

Water Framework Directive in Finland

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WAT-E2080 Water & Governance

Aalto University

Content of the presentation

- ▶ Basics of EU Water Framework Directive (WFD)
- ▶ Organizations involved
- ▶ Implementation of WFD in Finland
- ▶ Case examples

River Basin Management Plans based on the EU Water Framework Directive

- The aim is to achieve good surface and groundwater water status by 2015; with some exemptions the deadlines can be extended to 2021 or 2027.
- Plans cover the whole river basins
- Plans include identification of cost-effective measures to achieve good water quality status
- Plans are drawn every six year
- Planning is based on broad cooperation with different stakeholders
- Planning includes public consultation and involvement of all stakeholders
- The government adopts the River Basin Management plans in Finland

1st hearing

1. Work Program and Essential Issues

Kuullaan vesienhoidon keskeisistä kysymyksistä ja suunnitteluprosessista

- Suunnittelun työohjelma ja aikataulu
- Suunnittelun lähtökohdat
- Vesienhoidon keskeiset haasteet alueella

Suunnittelu-
vaiheet toistuvat
6 vuoden välein

2. Status assessment

- Järvien, jokien, rannikko-vesien ja vesien ekologinen ja kemiallinen tila
- Pohjavesien tilanarvio

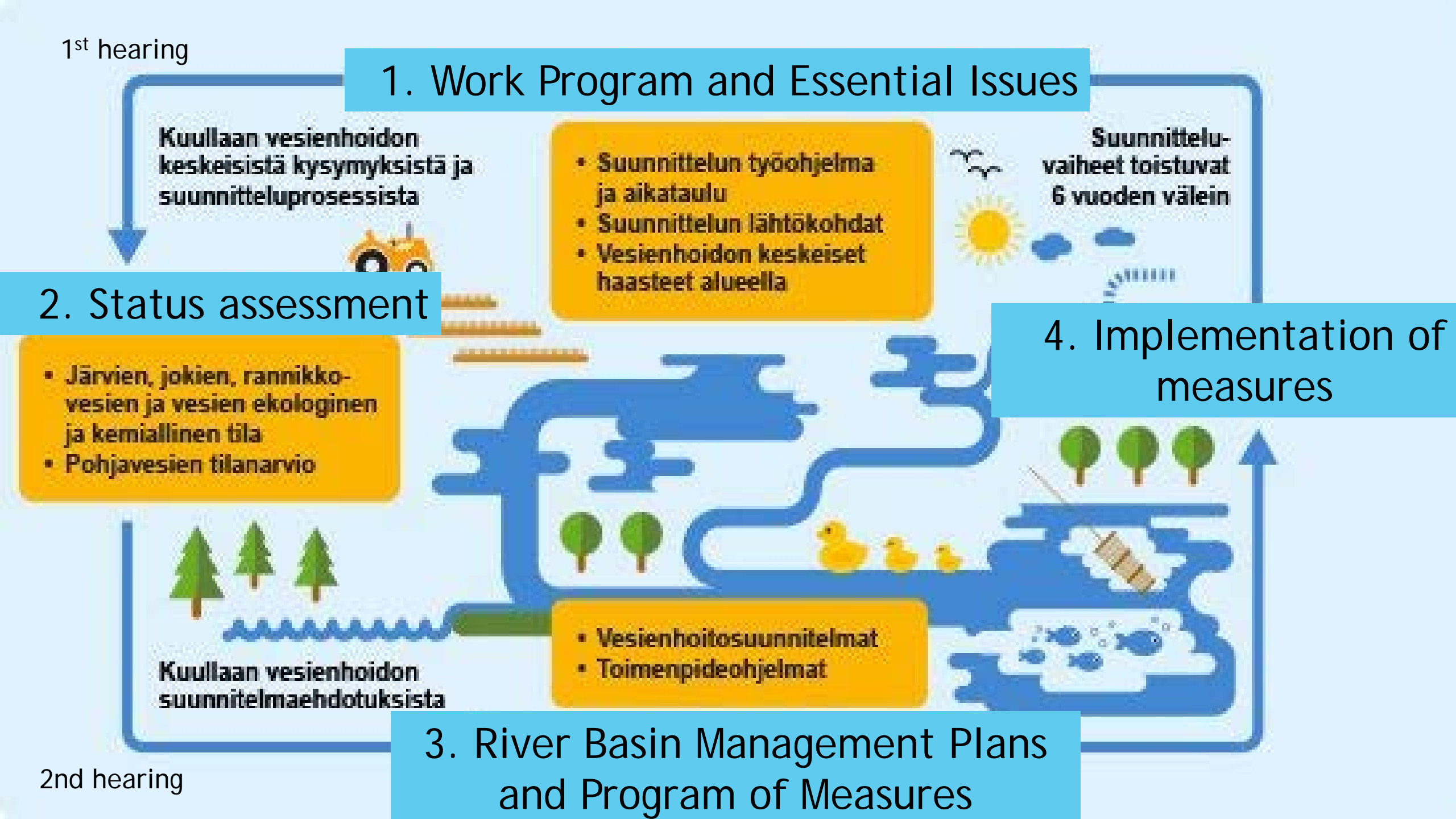
4. Implementation of measures

Kuullaan vesienhoidon suunnitelmaehdotuksista

- Vesienhoitosuunnitelmat
- Toimenpideohjelmat

3. River Basin Management Plans and Program of Measures

2nd hearing



Basics of WFD

in other words

Twelve steps of River Basin Management Planning (RBMP)

Twelve steps of RBMP

- ▶ Delineate river basin districts = catchment and reporting units
- ▶ Delineate water bodies = planning units

