

## **Market supply and monitoring available capacity**

- re-estimating 2003-2005**
- new estimates 2006-2007**



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- ◆ Objective of the project
- ◆ Approach and methodology
- ◆ Refinements and further improvements in the calculations

# Objective of the project

- The objective is to estimate the level of capacity utilisation of the inland water transport fleet, taking into account:
  - Differences between shiptypes en ship sizes
  - Differences between market segments (types of cargo and operating area)
  - Sesonal fluctuations in markets and changes in waterlevels
- Estimates will be made for entire period 2003-2007

# Approach and methodology

- Estimates can be made for the combined fleet of :
  - ◆ Germany
  - ◆ The Netherlands
  - ◆ France
  - ◆ Belgium
  - ◆ Switzerland
- ◆ Note: Although previously all these flags were included in calculations for Germany, The Netherlands and France. Indirectly, based on these results, results for Belgium and Switzerland were derived This will however be changed in the present project

# Approach and methodology

**Fleet segmentation, according to type and size:**

Ship tonnage	Dry cargo		Liquid cargo	
	Motorvessels	Push barges	Motorvessels	Push barges
0 - 249	x	x	x	x
250 - 399	x	x	x	x
400-649	x	x	x	x
650- 999	x	x	x	x
1000-1499	x	x	x	x
1500 - 1999	x	x	x	x
2000 – 2499	x	x	x	x
2500 - 2999	x	x	x	x
> 3000	x	x	x	x

# Approach and methodology

- The level of capacity utilisation of the fleet =

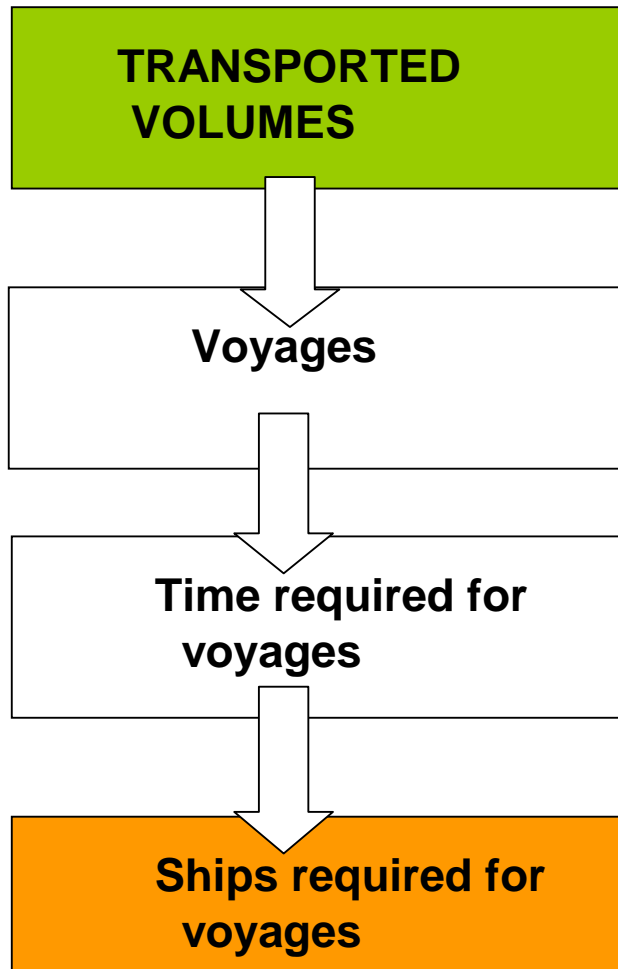
$$\text{REQUIRED} / \text{AVAILABLE FLEET} (\%)$$

- The required fleet for transport = average fleet that is necessary for transport + fleet necessary to transport a "peak" demand situation
- A peak demand situation = extra demand for goods in a seasonal high in transported volumes + extra demand for ship tonnage because of low levels of water on the waterways such as Rhine and Danube.

