

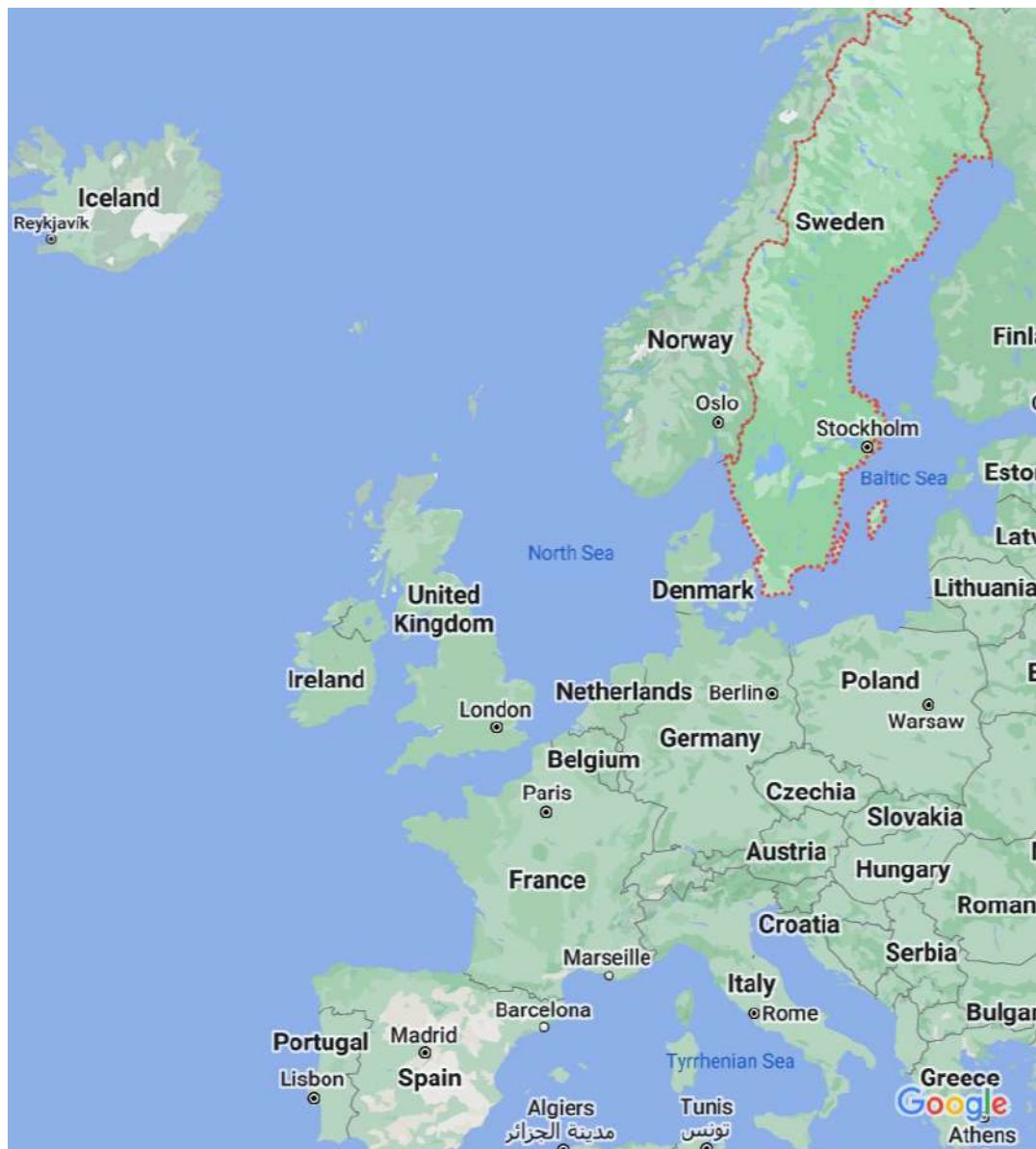
# INVENTORY AND PRIORITY METHOD FOR CONTAMINATED SEDIMENT IN SWEDEN

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## GOVERNMENT PROJECT

The inventory and prioritization method presented here is part of a large national effort to improve knowledge about contaminated sediments

