

# From programme of measures to practical work - what is important for success?

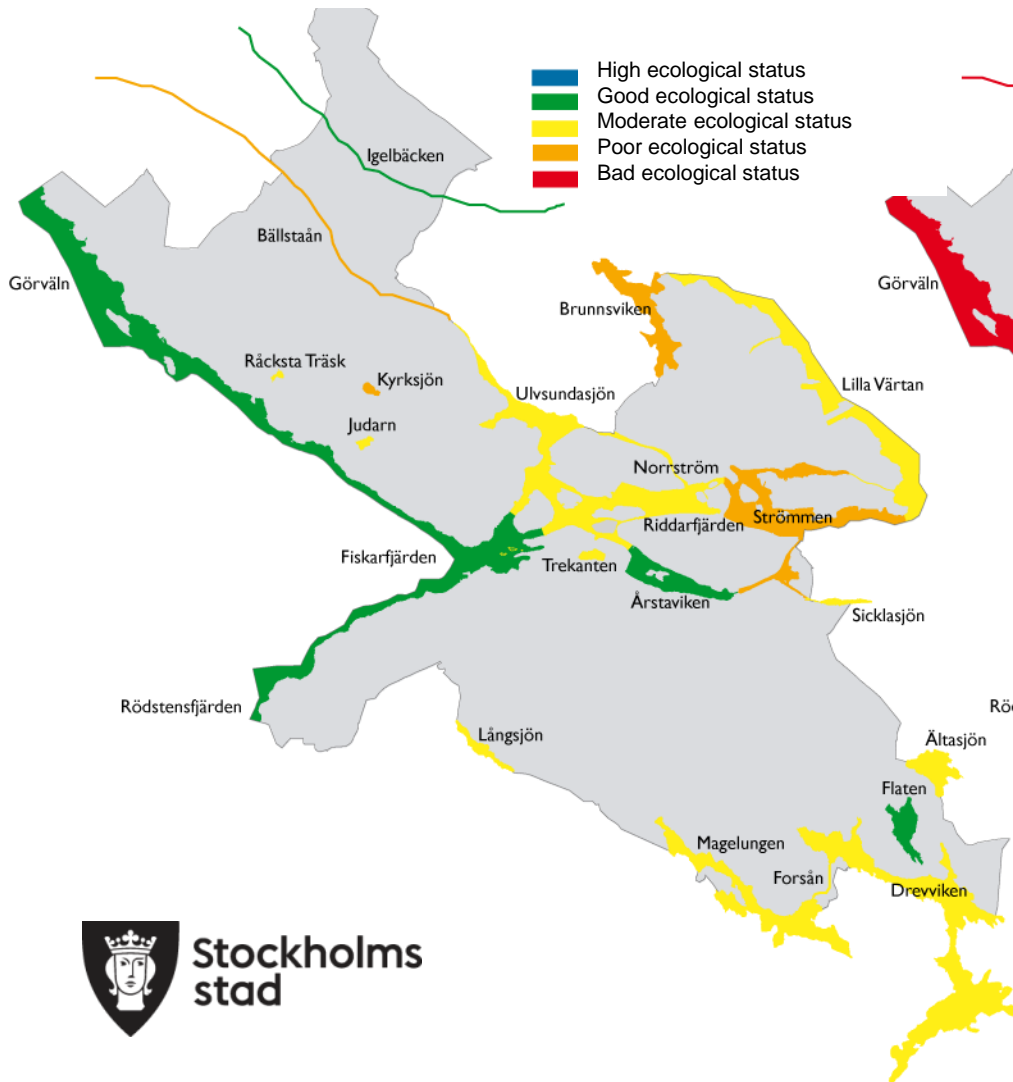