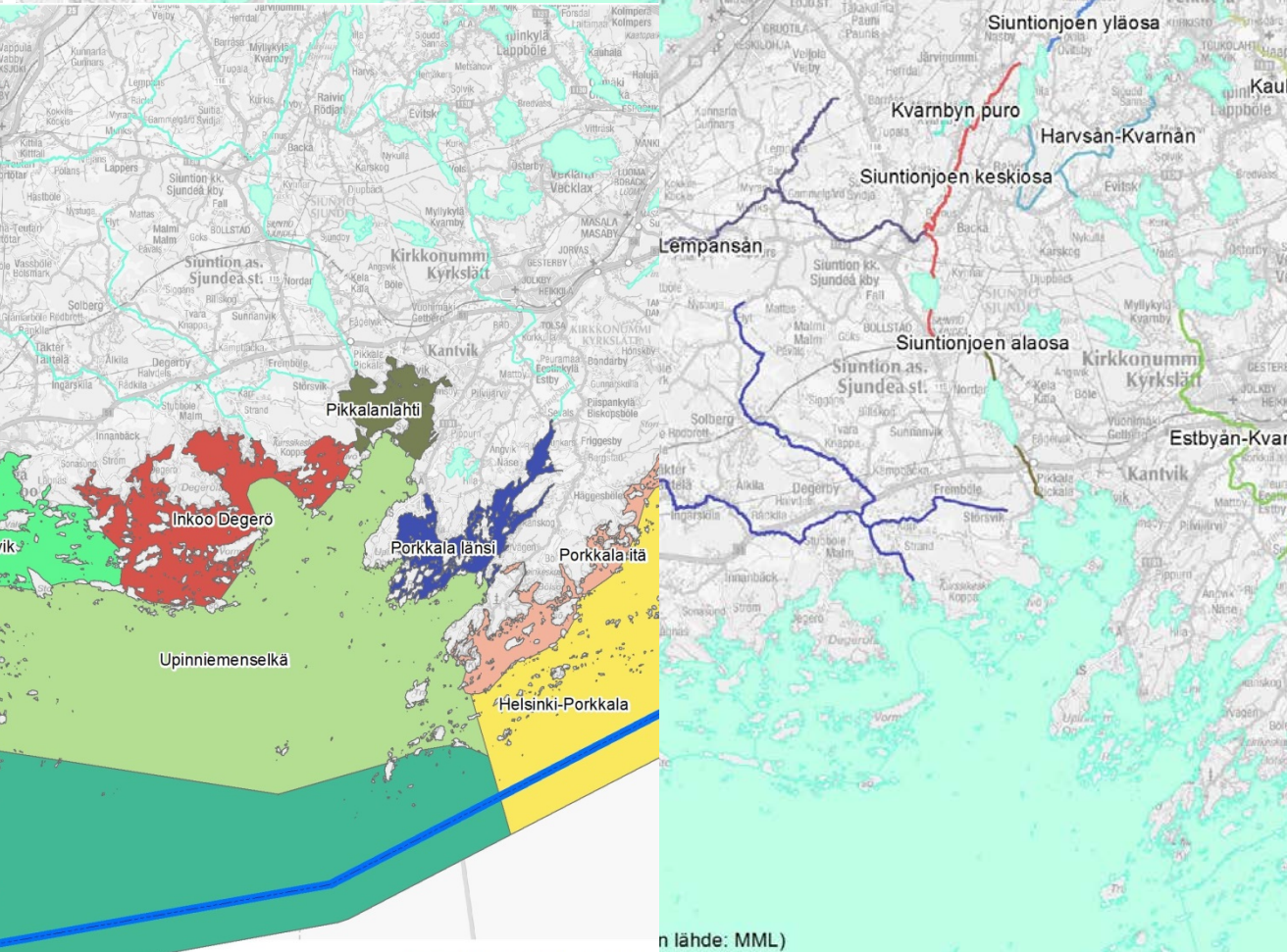
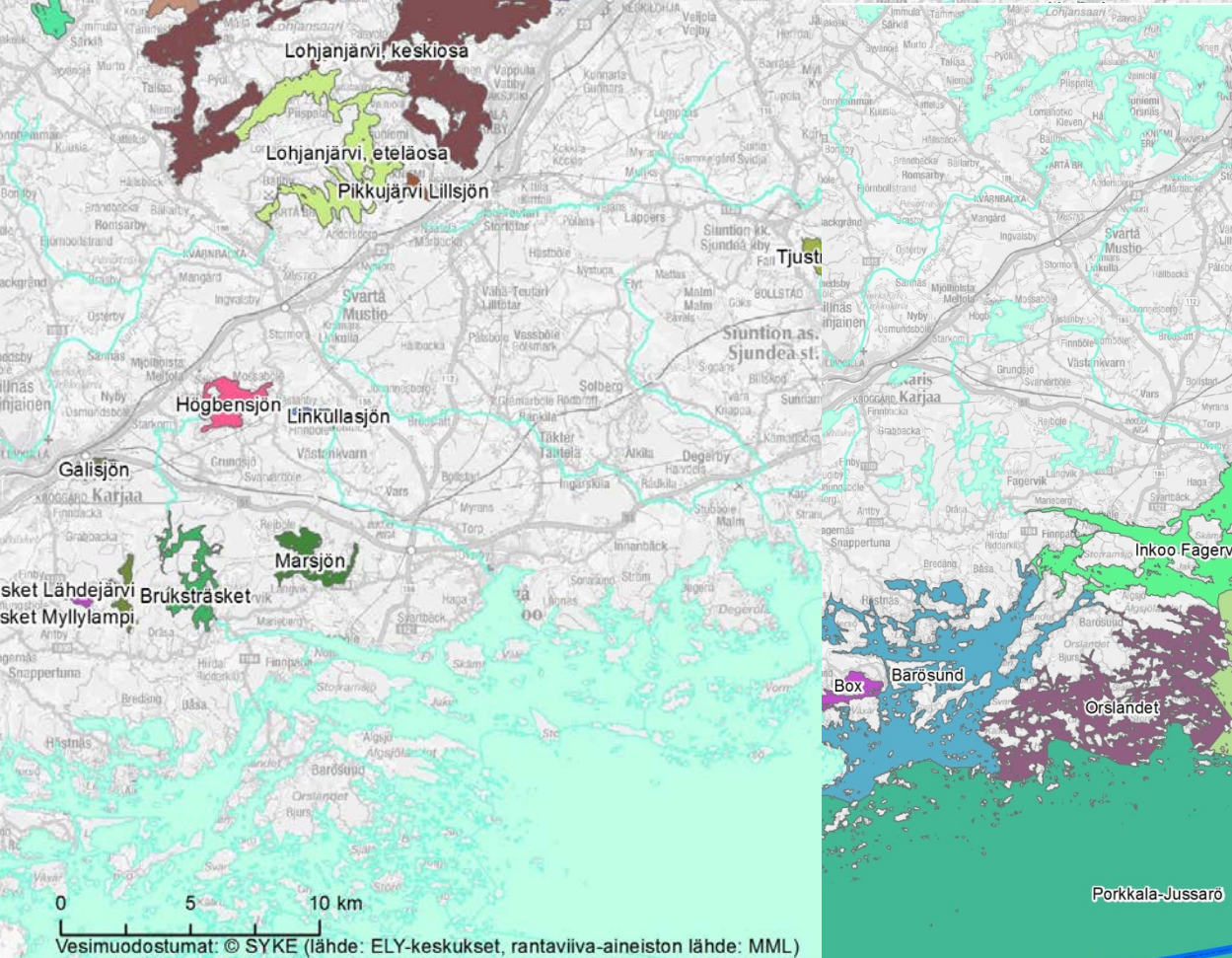
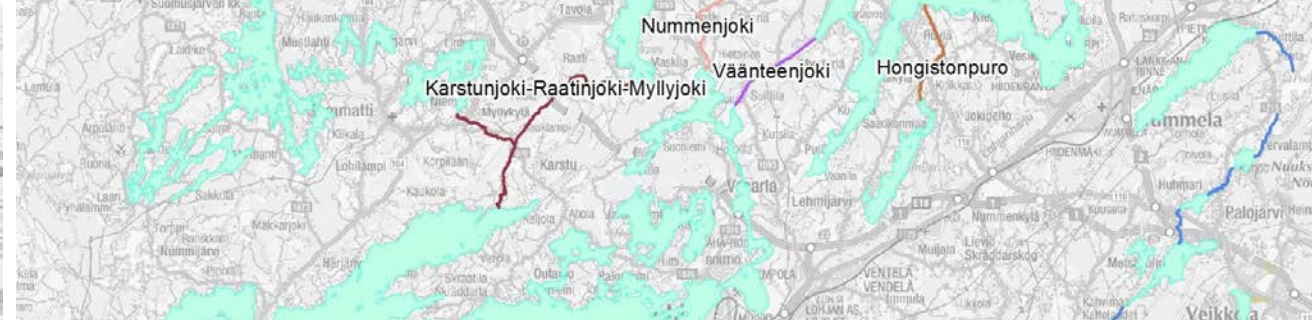
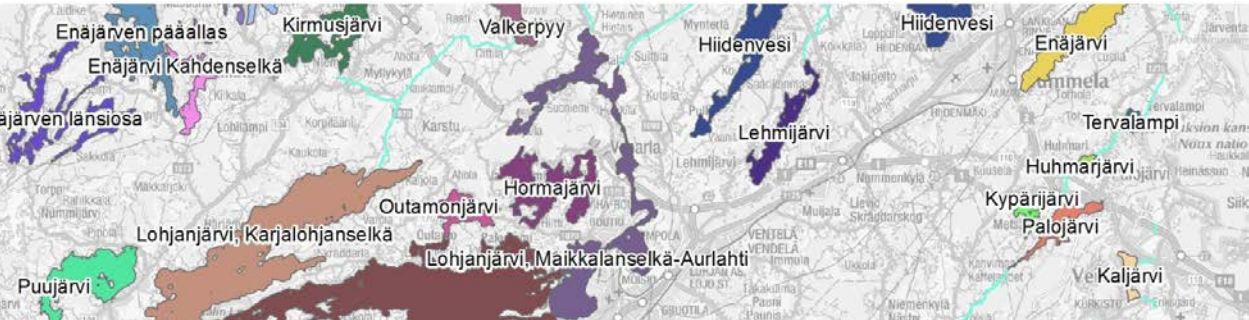
Finland's eight river basin districts (RBD's)

- ▶ 1. Vuoksi RBD
- ▶ 2. Kymijoki-Gulf of Finland RBD
- ▶ 3. Kokemäenjoki-Archipelago Sea- Bothnian Sea RBD
- ▶ 4. Oulujoki-Iijoki RBD
- ▶ 5. Kemijoki RBD
- ▶ Two international river basin districts (*IRBD*) have also been designated covering parts of Finland:
 - ▶ 6. Tornionjoki IRBD (shared with Sweden)
 - ▶ 7. Teno, Näätämöjoki and Paatsjoki IRBD (shared with Norway)
- ▶ 8. A separate RBD has been defined to cover the autonomous Åland Islands, where the WFD is being implemented by the provincial government.



Water bodies

- ▶ The “water body” should be a coherent sub-unit in the river basin (district) to which the environmental objectives of the directive must apply.
 - ▶ Lakes
 - ▶ Rivers
 - ▶ Coastal waters
 - ▶ Ground waters
- ▶ Hence, the main purpose of identifying “water bodies” is to enable the status to be accurately described and compared to environmental objectives.



