



SWEDISH ENVIRONMENTAL
PROTECTION AGENCY

SELF-MONITORING AND INSPECTION

Elin Sieurin

Swedish Environmental
Protection Agency

7 September 2018



Agenda

1. Introduction
2. Supervisory authorities
3. Self-monitoring in Sweden
4. Supervisory authority – the way of working
5. Cooperation



Introduction



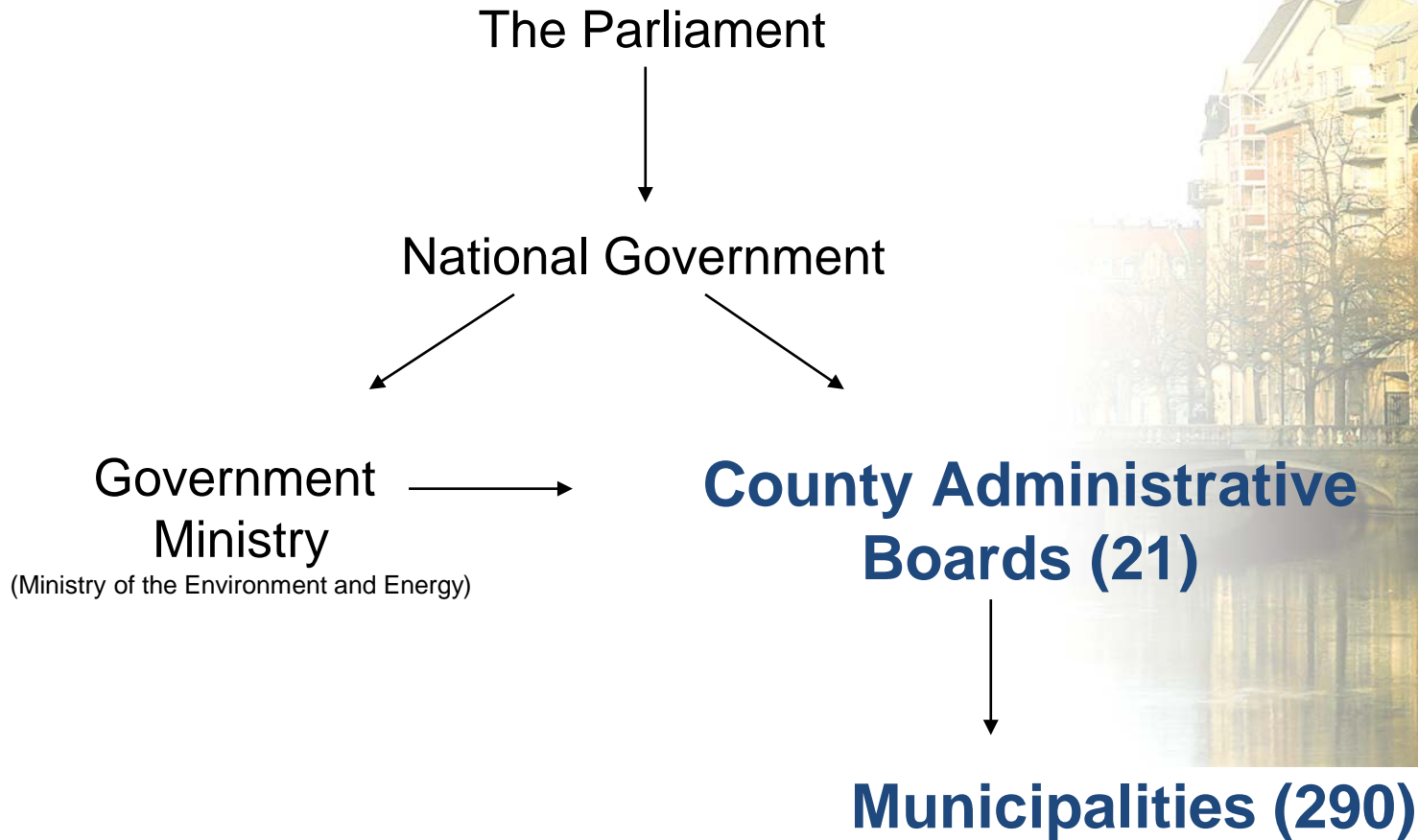
County administrative board of Stockholm (CAB)

- Supervision and permit
- Multipla of sectors
 - Combustion plants, windpower, waste treatment, waste-water etc.
- 72 environmental hazardous activities
- 10 officers



Supervisory authorities

The Swedish administration - for Supervision





Allocation – special ordinance

- The **County administrative Board** responsible for environmental hazardous activities that require permit, A- and B-activities
- **Municipalities**, responsible for environmental hazardous activities that not require permit, C-activities.
- The **Surgeon General** responsible for military installations

(The County administrative Board can delegate the supervision over A- and B-activities, if the municipalities ask for it.)



