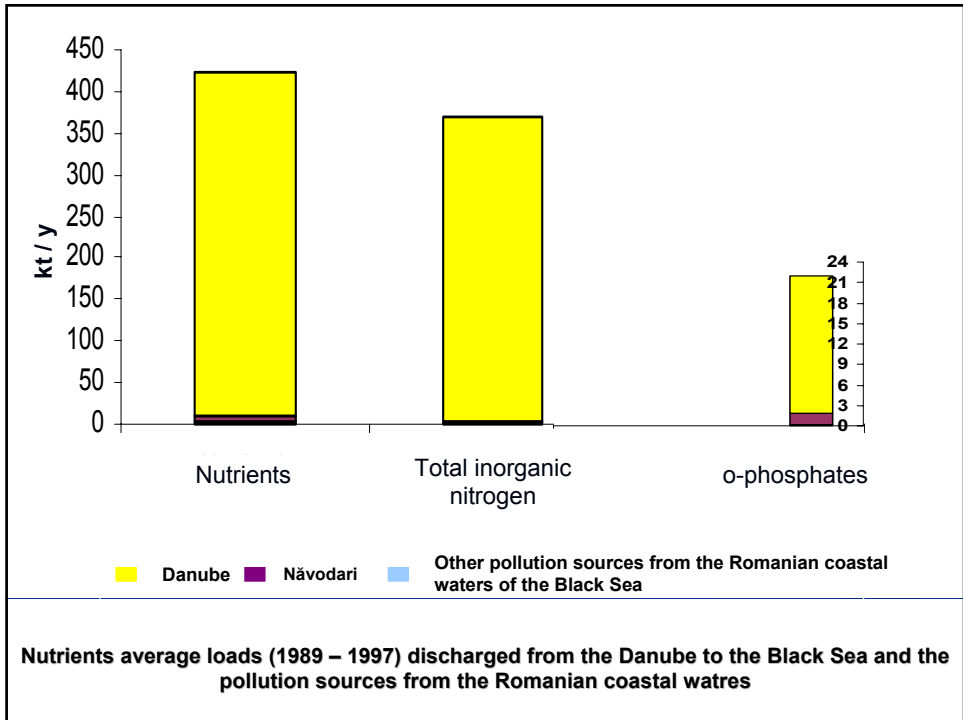
- 2000 – 31 749 tonnes
- 2004 – 97 334 tonnes
- Danube countries
 - 2000 – 19 056 tonnes
 - 2004 – 77 552 tonnes
- Other countries
 - 2000 – 12 693 tonnes
 - 2004 - 19 812 tonnes



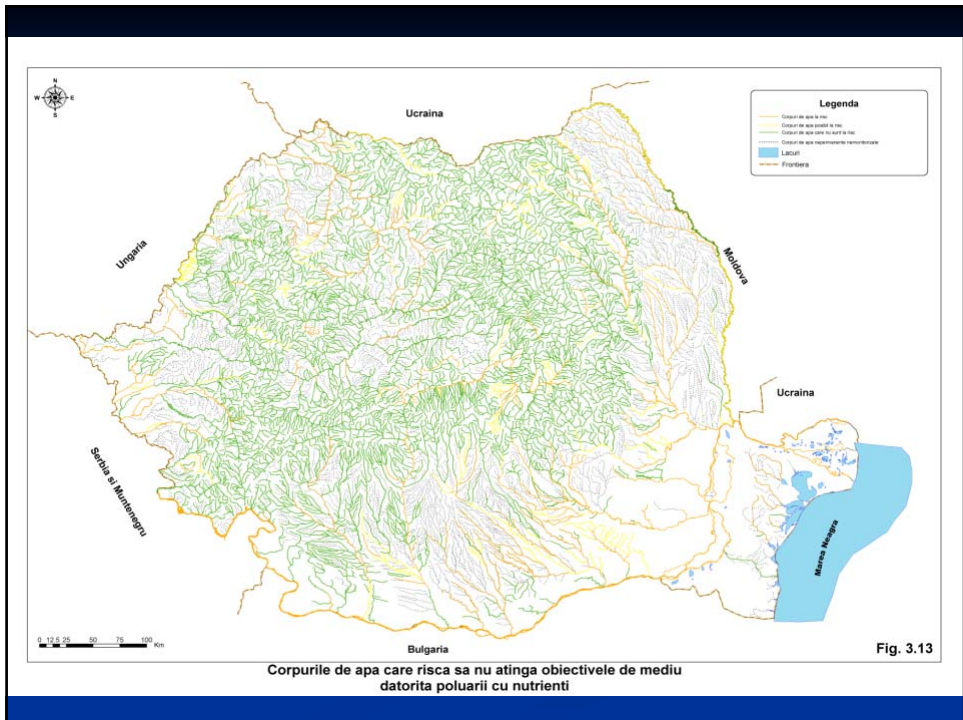
Inhabitant specific P discharge from point sources in the Danube countries from the period 1998 to 2000 (according to Behrendt & colab.2004)