# Approach and methodology

- The available fleet is simply the fleet as officially registered and already reported in the Market Observation system
- The required fleet is **estimated/ calculated** for each reporting year (e.g. 2003, 2004, 2005 or 2006 and 2007). The year 2004 is the base year.
- The required fleet is calculated in a few steps (see the next sheet) using as input the tons/ tonkms transported by ships of different shipsize-classes and markets segments

## Approach and methodology- basic scheme to calculate required fleet



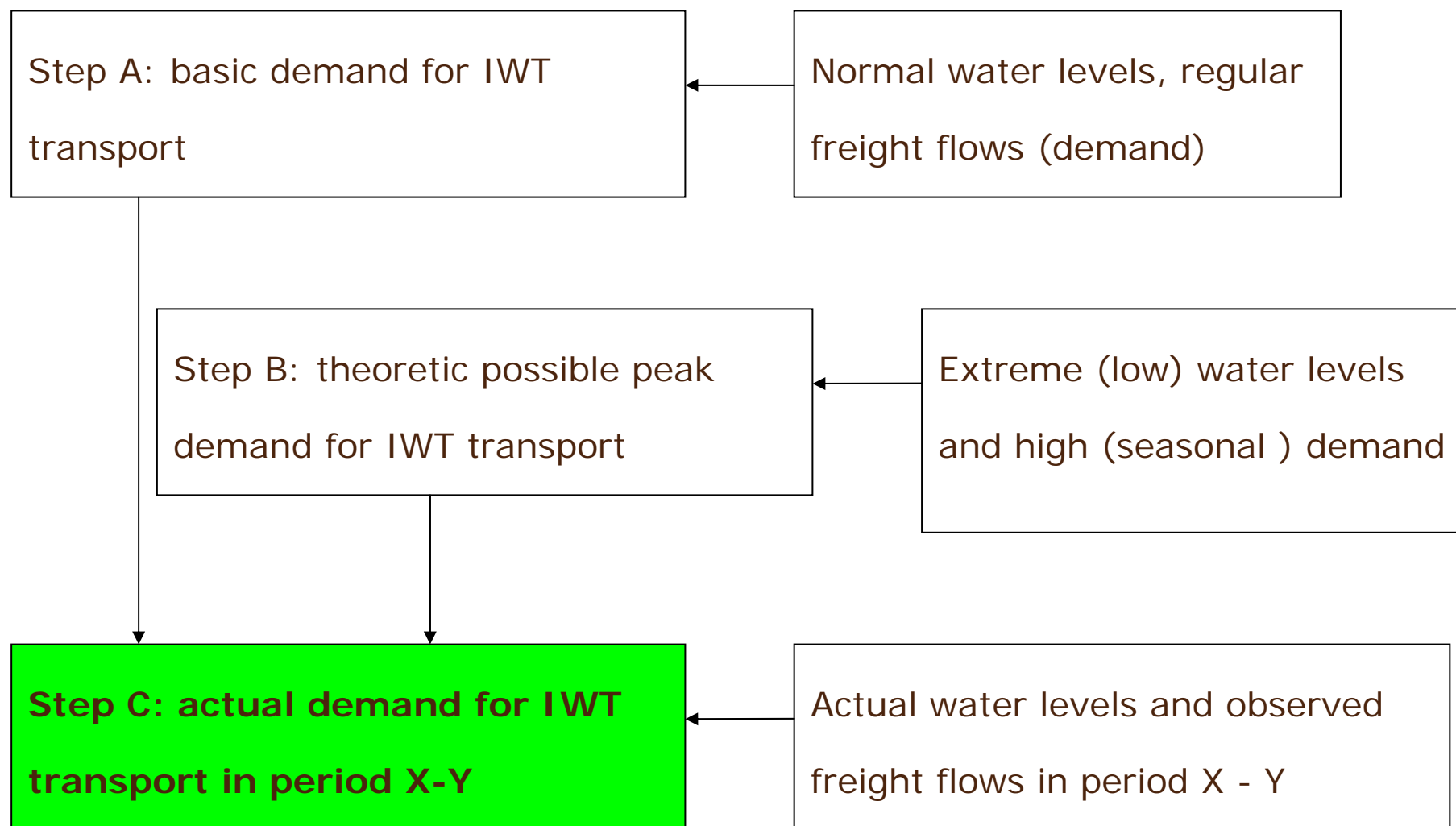
**volume / Load rates=  
voyages**

**Voyages X time per  
voyage= total time  
required**

**Total time required/  
operational availability  
time=ships required**



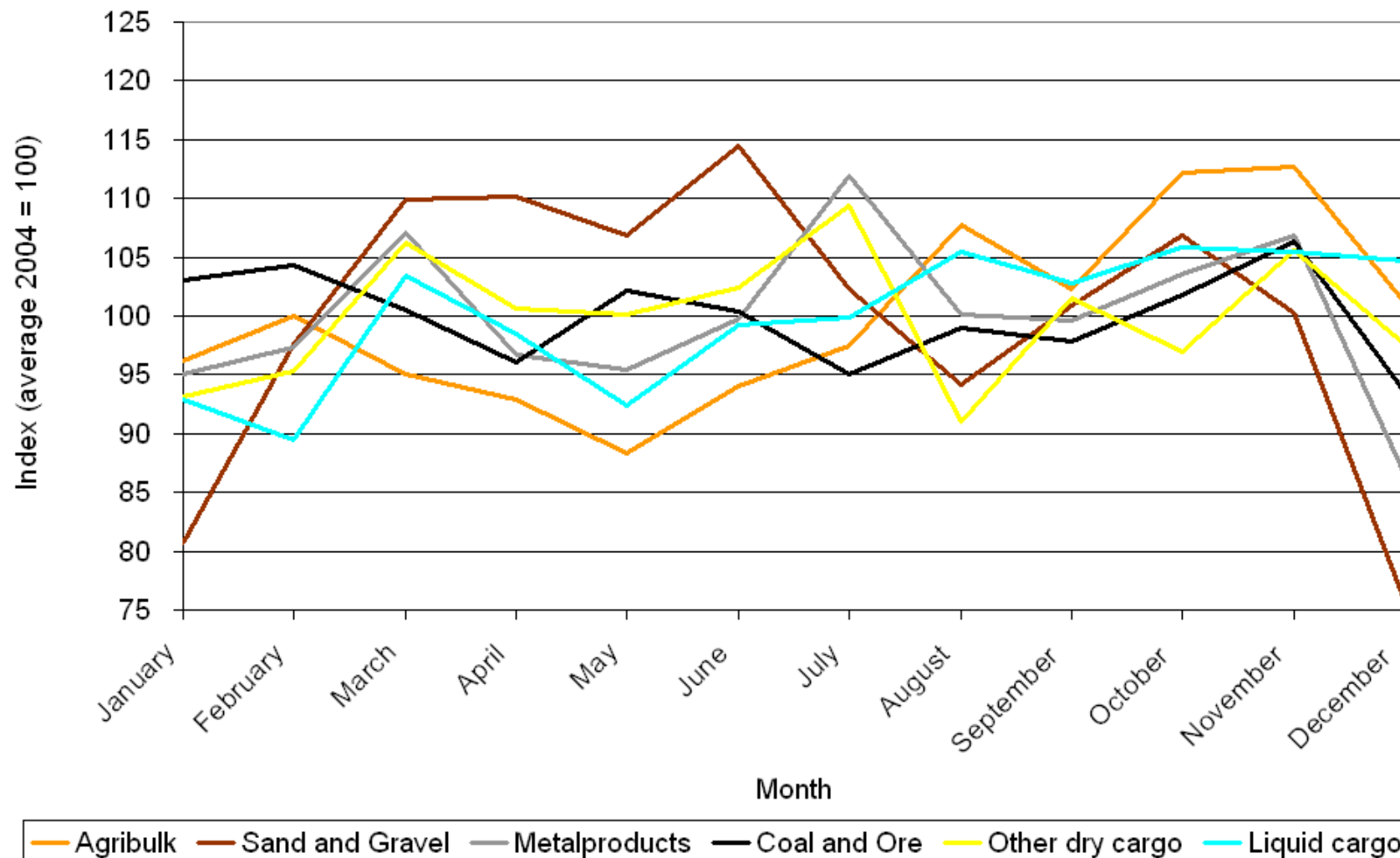
# Approach and methodology



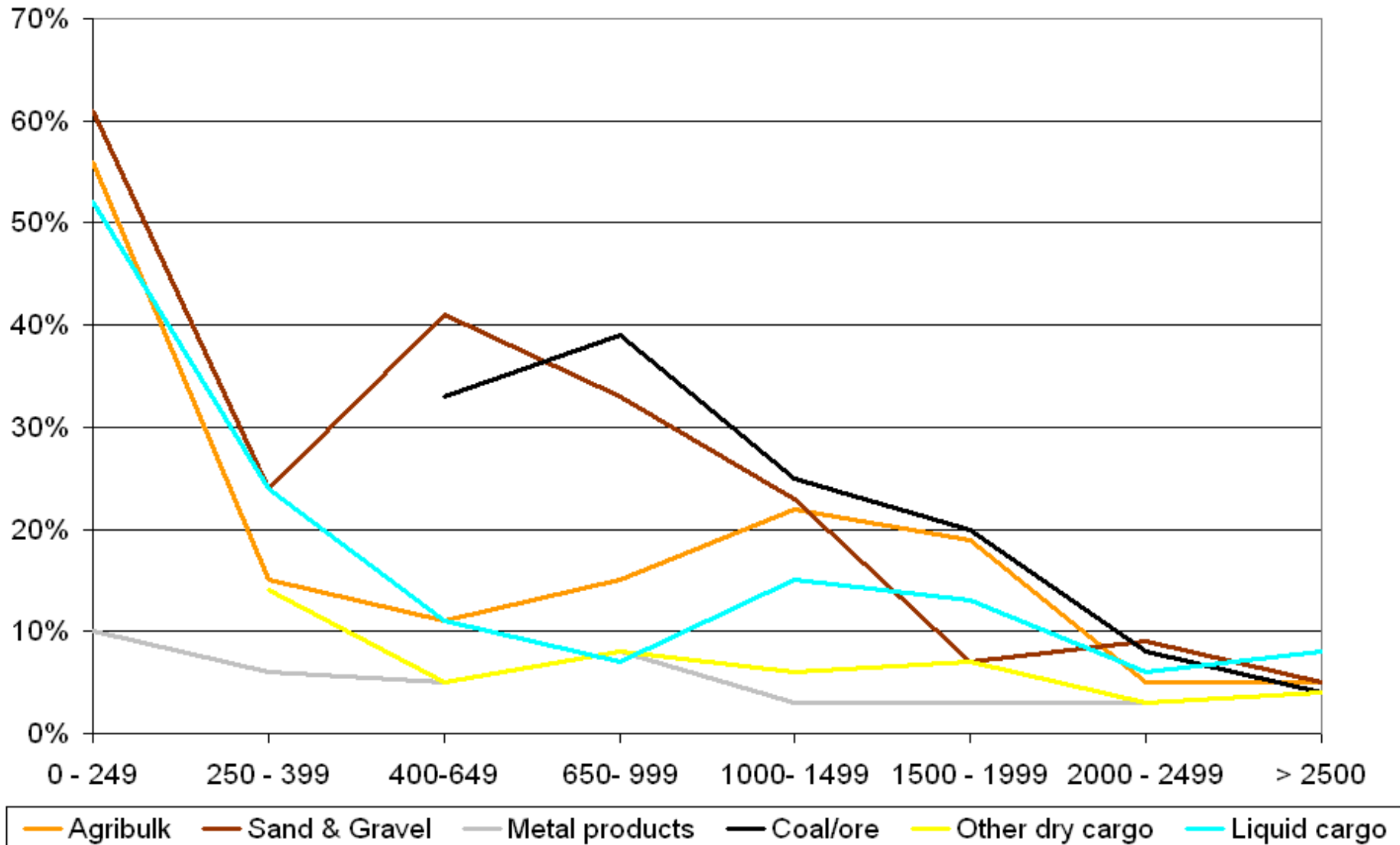
# Approach and methodology

- A seasonal peak in demand will be expressed as a percentual increase (mark-up) on the average demand per commodity (based on NSTR class (0-9));
- Similarly the impact of lower water levels are calculated as an increase/ decrease in demand for vessels of a certain size for Rhine and Danube where water levels regularly fluctuate;
- The required fleet: one has to determine a percentage mark-up on the average demand; Mark-up levels corresponding to 95% of the time the demand for ship tonnage will be below the chosen level.