0 5 10 km

Vesimuodostumat: © SYKE (lähde: ELY-keskukset, rantaviiva-aineiston lähde: MML)

0 5 10 km

Vesimuodostumat: © SYKE (lähde: ELY-keskukset, rantaviiva-aineiston lähde: MML)

— Sisempi aluevesiraja

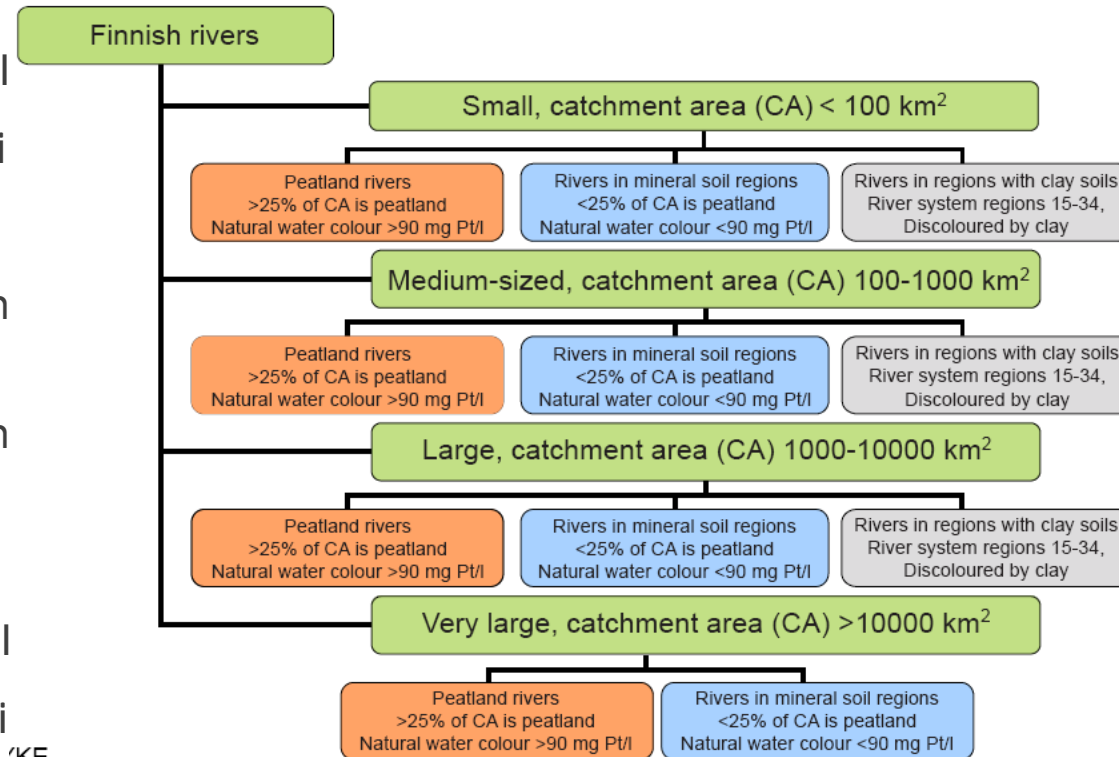
(lähde: MML)

Twelve steps of RBMP

- ▶ Delineate river basin districts = catchment and reporting units
- ▶ Delineate water bodies = planning units
- ▶ Divide water bodies to types (typology)
- ▶ Assess human impacts (=risks!)

River typology in Finland

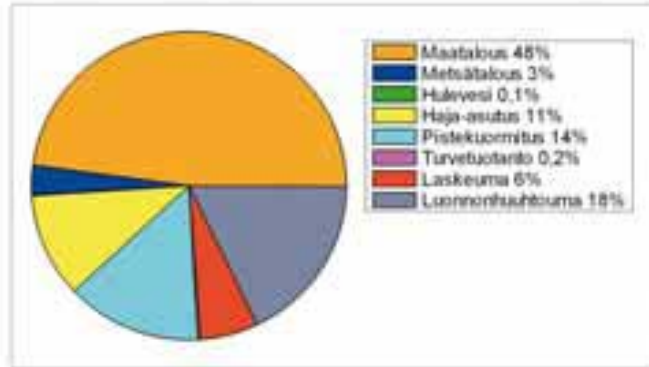
1. Small peatland rivers
2. Small rivers in regions with mineral
3. Small rivers in regions with clay soi
4. Medium-sized peatland rivers
5. Medium-sized rivers in regions with mineral soils
6. Medium-sized rivers in regions with soils
7. Large peatland rivers
8. Large rivers in regions with mineral
9. Large rivers in regions with clay soi
10. Very large peatland rivers
11. Very large rivers in regions with mineral soils



'KE

Phosphorus loading (point and diffuse)

Fosforikuormitus



Pistekuormitus (kg/a)(keskiarvo 2001-2006)