Approximately 100 000 lakes covering about 9% of the country

>500 000 km of water courses

## WHY IS A INVENTORY AND PRIORITIZATION METHODOLOGY NEEDED?

Few contaminated sediment  
areas identified today

There is appr 86 000  
contaminated soil areas in  
Sweden

High probability of large number  
of contaminated sediment areas



SGI Vägledning #

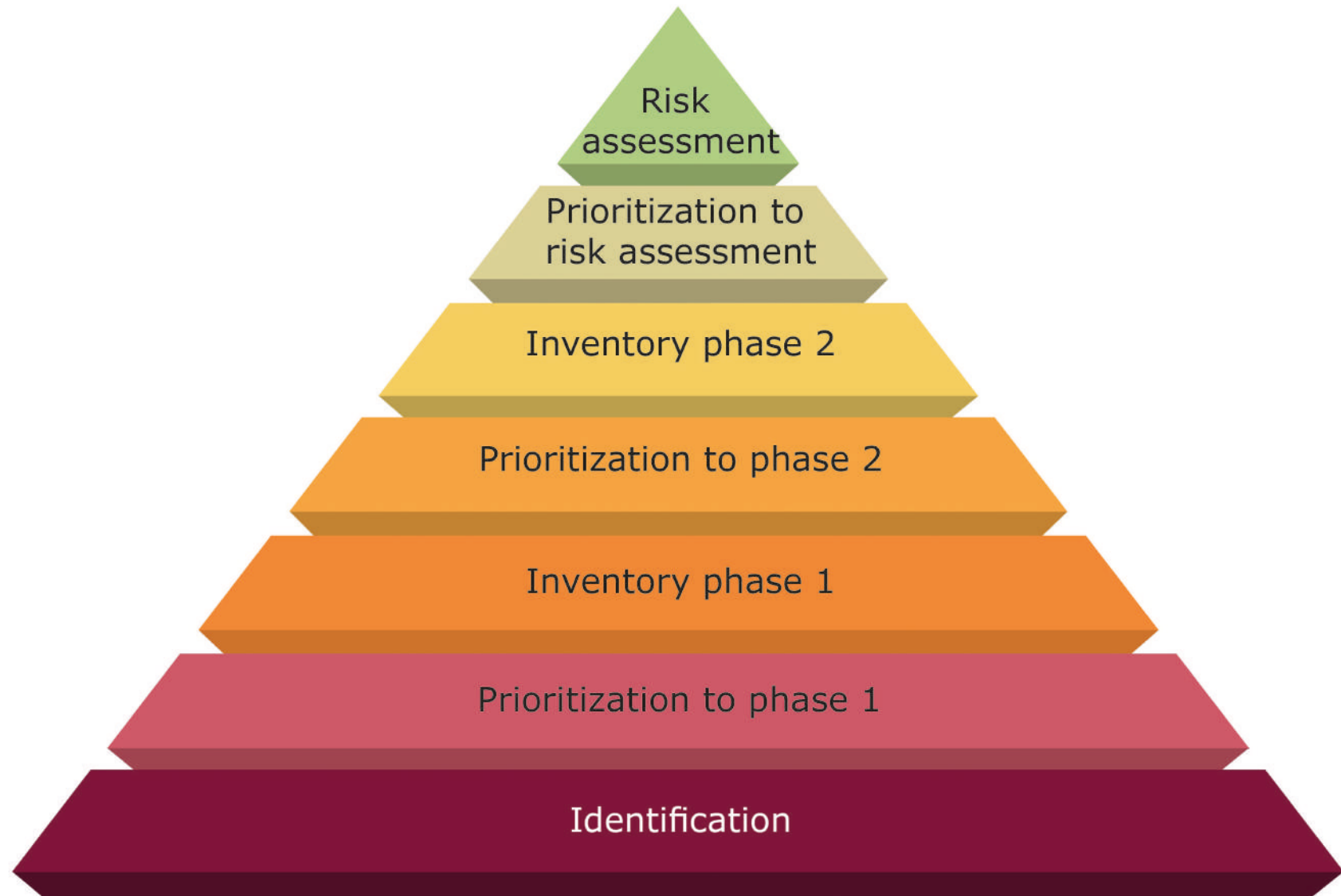
## Inventeringsmetodik förorenade sediment

En rapport inom Regeringsuppdraget förorenade sediment



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Pyramid showing  
the steps in the  
methodology





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## PRODUCTS

Inventory and priority report

Web guidance

GIS-layers (with contaminant load in the water catchment area)

Industrial inventory list with the potential contaminant load

## Sources

Ongoing industry

Contaminated soil from historical activities





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## **TWO MAIN APPROACHES**

Contaminant sources (single  
point sources)

Water body catchment area  
(multiple sources)