Environmental hazardous activities

	Total Sweden	Total Stockholm	CAB	Municipalities (26)	Surgeon general
A	500	28	11	17	-
B	5 500	263	61	191	11
C	~ 15 000	~ 1 800		~ 1 800	~ 35
Total			72	~ 1 800	~ 50



Supervisory guidance

- Swedish EPA
 - Guiding, Evaluating, Advising, Coordinating
- Guidebooks and websites
 - For the operator and supervisory authorities
- The County Administrative Board is responsible for giving supervisory guidance to the municipalities.





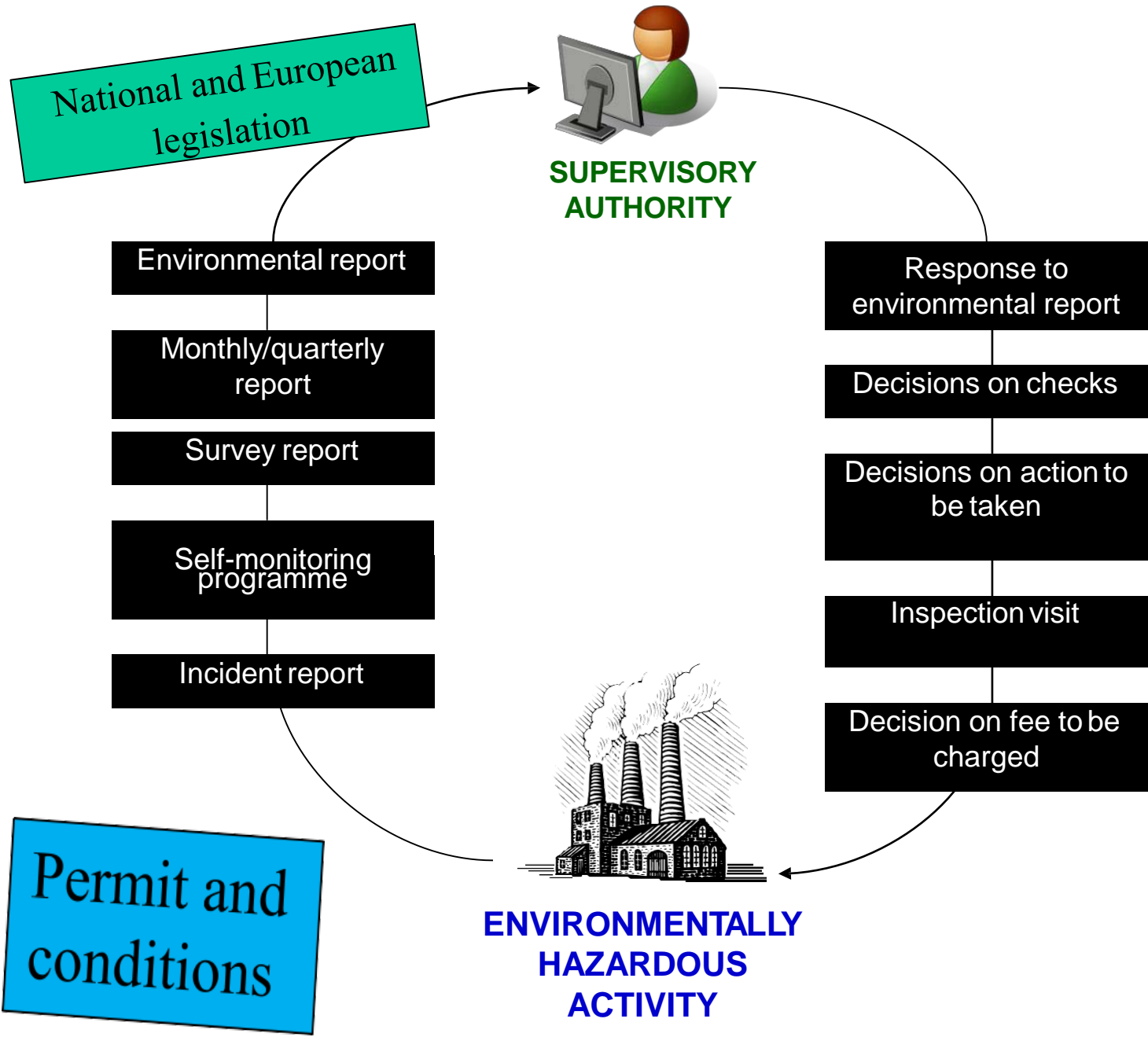
Self-monitoring in Sweden



Self-monitoring

- Self-monitoring is **preemptive work**
- The operators of environmentally hazardous activities have **sole responsibility for minimizing the environmental impact** of their activities.
- The operator have to have sufficient **knowledge to meet the demands in the environmental legislation, permits and conditions.**





Legislation



Self-monitoring

- Environmental code
- Ordinance of Self-monitoring

Monitoring

- SEPA regulation on monitoring and sampling
- Industrial Emission Directive (IED)

Environmental report

- SEPA Regulation on Environmental Report



Environmental Code

- general requirements for Self-monitoring

- Operators must **continuously plan** and control (monitor) the activity to mitigate or **prevent** detrimental impacts on human health or the environment
- Operators shall by **own examinations** or otherwise keep themselves informed about the impact on environment from the activity
- Operator shall present a **programme for self monitoring** if required by authorities





Ordinance of Self-monitoring - more specific requirements

- **Document** the **responsibility** of the environmental issues, to meet the conditions of the permit and other binding legislation including injunctions from authority.
- **Structure** the industry's **control of emissions**, sampling and analysis
- **Routines** for handling operational **disturbances** and documented procedures for **continuous check of all equipment**
- **Keep records of all chemicals**





Headlines from self-monitoring system - Example

1. Description of the operation and environmental impact
2. Allocation of responsibility
3. Permit and conditions of permit
4. Operating instructions and maintenance routines