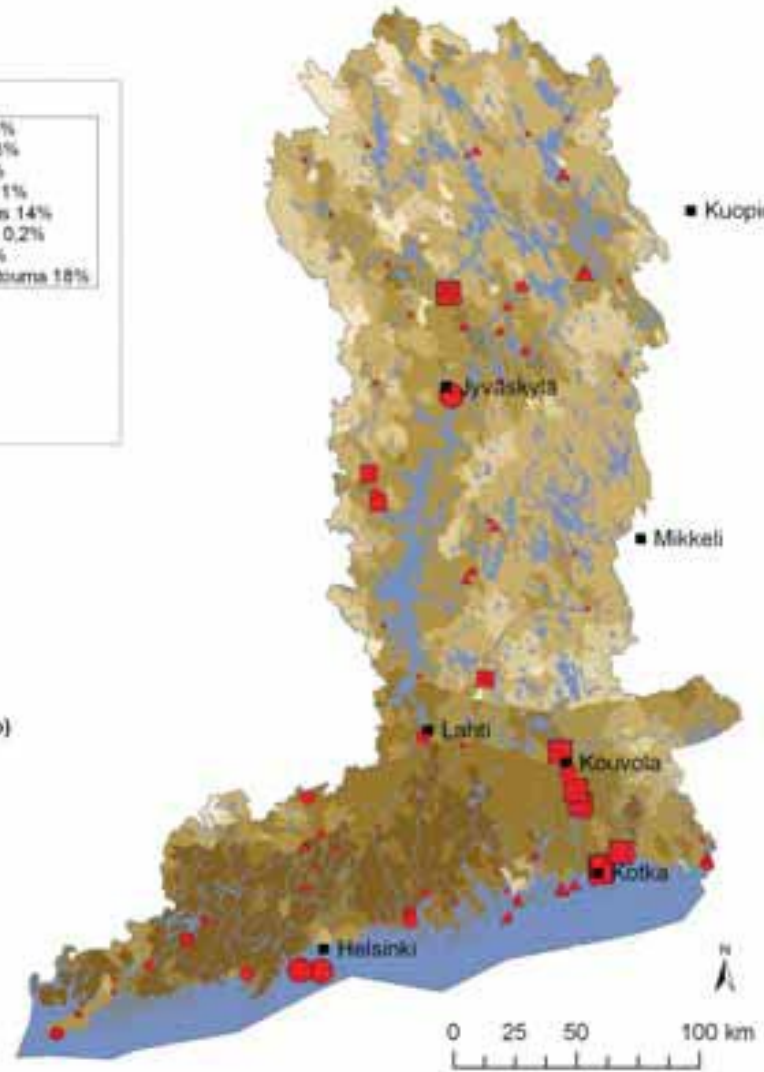
Yhdyskunnat Teollisuus Muut



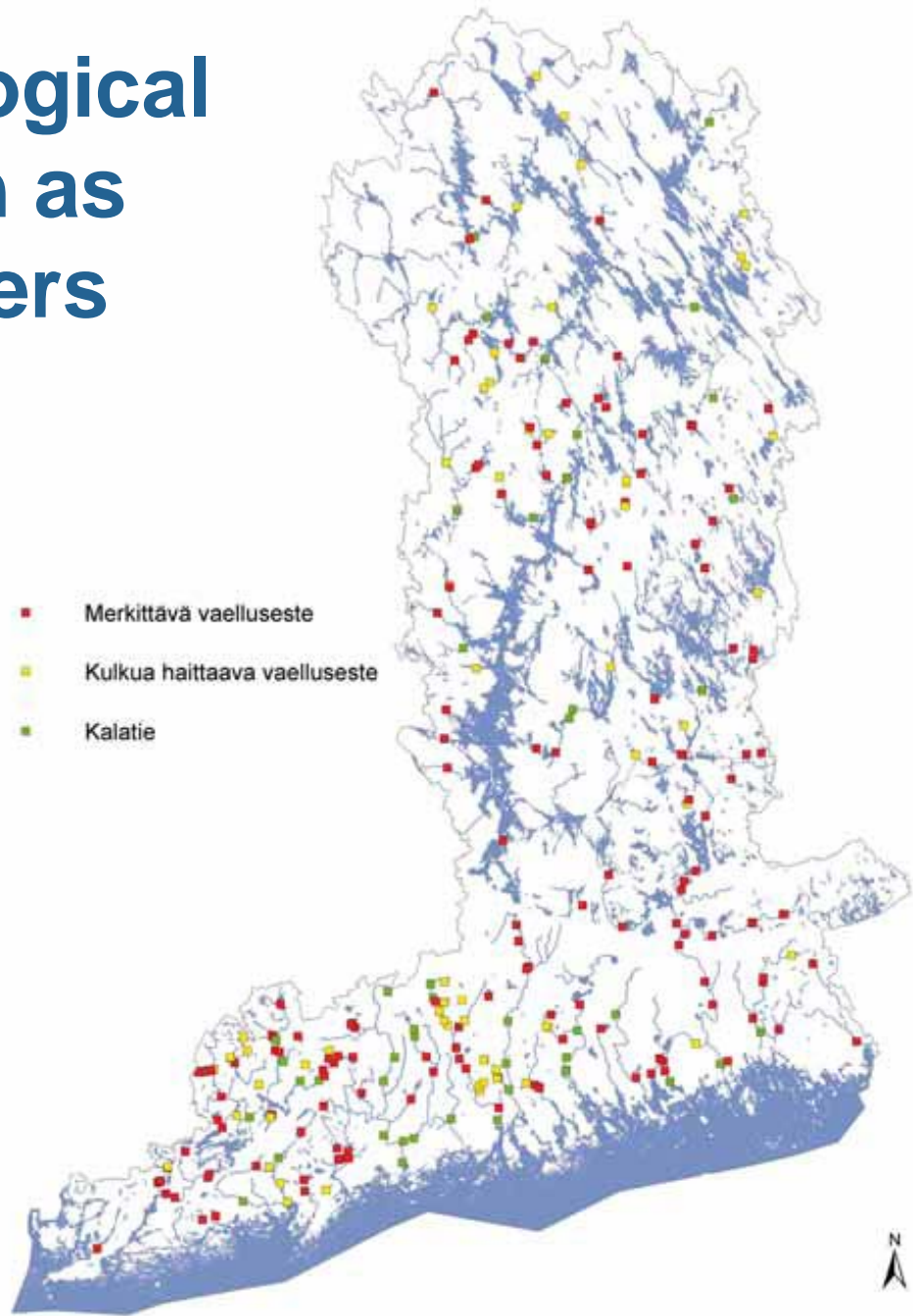
Hajakuormitus (kg/km²/a)(pitkän aikavälin keskiarvo)



Lähde: VEPSI / VAHTI
 tietoyhteiskunta © Maanmittauslaitos loppu sivu 3/2008/08



Hydromorphological pressures such as migration barriers



Twelve steps of RBMP

- ▶ Delineate river basin districts = catchment and reporting units
- ▶ Delineate water bodies = planning units
- ▶ Divide water bodies to types (typology)
- ▶ Assess human impacts (risks!)
- ▶ **Make status classification (ecological, chemical, quantitative)**
- ▶ **Review monitoring program**

State of surface water body

Ecological

Chemical

Biological quality elements

- Phytoplankton
- Macrophytes and fytobentos
- Benthic invertebrates
- Fish

-EU priority substances (harmful substances)

Composition and abundance

Hydromorphological elements supporting the biological elements

Chemical and physico-chemical elements supporting the biological elements

Ecological status 2006 and 2012

Ekologinen tila

- Erinomainen
- Hyvä
- Tyydyttävä
- Välttävä
- Huono
- Ei tietoa

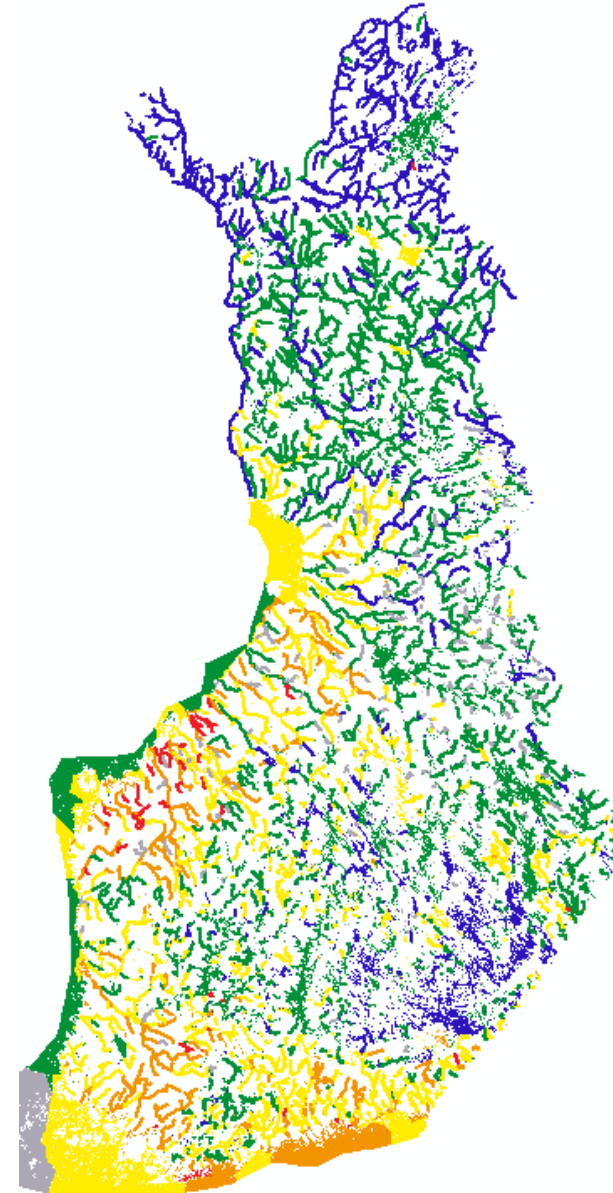
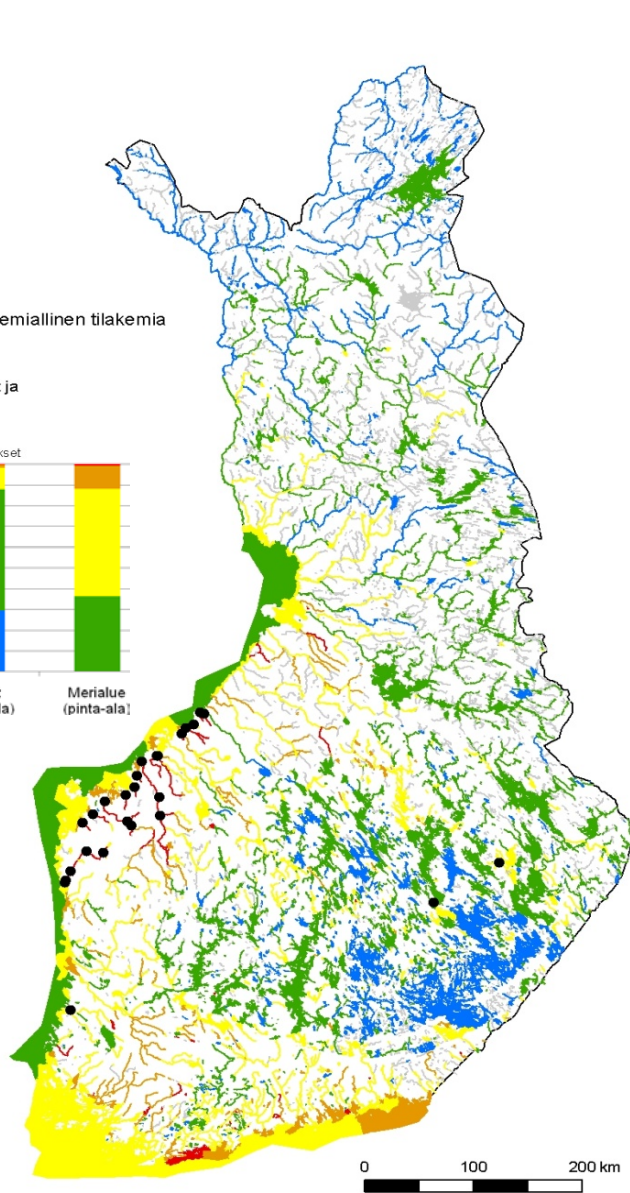
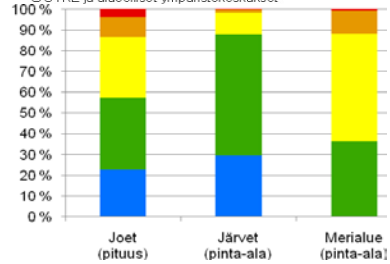
- Hyvää huonompi kemiallinen tilakemia

Tiedot:
Alueelliset ympäristökeskukset ja
Suomen ympäristökeskus

©SYKE

Rantaviiva-aineisto:

©SYKE ja alueelliset ympäristökeskukset



Do you see any differences in this
two pictures?