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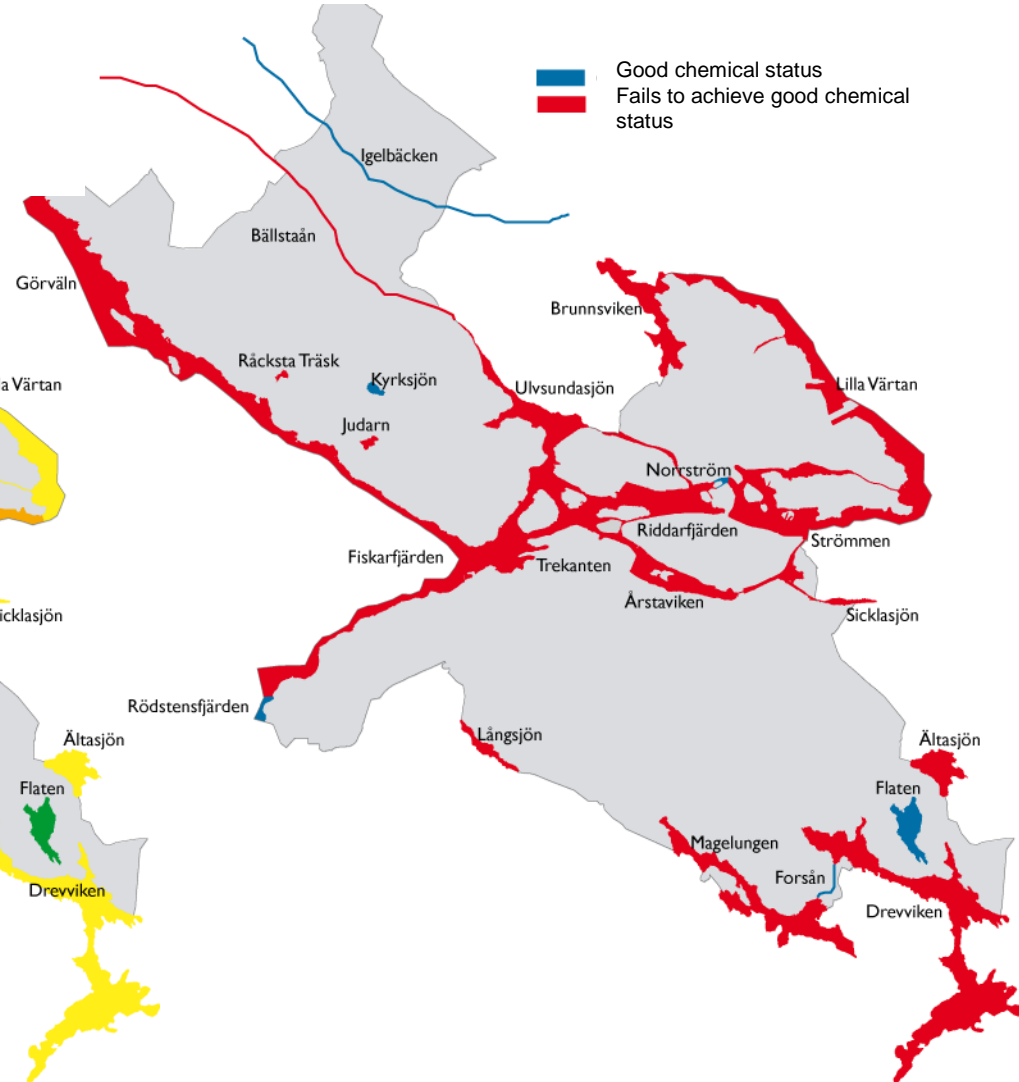