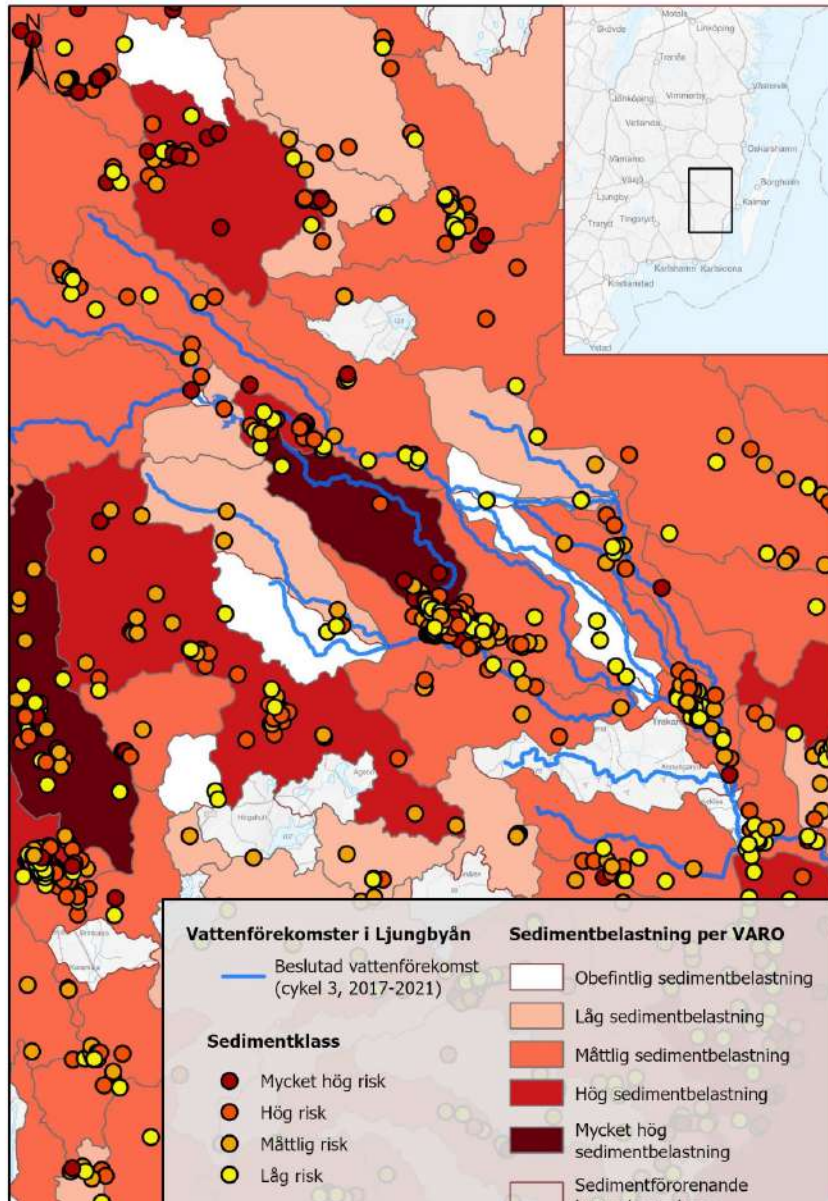
# INDUSTRIAL INVENTORY LIST

For each industry there is an associated sediment class

Contaminants associated with each specific industry is listed (and that has characteristics necessary to bind to sediment particles)

Bransch	Branschkommentar	Risk för påverkan på	Branschspecifika föroreningar - sediment	Andra föroreningar - sediment
Impregnering av sliprar och stolpar, samt lagring av impregnerade sliprar/stolpar	Impregnering av sliprar, stolpar samt omfattande lagring och hantering av impregnerat virke t.ex. stolpar. Både stationära och mobila anläggningar.	Mycket hög risk	PAH, metaller	* Oljekolväten
Industrideponier	Nedlagda deponier (industrideponier) ska enligt NFS 2006:6 redovisas och riskbedömas av kommunen (enligt MIFO).	Mycket hög risk	Metaller, PAH, PFAS	Platsspecifika
Järn- och lättmetallgjuterier	Metall smälts, stelnar i form och bearbetas.	Hög risk	Metaller, PAH	* Fenoler * Oljekolväten
Järn-, stål- och manufaktur	Produktion av järn och stål med malm eller skrot som råvara.	Mycket hög risk	Metaller, dioxiner, PAH	* Fenol * Cyanid * PCB * Oljekolväten
Järnvägstrafik	Järnvägsnätet, inklusive bangård.	Låg risk	Metaller, PAH	* PCB * Pesticider * Oljekolväten
Kemtvätt - med lösningsmedel	Avser kemisk tvätt, rengöring av textilier i annan vätska än vatten. Föroreningar i sediment kan finnas utanför kemtvättar som inte är anslutna till kommunalt reningsverk.	Måttlig risk	Klorerade alifater	* Oljekolväten * Metaller (-)