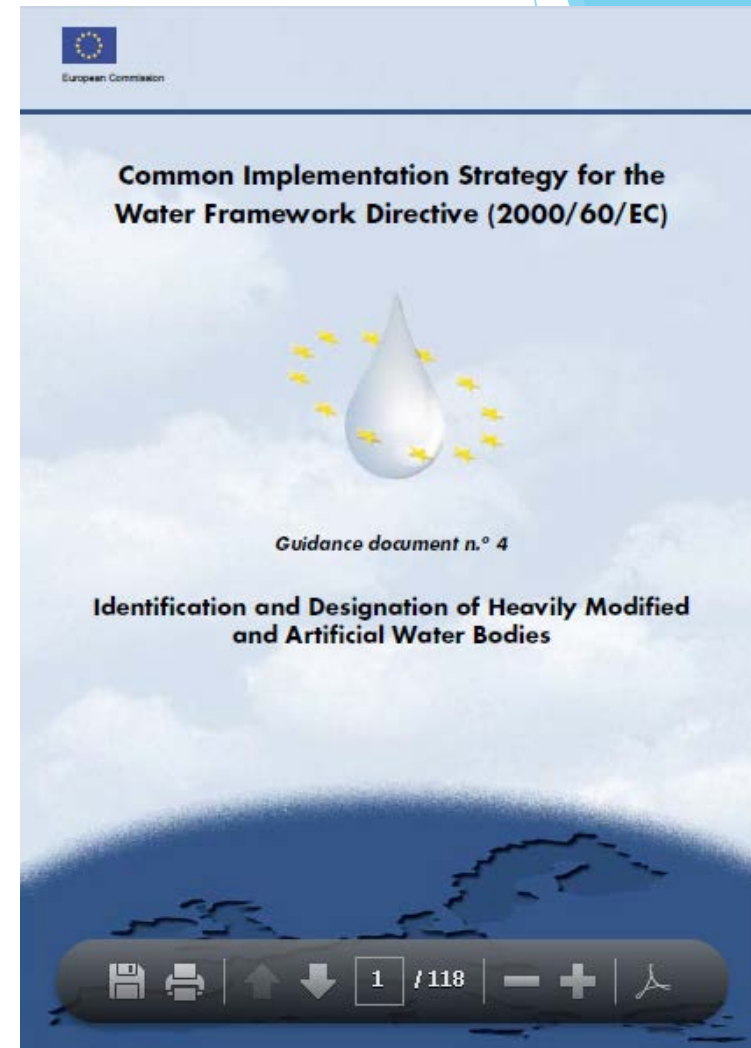
Number of water bodies has
increased more than 1000 units

Twelve steps of RBMP

- ▶ Delineate river basin districts = catchment and reporting units
- ▶ Delineate water bodies = planning units
- ▶ Divide water bodies to types (typology)
- ▶ Assess human impacts (risks!)
- ▶ Make status classification (ecological, chemical, quantitative)
- ▶ Review monitoring program
- ▶ **Identify protected areas and heavily modified water bodies**
- ▶ **Define environmental objectives and need for exemptions**
- ▶ **Plan measures to meet environmental objectives**

Protected areas and heavily modified water bodies

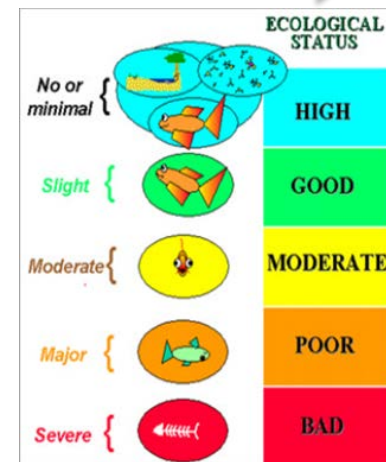
- ▶ Protected areas
 - ▶ Water depended Natura 2000 -sites
 - ▶ Drinking water areas
 - ▶ Bathing waters
- ▶ Physically changed water bodies
 - ▶ No possibility to achieve good ecological status without significant adverse effect on use and other alternative to achieve the same benefit don't exist.



Objective of the status of waters

- ▶ Good status means that certain standards have been met for the ecology, chemistry, morphology and quantity of waters (hydromorphology).
- ▶ Status of waters is described with five colors and calculated as EQRs (ecological quality ratio).
- ▶ Exemptions are possible in certain circumstances (technical, disproportionate costs, natural conditions)

Less than good status means significant pressures



Measures

- ▶ Basic measures are based on EU or national legislation

Finnish Legislation

Environmental Protection Act 2014

Water pollution

- UWWT
- Industry
- Peat production
- Agriculture etc.

Specific Acts or degrees on

– River basin management plans

- Marine protection
- Flood risk management plans
- Water services
- Discharge of nitrates
- Waste water on rural areas

Water Act 2011

Use of water resources

- Water abstraction
- Water regulation
- Hydropower
- Water related construction etc.

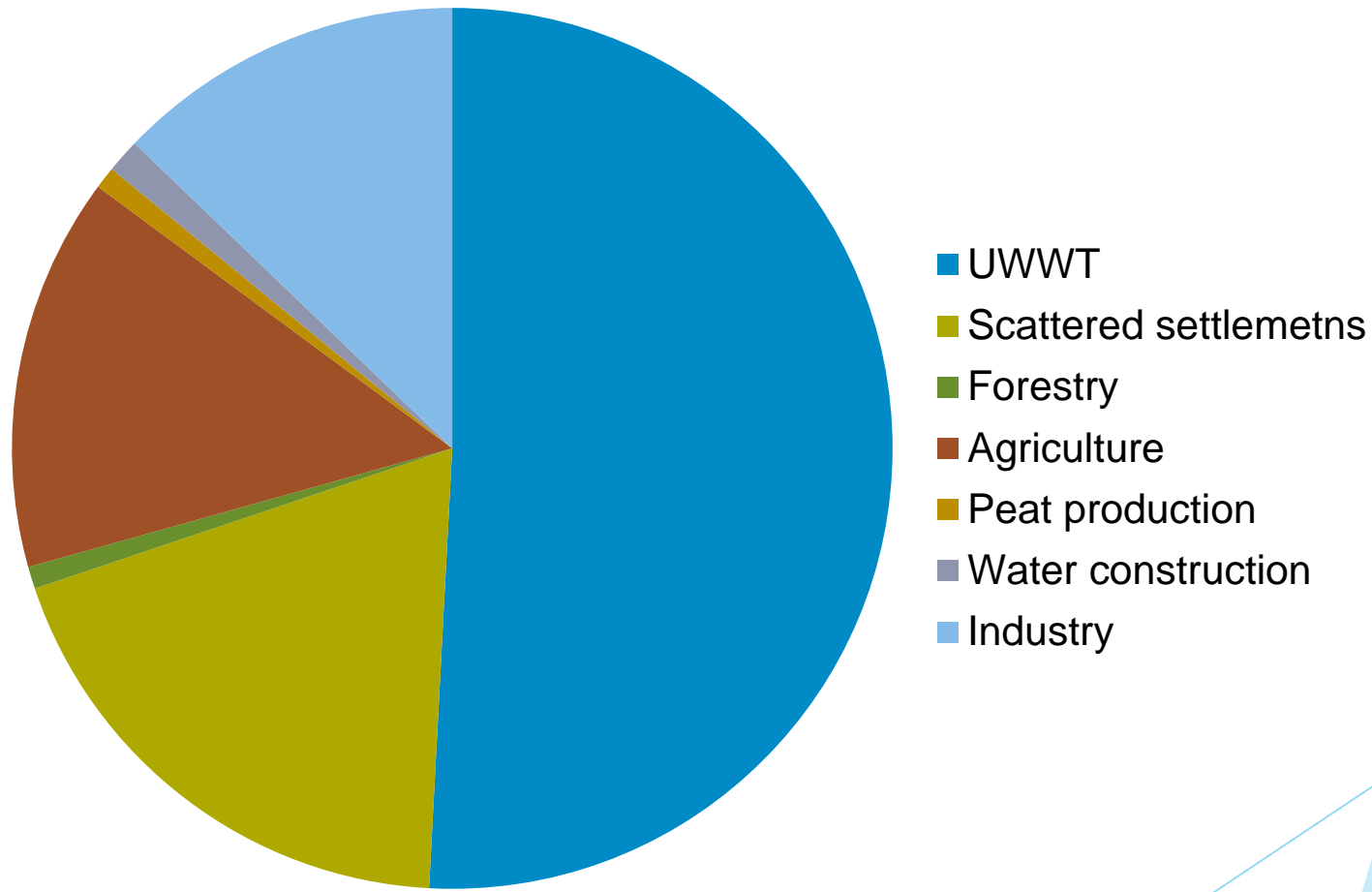
Measures

- ▶ Basic measures are based on EU or national legislation
- ▶ Supplementary measures are more or less based on voluntary
 - ▶ Part of those measures are planned on a level of specific river/lake
 - ▶ On the other hand, some of the measures are planned on the regional level

Most important voluntary based measures

- ▶ Measures in the Rural Development Programme to promote pollution control from agriculture
- ▶ Restoration measures in rivers and lakes reducing harmful impacts of eutrophication, also reducing the harmful impacts of hydrological engineering
- ▶ Reducing the loads from forestry

Water protection related measures 280 €/per capita in Finland



Discuss briefly with person(s) near to you:
Do you think costs are divided equally
between different pressures?