# Status

## Preliminary ecological status



## Preliminary chemical status, excluding mercury



# The lakes and streams of Stockholm

## Major environmental impacts:

- Eutrophication, hazardous substances and altered habitats

## Major sources of pressure:

- Contaminated stormwater from industrial land use, roads and urban land use.
- Untreated wastewater from storm overflows and misconnections in the wastewater and stormwater system.
- “Old sins” – mostly untreated urban wastewater, industrial wastewater and land use.
- Morphological alterations due to exploitation in water and near the shoreline, culverts and other migration barriers.



# Measures for better water quality - the past and future challenges

- The first "water management programme" already in 1973. Hard work and successful collaboration has lead to great improvements.
- Treatment of wastewater and stormwater has improved and lake restoration has been carried out, but there is still more to do.
- The concentrations of phosphorous has declined in all lakes compared to the 1990:s, but are in most cases still to high compared with good status.
- The programmes of measures and the environmental quality standards constitutes a great challenge for the expanding city.





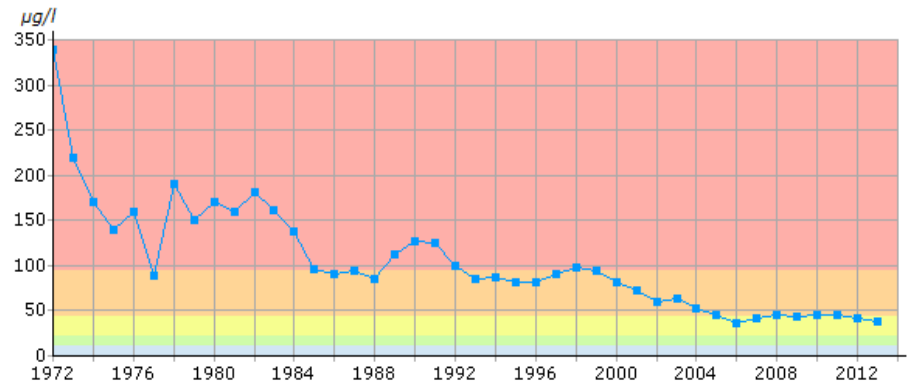
# Lake Drevviken – an example of great improvements since the 1970:s



Ytvattnets innehåll av totalfosfor i augusti, rullande 3-års medelvärden.

Välj vattenområde

Välj tidsperiod



Tillstånd:

■ Höga halter

Trend:

→ förbättring sedan 2000

Senaste värdet:

38 µg/l (2013)

Utgångsvärde:

82 µg/l (2000)

Datakälla:

Stockholm Vatten

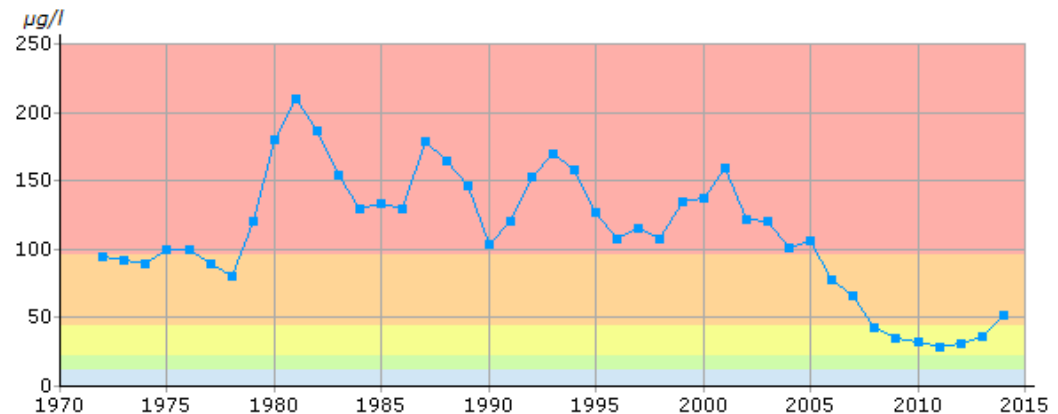
# Lake Långsjön – an example of the effectiveness of phosphorous immobilization with aluminium chloride



Ytvattnets innehåll av totalfosfor i augusti, rullande 3-års medelvärden.

Välj vattenområde

Välj tidsperiod



Tillstånd:

Mycket höga halter

Trend:

→ förbättring sedan 2000

Senaste värdet:

52 µg/l (2014)

Utgångsvärde:

140 µg/l (2000)

Datakälla:

Stockholm Vatten

# Potential conflicting interests and pitfalls to take into account

- The growing city. 140 000 new households and 300 000 new inhabitants by year 2030.
- Upstream impact – a subject for interaction within the catchment and need for support from the County administration boards and the Water district Authorities.
- Finance. PPP of course, but who has the responsibility for old sins?
- Large parts of the legislation is often too blunt to act as effective as we need.





# What is necessary in order to reach the targets? - The municipal responsibility

- An effective organisation for mutual planning, prioritizing and implementing measures.
- Cooperation within the catchment.
- Central municipal funding for measures.
- Local programmes of measures for each water body.
- Most bang for the bucks - more effective measures.
- “Translation” of EQS to practical work.
- More data - better knowledge.





# What is necessary in order to reach the targets? - The governmental responsibility

- An increased central governmental responsibility for measures against pressure without a clear responsible party (old sins).
- Improved and modernised legislation.
- Increased and more effective guidance.
- Act as a true cooperating force within the catchments – help the municipalities to prioritize.
- Better interaction with the municipalities – we have to go from government to governance.



# A new strategy for stormwater management

The city council decided a new strategy for storm water management in early spring 2015. The strategy will be used by all the administrations within the city.

The strategy takes aim at the following four points:

1. Improved water quality within the city.
2. A robust och climate adapted storm water treatment.
3. Storm water management will gain values for the city and be a resource – not be an economical burden.
4. Storm water management has to be environmentally and economically effective.