TP load evolution of the Danube river and P concentration evolution of the coastal waters-Constanta

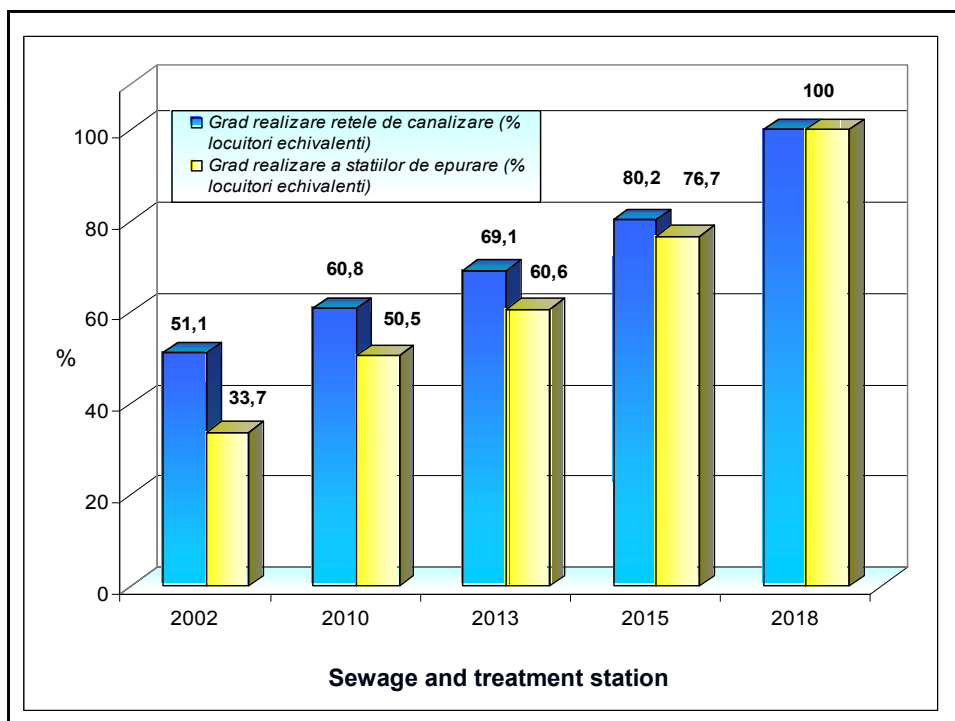
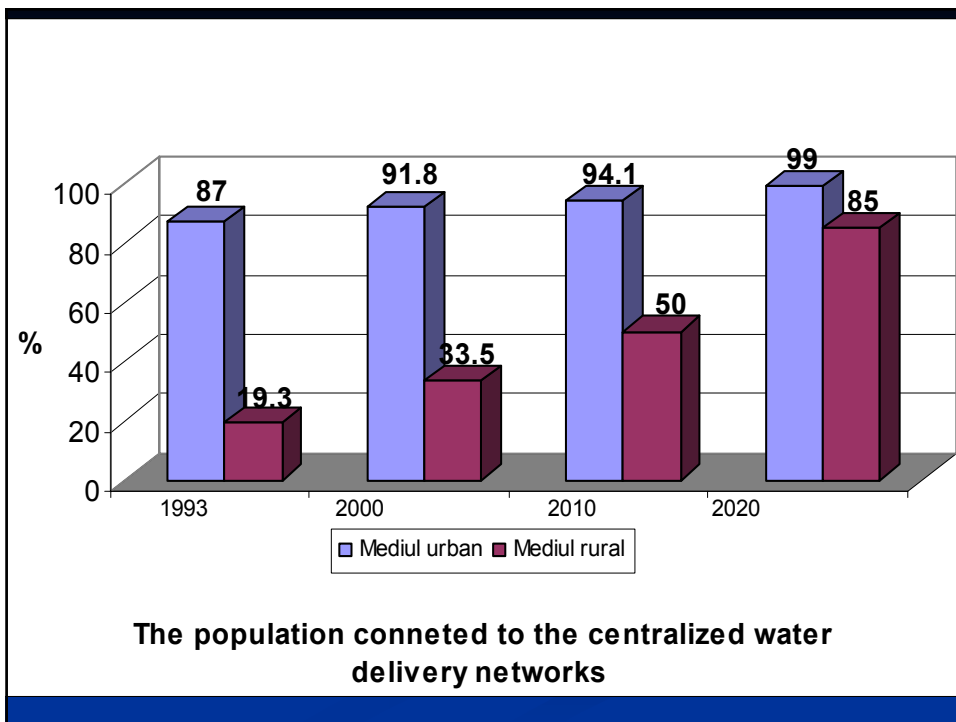


Nutrients average loads (1989 – 1997) discharged from the Danube to the Black Sea and the pollution sources from the Romanian coastal waters



Corpurile de apă care risca sa nu atinga obiectivele de mediu datorita poluarii cu nutrienti

Fig. 3.13



Thank you!