Measures

- ▶ Basic measures are based on EU or national legislation
- ▶ Supplementary measures are more or less based on voluntary
 - ▶ Part of those measures are planned on a level of specific river/lake
 - ▶ On the other hand, some of the measures are planned on the regional level
 - ▶ Also regional differences in level of planning with same mitigation measure
- ▶ Moreover 80 policy measures (legal, economical, administration)

Twelve steps of RBMP

- ▶ Delineate river basin districts = catchment and reporting units
- ▶ Delineate water bodies = planning units
- ▶ Divide water bodies to types (typology)
- ▶ Assess human impacts (risks!)
- ▶ Make status classification (ecological, chemical, quantitative)
- ▶ Review monitoring program
- ▶ Identify protected areas and heavily modified water bodies
- ▶ Define environmental objectives and need for exemptions
- ▶ Plan measures to meet environmental objectives
- ▶ **Organize stakeholder consultations and public hearings regularly**
- ▶ **Review and update all information and plans every six year and report to EU commission**
- ▶ **Update midterm evaluation of implementation of measures and report to EU commission every six year, three years after update of plans**

Public consultations

First integrated consultation

- ▶ a timetable and work programme for the preparation of the RBMP, including a statement of the consultation measures to be taken
- ▶ an interim overview of the significant water management issues identified in the river basin
- ▶ SEA Integrated into the consultation
 - ▶ included into the material

Second consultation on proposal of River Basin Management Plans

EIONET

Central Data Repository

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You are here: [Eionet](#) » [CDR](#) » [Finland](#) » [European Union \(EU\) obligations](#) » [Water Framework Directive: River Basin Management Plans - 2016 Reporting](#)


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Overview

Water Framework Directive: River Basin Management Plans - 2016 Reporting

Obligation(s) [Water Framework Directive - River Basin Management Plans - 2016 Reporting](#)

Envelopes and subcollections

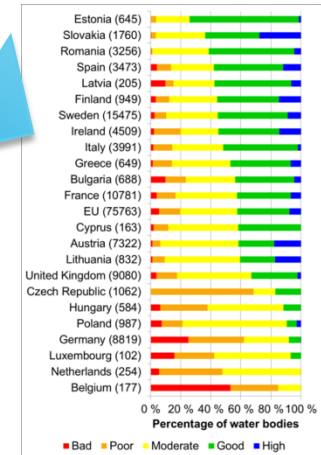
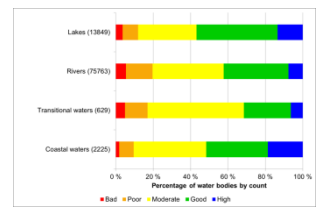
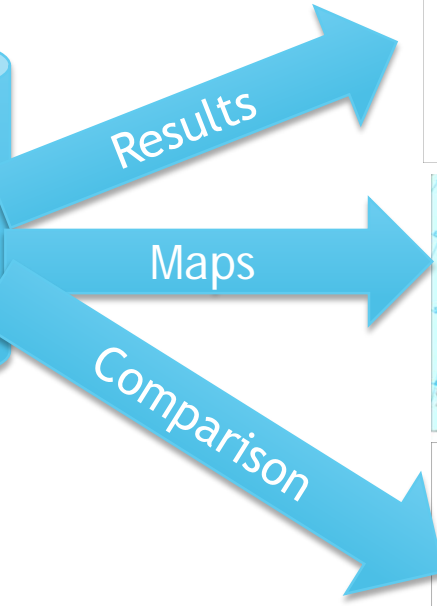
 1. RBMP, PoM and background documents	27 Nov 2015
 2. National spatial data	11 Oct 2016
 3. National RBDSUCA	18 Oct 2016
 4. River Basin Districts	27 Nov 2015

- 104 000 rivers (1.2 milj. km)
- 19 000 lakes
- 1000 transitional zones and
- 2950 coastal areas

Status of european waters



26 Countries
170 RBMP's



1. Work Program and Essential Issues

Kuullaan vesienhoidon keskeisistä kysymyksistä ja suunnitteluprosessista

- Suunnittelun työohjelma ja aikataulu
- Suunnittelun lähtökohdat
- Vesienhoidon keskeiset haasteet alueella

Suunnittelu-
vaiheet toistuvat
6 vuoden välein

2. Status assessment

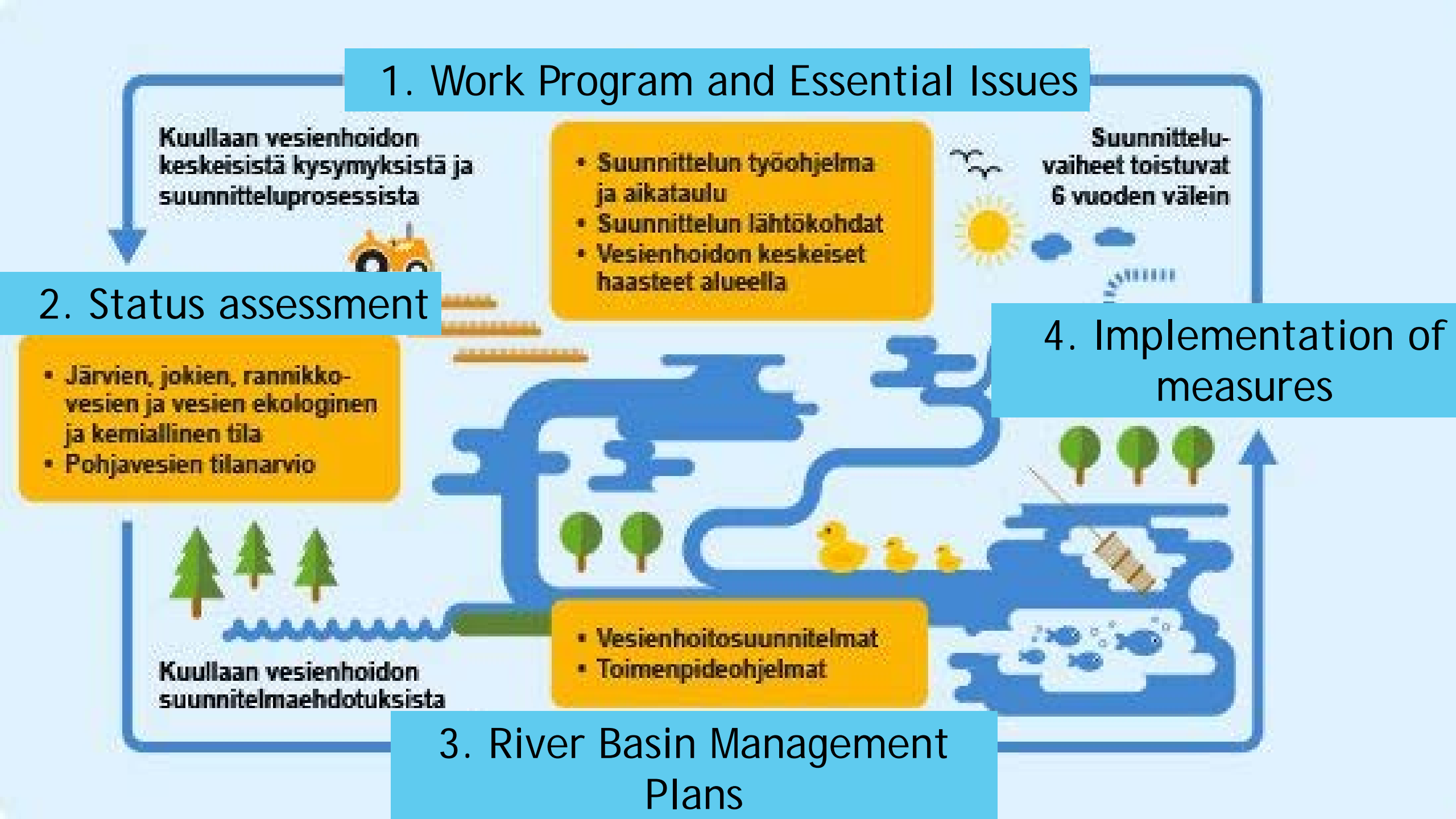
- Järvien, jokien, rannikko-vesien ja vesien ekologinen ja kemiallinen tila
- Pohjavesien tilanarvio

4. Implementation of measures

Kuullaan vesienhoidon suunnitelmaehdotuksista

- Vesienhoitosuunnitelmat
- Toimenpideohjelmat

3. River Basin Management Plans



Discuss briefly with person(s) near to you:
What might be to most resources
demanding phase(s) in revision of 12 steps?