# The city of Stockholm

## Action plan for good water status

### The aim of the action plan

- States how the water management within the city has to develop in order to gain focus on more operational measures.
- States how the water management within the city need to adapt in order for us to reach the goals of the water frame work directive.



# A new overall target for the water management within the city

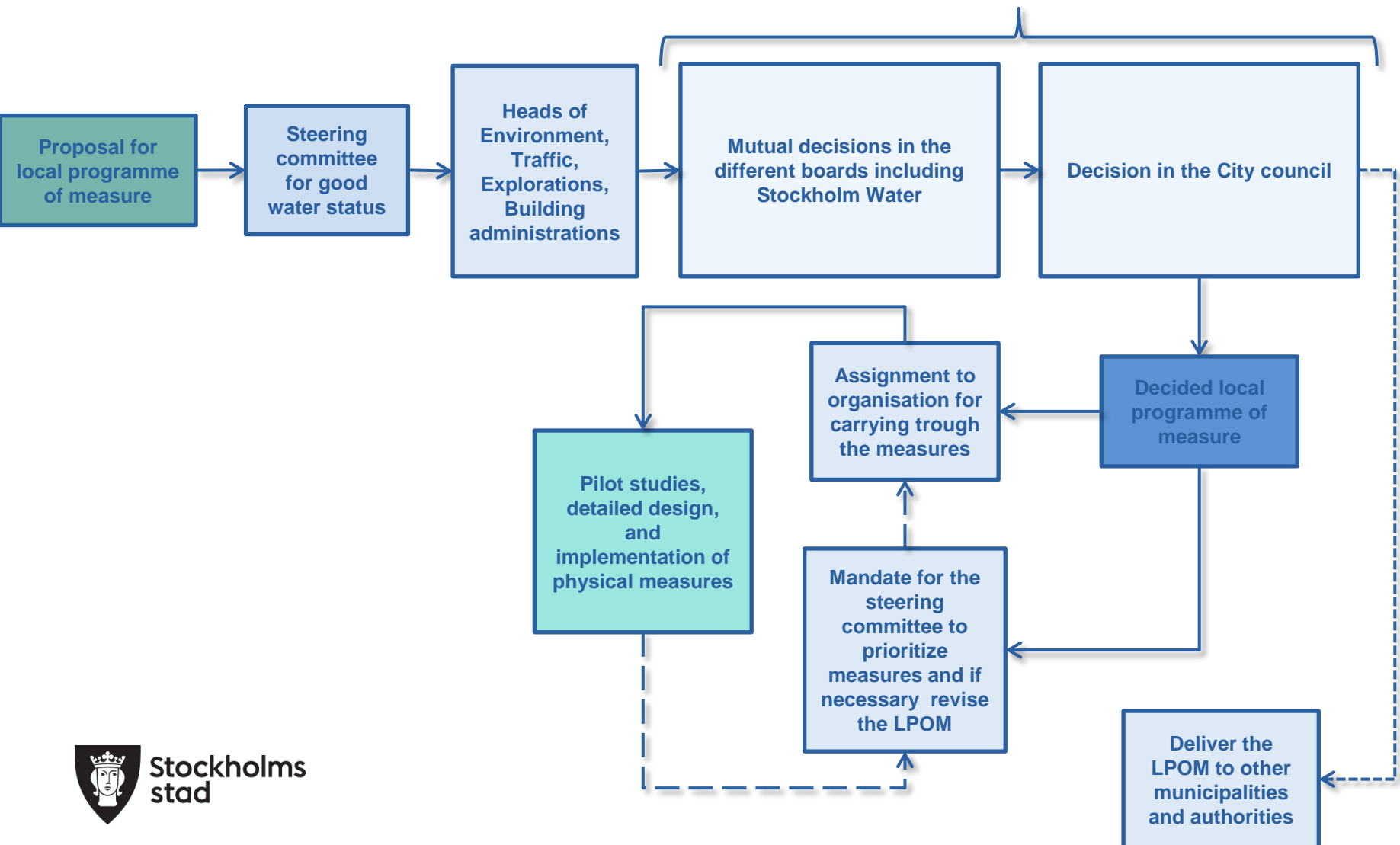
- The lakes, costal waters and streams within the city of Stockholm shall reach the environmental targets for water - in most cases good ecological and chemical status by 2021 or 2027.
- To reach the target local programmes of measures has to be completed by latest 2018.