5. Emission points and sampling points
6. Sampling method and analysis
7. Risk assessment and mitigation
8. Routines in case of incidents
9. Reporting during normal operation and during disturbances
10. Frequency of inspection by an independent expert.





SEPA regulation on monitoring and sampling

- Operator shall **document** all monitoring activities
- Operator shall use **methods stated in permits** or in regulations or in other cases according to Swedish or international **standards**
- **Accredited laboratories** must be used and sampling personal must be accredited or have equal training



EU regulation on monitoring and sampling

BAT-associated emission levels (BAT-AELs) for NO_x emissions to air from the combustion of solid biomass and/or peat

Combustion plant total rated thermal input (MW _{th})	BAT-AELs (mg/Nm ³)			
	Yearly average		Daily average or average over the sampling period	
	New plant	Existing plant ⁽¹⁾	New plant	Existing plant ⁽²⁾
50–100	70–150 ⁽³⁾	70–225 ⁽⁴⁾	120–200 ⁽⁵⁾	120–275 ⁽⁶⁾
100–300	50–140	50–180	100–200	100–220
≥ 300	40–140	40–150 ⁽⁷⁾	65–150	95–165 ⁽⁸⁾



EU regulation on monitoring and sampling

NO _x	<ul style="list-style-type: none">— Coal and/or lignite including waste co-incineration— Solid biomass and/or peat including waste co-incineration	All sizes	Generic EN standards	Continuous ⁽³⁾ ⁽⁵⁾	BAT 20 BAT 24 BAT 28
-----------------	---	-----------	----------------------	--	----------------------------



Permit

- typical condition in a permit

A proposal to a **programme for self-monitoring shall be submitted to the Supervisory Authority** not later than **4 months** after the date that this permit has entered into force.

The proposal shall describe how inspections and monitoring will be performed including monitoring methods, frequency of monitoring and evaluation.





Permit

- typical condition in a permit

The total annual emissions of dioxins to air are given as **annual mean value** does not exceed **0.10 ng / Nm³**, recalculated gas.

Emissions should be determined after **continuous long-term sampling** covering the **total annual emission** of dioxins. The condition shall begin **24 months** after the date that this permit has entered into force.