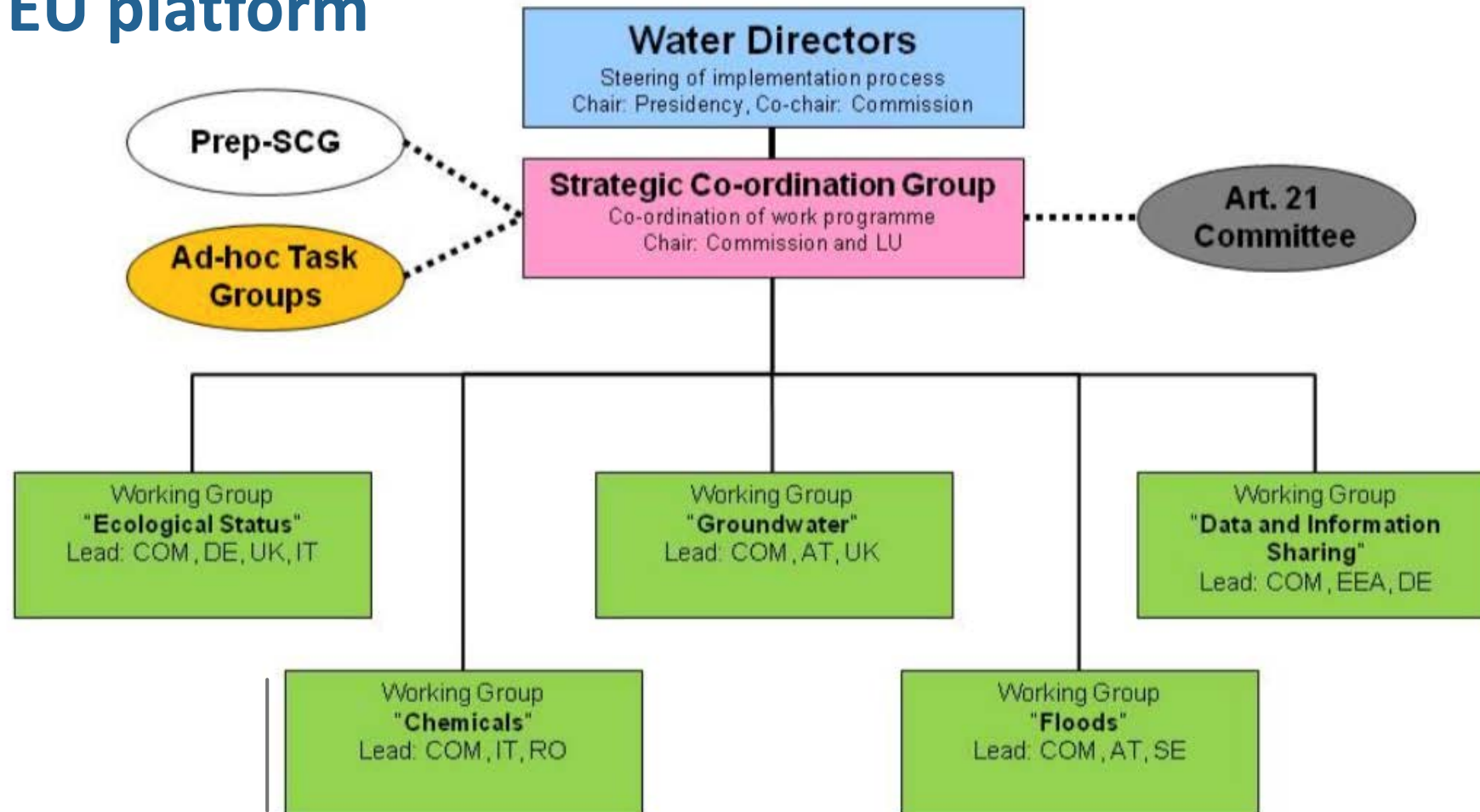
Topics of the presentation

- ▶ WFD basics
- ▶ **Organizations involved**
- ▶ Implementation of WFD in Finland
- ▶ Cases

Organizations
involved
= the players

CIS Organisation 2016-2018

EU platform



ECOSTAT co-leads:

Martina Bussettini (IT - also co-lead of ATG hymo)

Sandra Poikane (JRC)

Peter Pollard (UK)

Ulrich Claussen (DE - also co-lead of MSFD GES)

Wouter van de Bund (JRC - also co-lead of ATG Hymo)

Water

Blueprint ▶

River Basin Management ▾

Water Framework Directive

Groundwater ▶

Common Implementation Strategy ▾

CIS Work Programme

Guidance Documents

Flood Risk Management ▶

Water Scarcity and Droughts ▶

Drinking Water ▶

Bathing Water

Emissions and Water Reuse▶

Adaptation to Global Change

Conferences and Initiatives ▶

Water Eurobarometer

Feedback

If you have any questions about European water policy or if you have any ideas on

WFD Guidance Documents



Guidance documents and technical reports have been produced to assist stakeholders to implement the WFD. Guidance Documents are intended to provide an overall methodological approach, but will need to be tailored to the specific circumstances of each EU Member State.

Below you will find the list of guidance documents which have been published to date. Guidance documents numbers 1, 3, 4, 6, 7, 9 and 10 have associated policy summaries that give an overview of the documents.

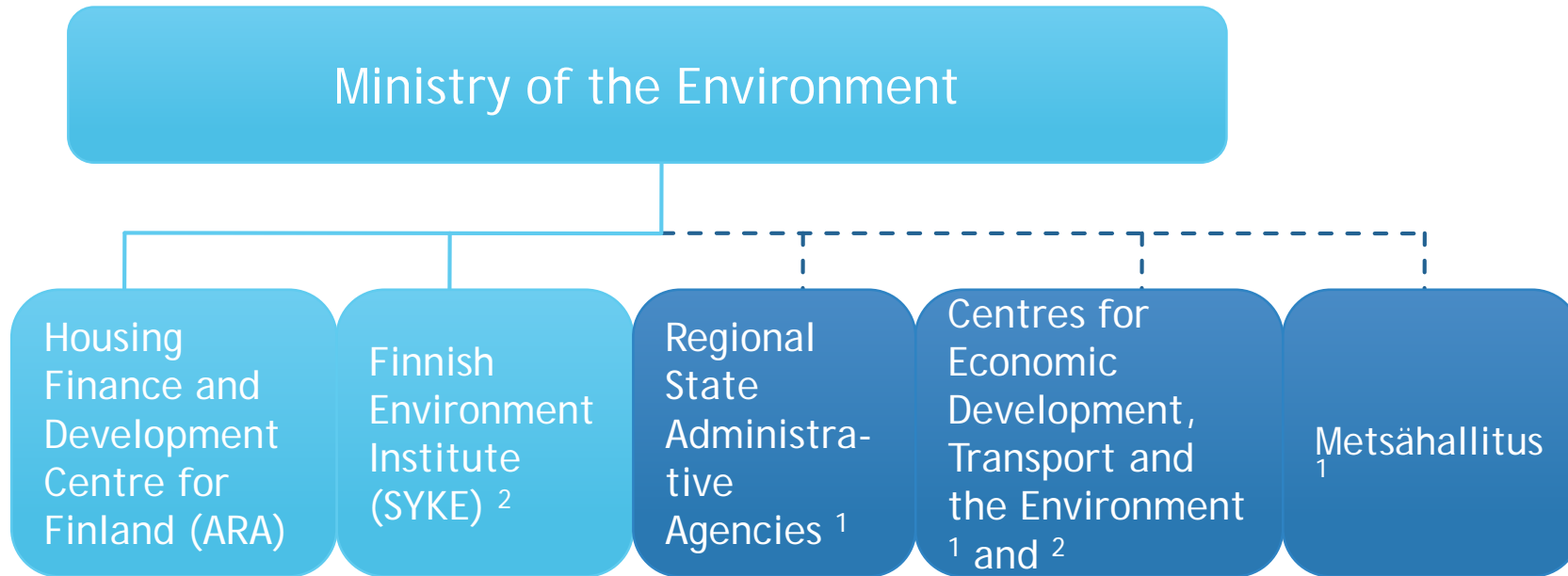
All these documents and other results of the work under the Common Implementation Strategy, for instance [key events](#) and additional [resource documents](#) related to different aspects of the implementation process, can be found in the [WFD CIRCABC library](#).