# Approach and methodology seasonal patterns – fluctuations

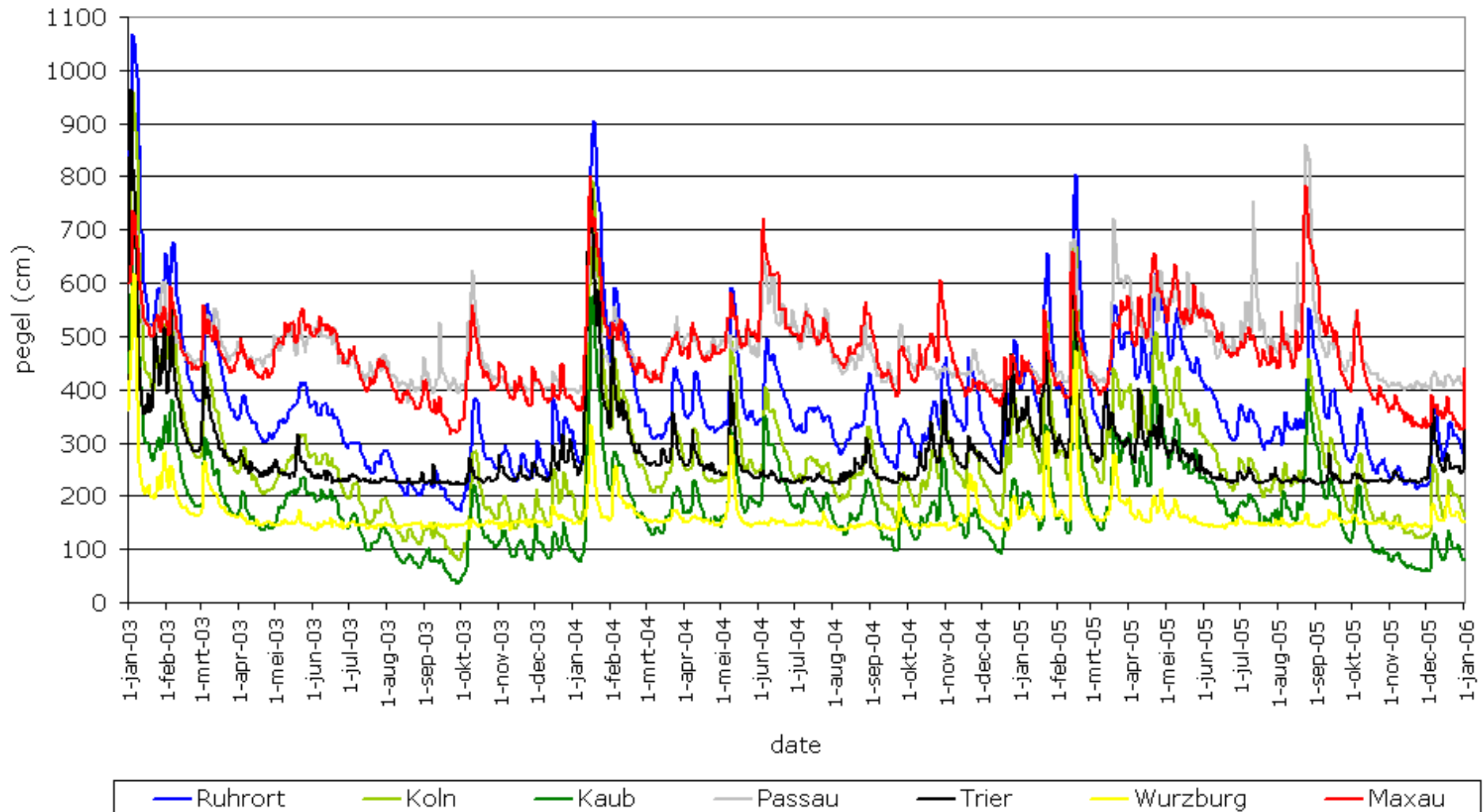


# Approach and methodology – seasonal patterns – fluctuation



# Approach and methodology fluctuations in water levels

## Pegel 2003 - 2005



# Refinements and improvements for new calculations

- ◆ Better data on transport volumes and the fleet
- ◆ Better estimates on the use of vessels for non-sailing purposes (e.g. storage)
- ◆ Better estimates of contribution of other flags (e.g. other flags than D, FR, NL, BE, CH, LUX)

***Thank you for your  
attention***

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