SEPA Regulation on Environmental Report

- Annual report to a national website
- A- and B-activities must submit an environmental report
 - Basic information
 - Describing text
 - Report of emission



Environmental report

- Basic information and Describing text

- Basic information
 - classification, address etc.
 - Describing text
 - valid permits, valid decisions, conditions and how they are met, yearly production, BAT conclusions
- The results from self-monitoring is summarized in the annual Environmental report to the authorities





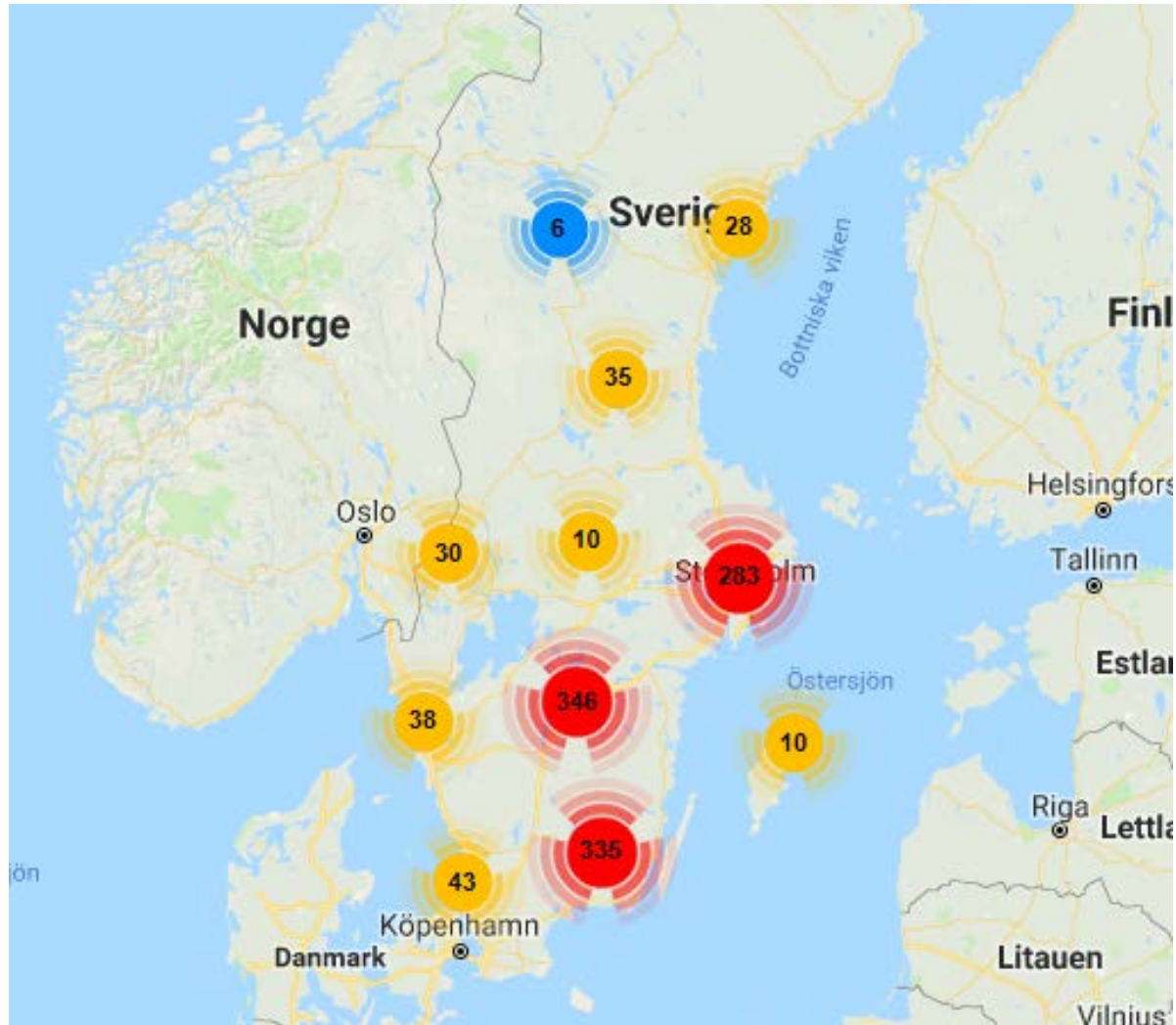
Environmental report

- Report of emission

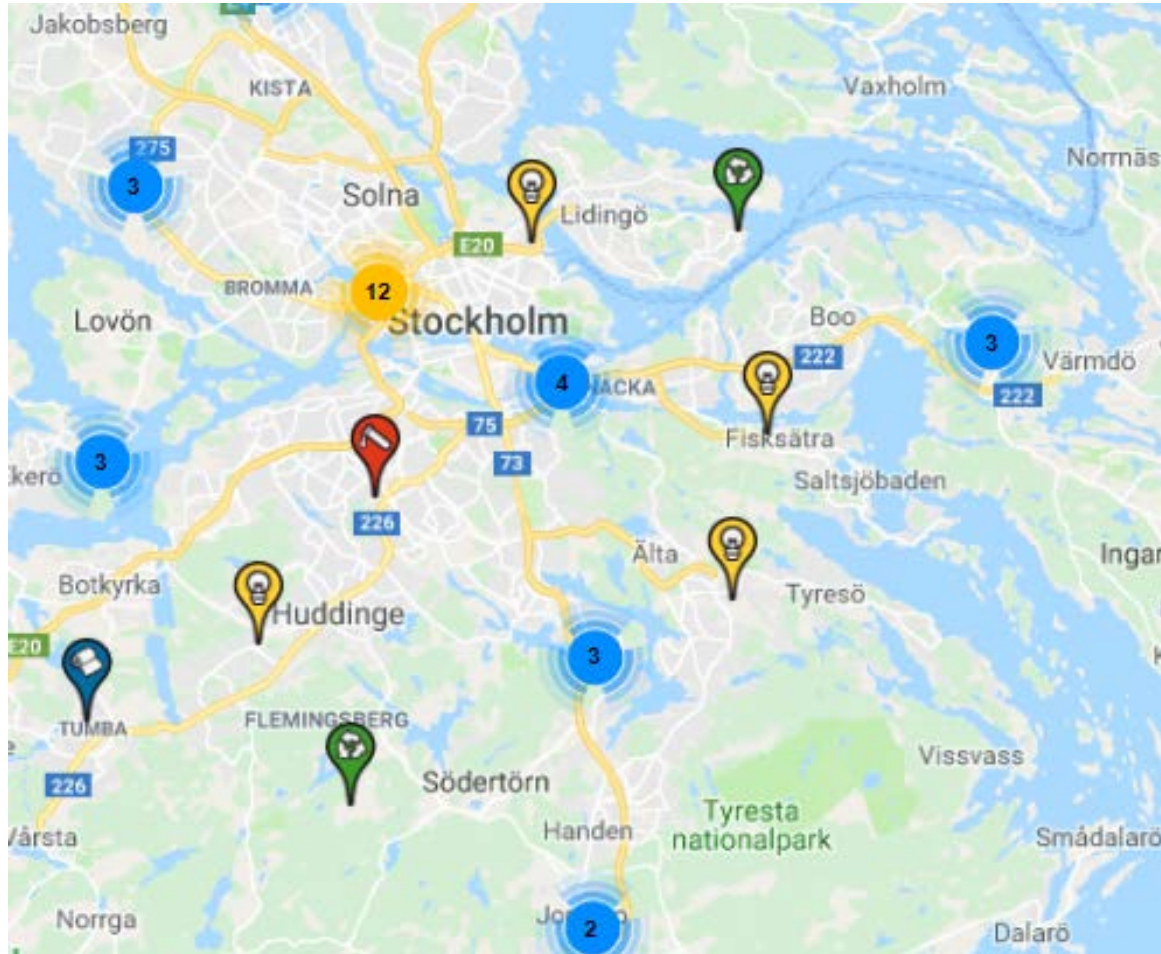
- Register of the emissions of pollutants to air, water, land and transfers of pollutants through sewage water and transfers of waste.
 - Swedish Environmental Emissions Data (SMED)
 - European Pollutant Release and Transfer Registers, (EPRTR)
- **The register is available to the public**