# Process for decision and implementation of the local programmes of measures

Political process



# Current situation – what are we doing right now?

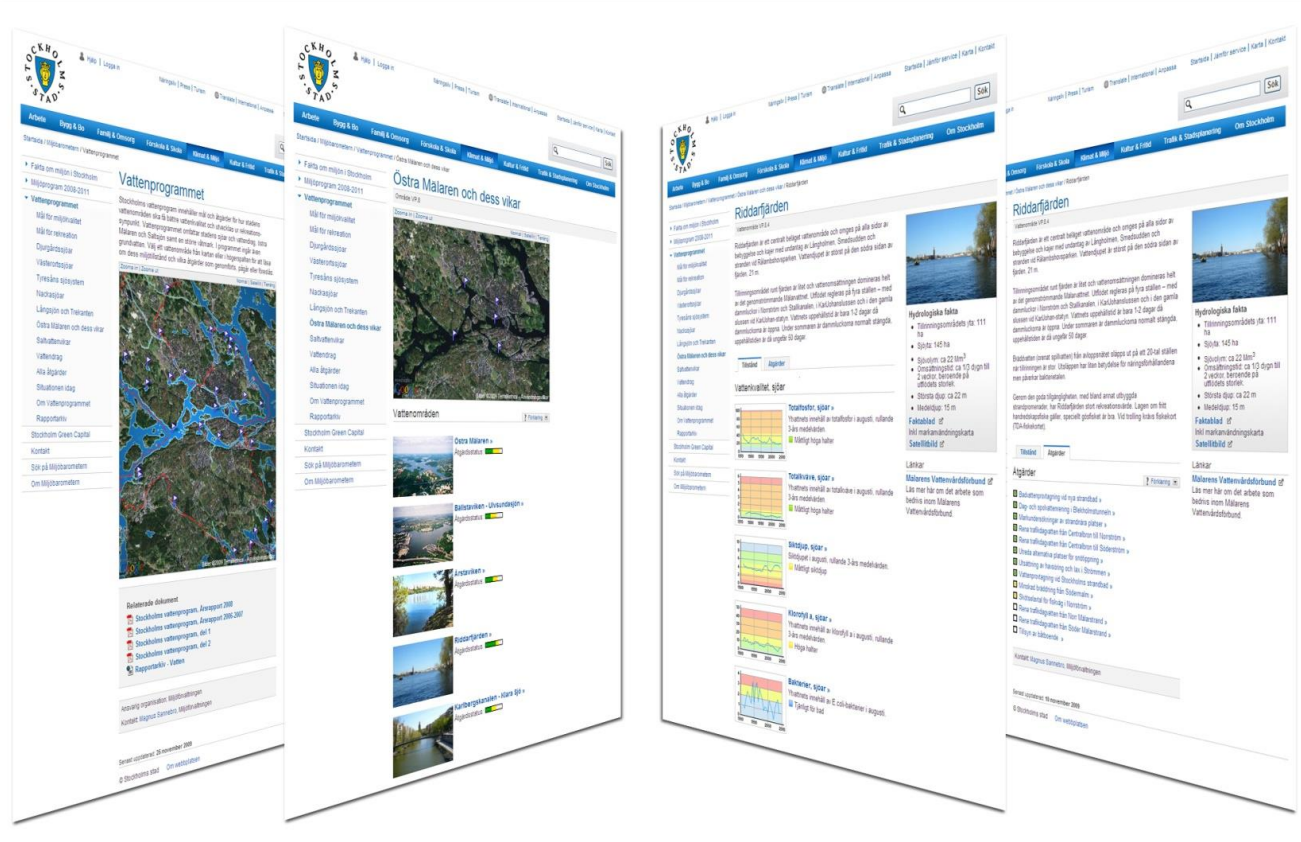
- Gathering basic information for the local programmes of measures.
- Valuation study of all water bodies – what is good ecological status worth for Stockholm?
- Overall calculation of the costs to reach good ecological status by 2027.
- Troubleshooting and fixing misconceptions in the wastewater and stormwater system.
- Immobilization of phosphorous sediment with aluminium chloride.
- Guidance for storm water management on parking places and urban land use.
- Guidance for storm water management for roads will be ready next year.
- A translation key between retention of storm water and EQS for phosphorus and metals - more useful for practical management than concentrations.





# More information on Miljöbarometern

In the web tool [Miljöbarometern](http://www.miljobarometern.stockholm.se/vatten) you can find targets, indicators, environmental conditions and measures.



[www.miljobarometern.stockholm.se/vatten](http://www.miljobarometern.stockholm.se/vatten)



# Thank you for listening!

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