THE NORTHERNMOST UNIVERSITY
of Technology in Scandinavia

Water management: Legal Aspects

'property rights', water operations, integrated water management and flood risk management

Prof. Maria Pettersson
Luleå University of Technology
Email: Maria.Pettersson@ltu.se

LULEÅ
UNIVERSITY
OF TECHNOLOGY

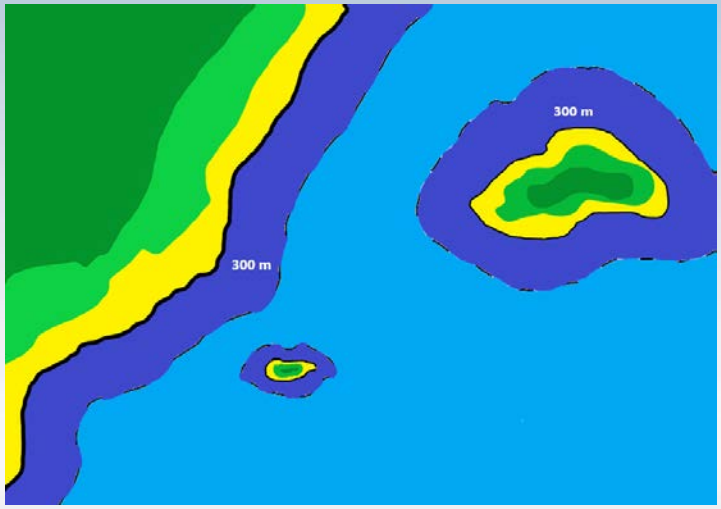
Today's presentation

1. Who has the right to the water resources?
2. Requirements for using the water resources
3. Integrated water management and flood risk management

Part I:
Who has the right to the water resources?

- The water “belongs to” the property
- Includes all water within 300 meters of the shoreline (off the mainland)

Water = private property



- Public water areas: the sea & the large lakes: Vänern, Vättern, Hjälmaren and Storsjön

Who has the right to the water resources?

- Private property rights can be
  - *Limited* by law for the benefit of public interests
    - E.g. protection of the environment
  - Transferred through *expropriation* or voluntary *agreements*

- Entitlement of public water areas belongs to the state

Part II;
Requirements for *using* the water resources

- **Water operations**
  - Construction, modification or removal of a water plant
  - Filling and piling
  - Diversion of water
  - Land-draining
  - Digging, blasting or cleansing in water areas
  - Changing the depth or location of the water
  - Increasing the groundwater level

Picture of Stornorrfors: the 2nd largest hydropower dam in Sweden

Requirements for *using* the water resources

§ Entitlement to the water

- Can be obtained through acquisition of the property or through agreement of use with the land owner

Requirements for *using* the water resources

§ Permit

- As a rule, all water operations require permit
- Assessment by the land and environmental court
- Permits can be:
  - limited in time (almost never), and
  - include conditions (always)

- Brand new rule:
  - General regulations for water operations to protect e.g. the environment – *if more appropriate* than individual decisions

Requirements for *using* the water resources

§ Compliance with legal rules

- *Consideration rules*
  - ⇒ Suitable location
  - ⇒ Precautions to prevent, minimize and counteract negative environmental impacts
  - ⇒ Best available technology
- *Specific requirements for water operations*
  - ⇒ Consider future water use (boat traffic, drinking water supply)
  - ⇒ Show consideration for fishing activities
- *Existing hydropower production plants*
  - ⇒ Modern environmental requirements

Part III
Integrated water management & flood risk management

The Water Framework Directive and the Floods Directive:

Actions towards the 'good status' of EU water and to reduce flood risks

The aim of the WFD

- **Improve water quality**
- **Secure water quantity**

Holistic and adaptive governance system

Environmental objectives

- Prevent deterioration…
- Protect, enhance and restore…
- to achieve **'good water status'**

Integrated river basin planning

- Wide consultation
- Learning
- Experimentation
- Constant evaluation of planned and taken measures

Adaptive water governance system

Instruments of the WFD

For attaining the environmental objectives

- Programs of measures
- River basin management plans
- Monitoring of the water status
- Registering protected areas

Combined approach for handling discharges to water

⇒ Environmental Quality Standards (EQS)

⇒ Emission requirements (e.g. BAT)

Example of EQS on EU-level (Directive 2008/105/EC)

***Cadmium* and its compounds**

The values vary depending on the hardness of the water as specified in five class categories:

≤ 0,08 (Class 1)
0,08 (Class 2)
0,09 (Class 3)
0,15 (Class 4)
0,25 (Class 5)

Instruments of the WFD

The derogation regime

- **"Offers" a possibility for MS to fail to meet the objectives without being in breach of the directive**

  'New modifications to the physical characteristics of a water body…" or the result of 'new sustainable human development activities'

- Targets e.g. the fulfilment of the objectives of other policies, such as energy supply, flood protection and transport

- Must be of overriding public interest and/or outweigh the benefits of achieving the WFD objectives

Swedish transposition of the WFD
Challenges

- **In the original transposition**:
  - ⇒EQS only partially legally binding
  - ⇒Derogation regime not applicable in individual permit assessments
- **Result**:
  - ⇒Court rulings for the benefit of the operators of e.g. hydropower plants
  - ⇒'Fair' outcome for the permit holders

Swedish transposition of the WFD
Challenges

- **Adaptation of existing and new water operations**

Non time-bound permits for water operations

≠

WFD Article 1

"The purpose of this Directive is to establish a framework for the protection of […] waters […], which: (a) prevents further deterioration and protects and enhances the status of aquatic ecosystems […]"

i.e. the non-deterioration requirement

Swedish transposition of the WFD

System collision?

'Traditional' water management

Discourses

- Use of water
- Hydropower development
- Traditional management

Rules

- Swedish Environmental Code
- Water operation permit
- Conditions in individual permits

Integrated water management

Discourses

- Environmental protection
- Ecosystem approach
- Participation
- Process oriented

Rules

- Water Framework Directive
  - EQS
  - POMs
- Spatial planning

Legal certainty  ***Flexibility***

BALANCE

Swedish transposition of the WFD

New rules

- …aiming to better transpose the environmental objectives, including the derogation regime, entered into force on January 1, 2019

⇒the full consequences of the new rules are difficult to assess at this stage

The Floods Directive (FD)

Starting points

- Floods can result in:
  - Fatalities, displacement of people and damage to the environment, and
  - Compromise economic development and undermine economic activities
- As natural phenomena floods cannot be prevented
  - But, *human activities* and *climate change* contribute to increase the likelihood and adverse impacts of flood events
- It is desirable to reduce the risk of adverse consequences of floods
  - To be effective, the measures should be *coordinated throughout a river basin*

The Floods Directive (FD)

Aim

To reduce the adverse consequences of floods for society
(human health, the environment, cultural heritage and economic activities)

- In three steps:
  - ⇒**Flood risk assessment**
    - Maps of the river basin districts
    - Account of previous floods
  - ⇒**Flood hazard maps** and **flood risk maps**
    - Accounting for different probabilities of floods
  - ⇒**Flood risk management plans** (FRMPs)
    - Goals and measures for managing the flood risks

The Floods Directive (FD)

Summary

- Basically a procedural directive
  - Plans and programs
  - No substantive requirements

    ⇒**'More policy than law'**
- Promotes 'active involvement' of the public
  - Shared rules with the WFD
- Improved availability of flood risk *information*
  - Duty to undertake, publish and make FRMPs available for public consultation

That was all for now

THANK YOU FOR YOUR ATTENTION!