<http://utslappisiffror.naturvardsverket.se/Kartsida/>

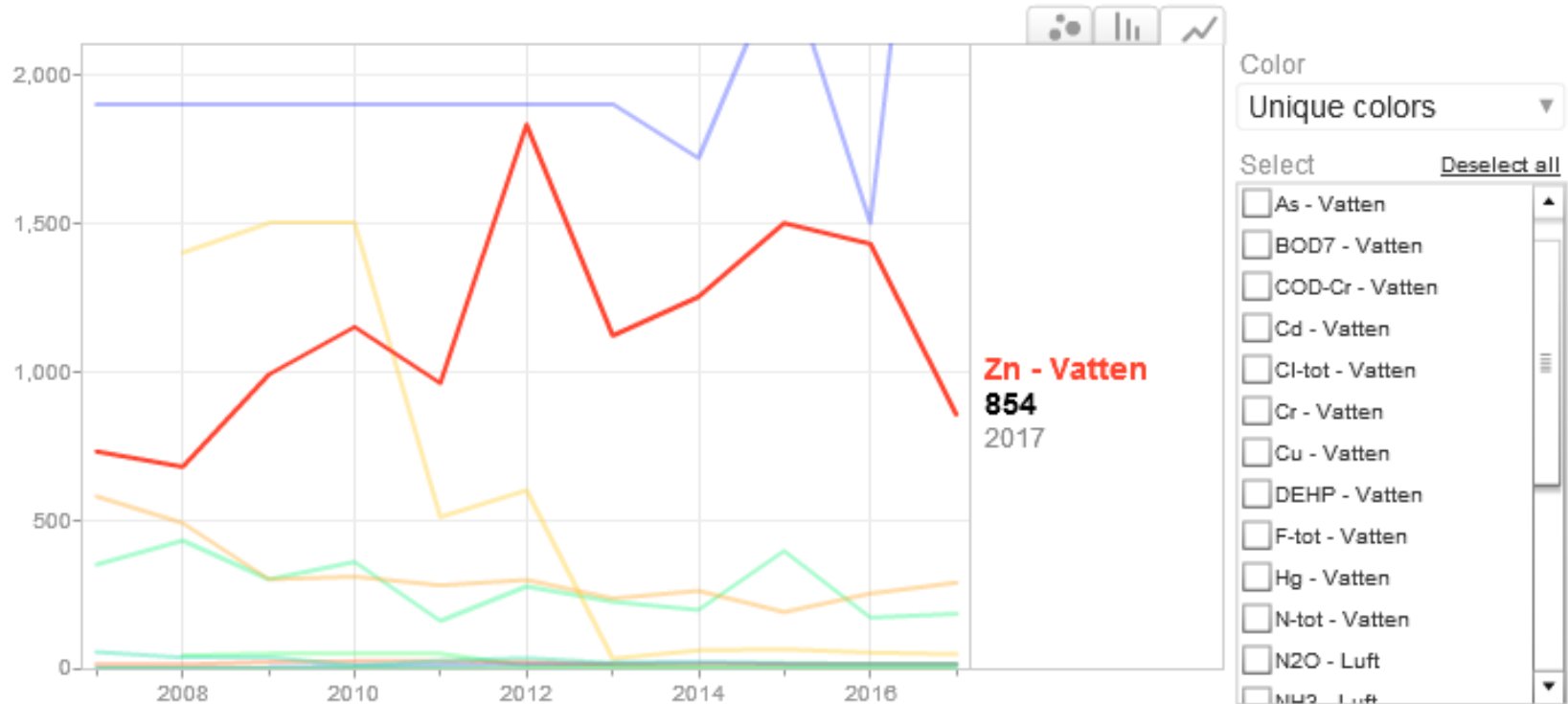
Swedish Environmental Emissions Data



Swedish Environmental Emissions Data

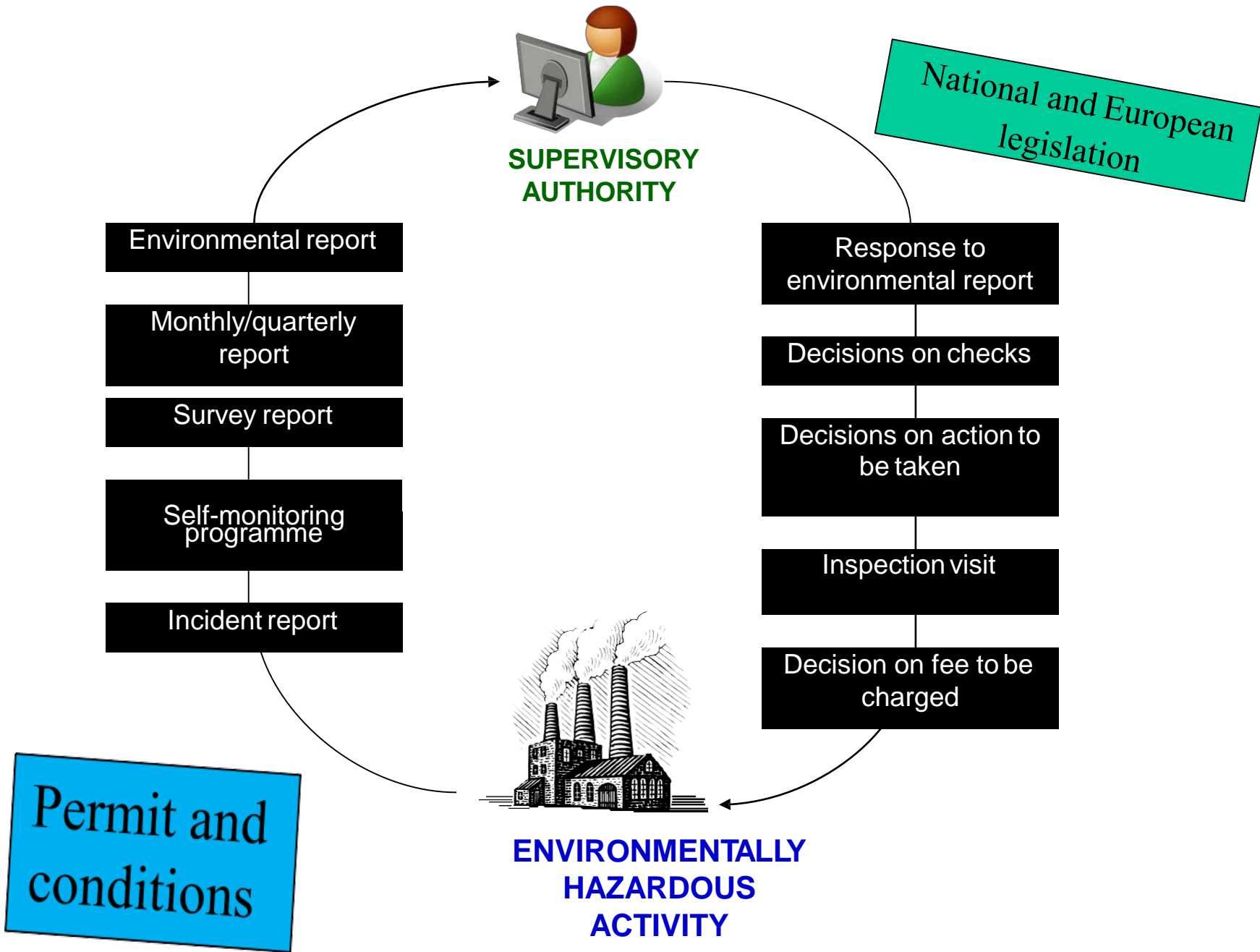


Swedish Environmental Emissions Data





Supervisory authority – the way of working



Legislation



Swedish legislation

- Frame-legislation
- Preventive more than control focused

EU-legislation:

- Detailed
- Control more than preventive focus
- Follow up and report



Supervision and good governance

- Supervisory authority must be **reliable, service-minded** and effectiveness
- **Impartial/fair judgement** and no corruption
- **Transparency**- all documents, analysis and monitoring programs (official)





Supervision/Inspection

- Desktop-supervision
 - Self-monitoring programme
 - Environmental report
 - Advice by telephone or e-mail
- Site visit
- Supervision campaigns and projects





Site visit

- Ensure compliance with conditions in permits and binding legislation
- Site visit as a result of complaints from individuals or public
- Notify of smaller changes in activities
- Take action to promote corrections
- Examinations made by independent expert (usually a consulting company)