## SEDIMENT CLASS

Potential risk of impact on sediment

Very high risk

High risk

Moderate risk

Low risk

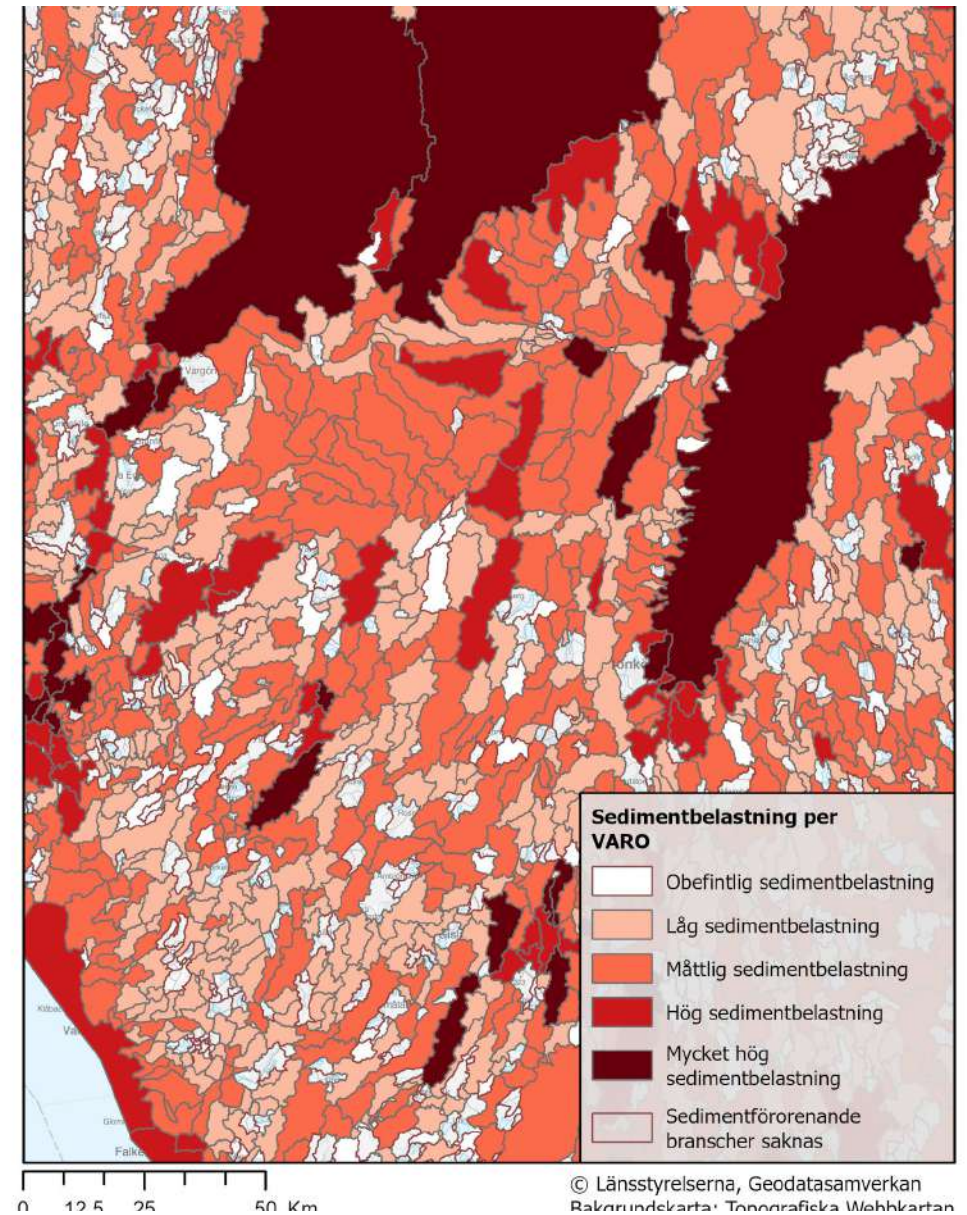
## CONCEPT WITH CONTAMINANT LOAD

Industries/contaminant sources  
within the catchment area

Active industry is currently only  
partially included

The contaminant load is summed  
for each water catchment area

Catchment areas are divided into  
streams, lakes and coastal  
waters



## INVENTORY PHASE 1

Verify the potential of the pollutant source to contaminate the sediments (sediment class)

Verify the water catchments accumulated load

Prioritize objects to inventory phase 2





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## INVENTORY PHASE 2

Field investigation (including sampling)

Verifying potential sources and if possible link found contaminants in sediments to sources

Assess whether the sediments can constitute a source of pollution

Assess whether the sediment object needs further investigation



## **SIMPLIFIED ASSESSMENT**

Clearly/significantly increased  
contaminant content in water and/or  
sediment

Contains contaminants that are  
considered to have a very high  
inherent hazard

Has a high potential of spreading or  
documented ongoing spreading

The pollution damage has a potential  
risk to human health or the  
environment

Areas of high natural value are  
affected (drinking water, spawning  
grounds etc)



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# THANK YOU

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FOR YOUR ATTENTION