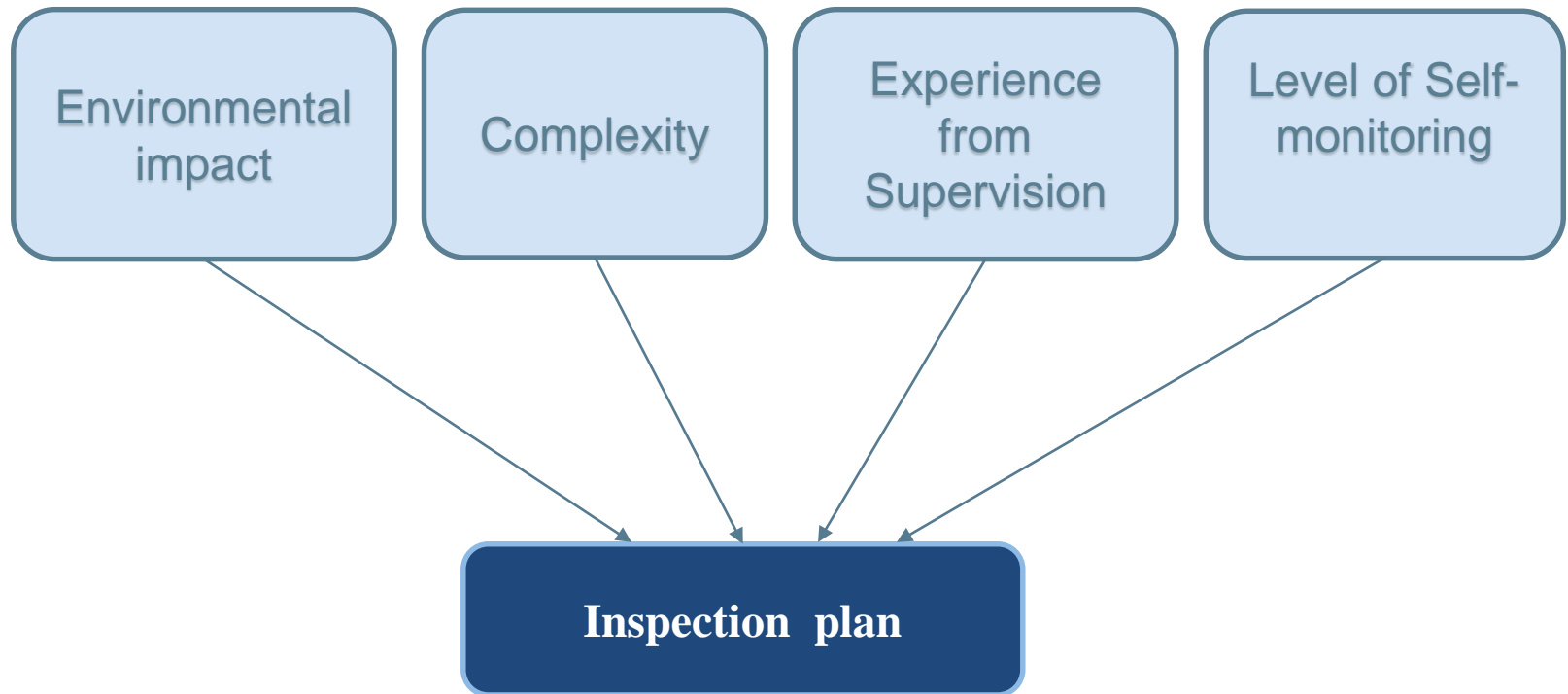
Ordinance of Supervision

- The authorities have a duty to present a **written plan** with the **inspection priorities** and fulfill the plan
- The authority shall **keep a register** of the activities
- The authority shall **annually evaluate** the activities





Inspection plan - Example





Priority of industries

- **Emissions**- amounts to water and air
- Handling of chemicals – type of chemicals, how they are stored, etc.
- The **complexity** of the plant
- A- or B-activity or IED
- **Experience** from previous inspections
- Remarks from site-visits
- The **level of the conducted self-monitoring**
- Documentation, annual report



Our tools for improvements

- Advice and information
- Injunctions with penalty
- Environmental sanction charges
- Notify the prosecutor to investigate the environmental crime
- Prohibit and or stop production



Environmental sanction charges

- Self-monitoring

- Written routines and instructions for all environmental related issues (if not, 100 000-300 000 INR)
- Documented distribution of environmental responsibilities (if not, 250 000-500 000 INR)
- Documentation of the measurements which are performed (if not, 30 000-200 000 INR)
- Fail to submit an annual environmental report (10 000-20 000 INR)





Cooperation

- consensus and
development



National Environmental Collaboration

- Funded and organized by:
 - Swedish Environmental Protection Agency
 - Marine and Water Management
 - Swedish Board of Agriculture
 - Swedish County Administration Boards
- The aim is to improve supervision at a regional level
 - Increased consensus on regulatory issues
 - Increased utilization of resources
 - Development of skills
 - Similar supervisory guidance





Water/Air Quality associations

- Companies (and municipalities) cooperate
 - To be cost effective
 - To build common knowledge
 - To achieve high quality audits





Summary

- Self-monitoring, responsibility and knowledge
- Dialogue with respect
- Inspection plan after environmental impact and self-monitoring, do the right thing
- Cooperation



Thank you!