Find out more about the [information exchange platform](#) for the implementation of the Water Framework Directive.

List of published CIS Guidance Documents available on [CIRCABC](#)

- [N° 1 - Economics and the Environment - The Implementation Challenge of the Water Framework Directive](#)
- [N° 2 - Identification of Water Bodies](#)
- [N° 3 - Analysis of Pressures and Impacts](#)
- [N° 4 - Identification and Designation of Heavily Modified and Artificial Water Bodies](#)
- [N° 5 - Transitional and Coastal Waters - Typology, Reference Conditions and Classification Systems](#)
- [N° 6 - Towards a Guidance on Establishment of the Intercalibration Network and the Process on the Intercalibration Exercise](#)
- [N° 7 - Monitoring under the Water Framework Directive](#)
- [N° 8 - Public Participation in Relation to the Water Framework Directive](#)
- [N° 9 - Implementing the Geographical Information System Elements \(GIS\) of the Water Framework Directive](#)
- [N° 10 - Rivers and Lakes - Typology, Reference Conditions and Classification Systems](#)
- [N° 11 - Planning Processes](#)
- [N° 12 - The Role of Wetlands in the Water Framework Directive](#)
- [N° 13 - Overall Approach to the Classification of Ecological Status and Ecological Potential](#)
- [N° 14 - Guidance on the Intercalibration Process \(2004-2006\)](#)
- [N° 15 - Groundwater Monitoring \(WG C\)](#)
- [N° 16 - Groundwater in Drinking Water Protected Areas](#)
- [N° 17 - Direct and indirect inputs in the light of the 2006/118/EC Directive](#)
- [N° 18 - Groundwater Status and Trend Assessment](#)

Finland's environmental administration



1) The Ministry of the Environment guides the work related to environmental issues of the Regional State Administrative Agencies and the Centres for Economic Development, Transport and the Environment. Additionally, the Ministry guides the nature conservation work of the Natural Heritage Services Unit for Metsähallitus.

2) The Ministry of Agriculture and Forestry is responsible for the work related to water resource management of the Finnish Environment Institute and the Centres for Economic Development Transport and the Environment.

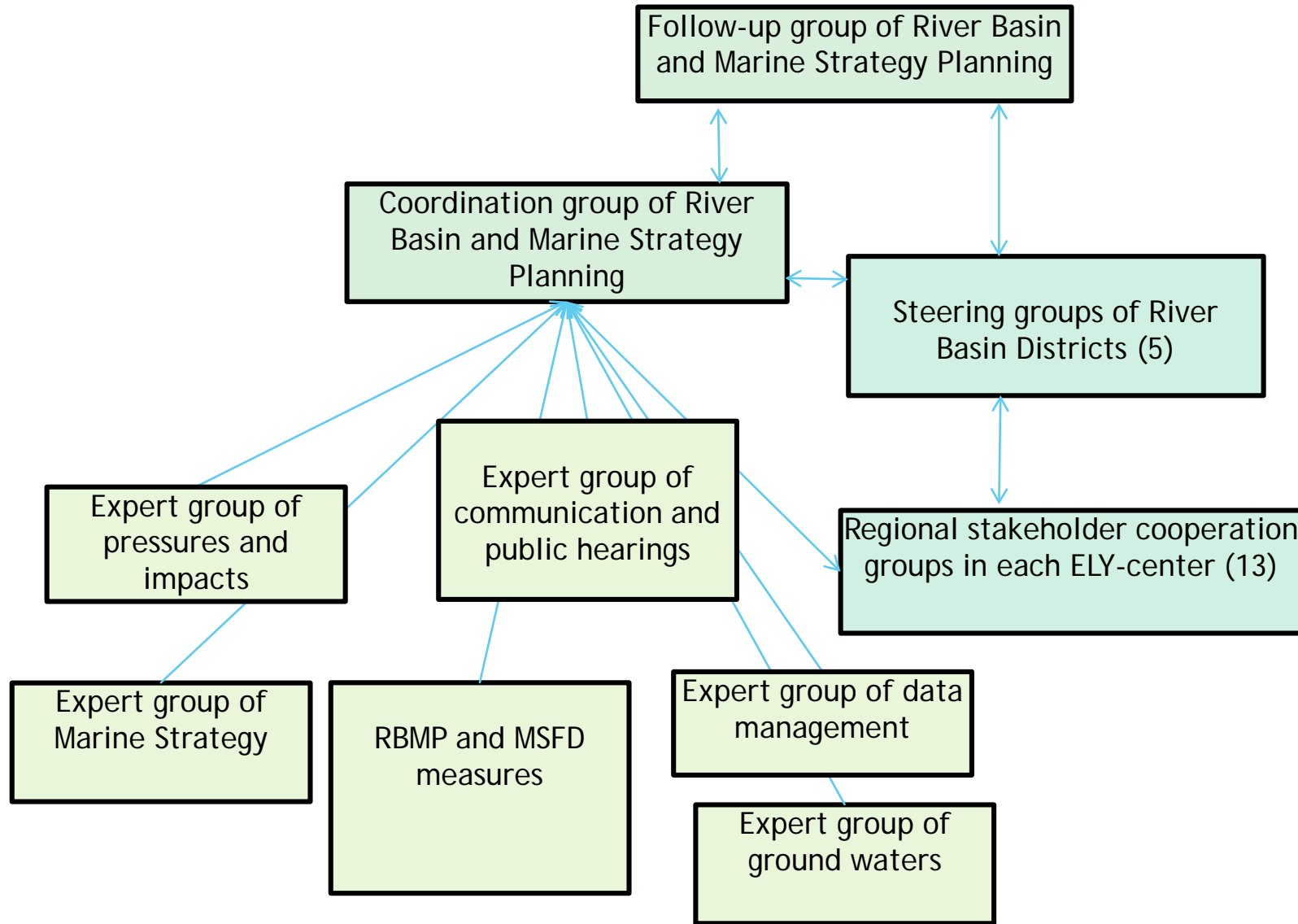
Nature of the RBMPs

- ▶ The measures in the River Basin Management Plans are not binding for single actors.
- ▶ The state government and municipalities promote activities within the framework of their budgetary funds.
- ▶ Many actions are voluntary and their success depends on the willingness of enterprises and individual citizens to implement them.
- ▶ River Basin Management Plans will be considered when granting the environmental permits.
- ▶ EU Court (Weser case)
 - ▶ You need to have assessment on biological quality element level
 - ▶ Deterioration of single biological quality elements is not allowed

Binding nature of the WFD environmental objectives

- ▶ Obligation of “best effort” vs. “obligation of result”
- ▶ River Basin Management Plans must be taken into consideration when authorities assess permit application in accordance of the provisions in the Environmental Protection Act and Water Act.
- ▶ In Finland, the environmental objectives of the WFD and the no-deterioration principle have been regarded directional towards the water management planning, not binding towards individual operations or other environmental practices.
- ▶ Act on the Organisation of River Basin Management and the Marine Strategy” state and municipal authorities and other bodies managing public authority duties shall give due consideration in their activities, as appropriate, to the river basin management plans.
- ▶ The environmental objectives of the water management of the measures established in the programs of measures are however not binding towards in the activities of the authorities.

National platform



Network of Division Managers in ELY-centers

Vesienhoidon suunnittelu ja yhteistyö

› Suunnittelumateriaalia ja julkaisuja

› Suunnitteluopas

› Vesienhoitoalueet

› Vesienhoito ELY-keskuksissa

[Etusivu](#) > [Vesi](#) > [Vesiensuojelu](#) > [Vesienhoidon suunnittelu ja yhteistyö](#) > [Suunnitteluopas](#)

Vesienhoidon suunnitteluopas

Opasmateriaali ja taustadokumentit vesienhoidon suunnitteluun - uutta suunnitelmakaudelle 2021-2027

- [Vesienhoidon ja merenhoidon käsikirja](#) (versio 17.2.2017) (pdf)
- [Ympäristöministeriön ohje SYKE:lle pohjavesien kansallisten raja-arvojen määrittämisessä huomioitavista seikoista](#) (pdf)

Vaikuta vesiin!



Opasmateriaali ja taustadokumentit vesienhoidon suunnitteluun vuosille 2016 - 2021

Toimenpiteiden suunnittelu on valmisteltu YM:n vetämässä hankkeessa, jossa on ollut mukana laaja joukko eri hallinnonalojen asiantuntijoita.

- [Ympäristöministeriön kirje ELY-keskuksille](#) (pdf, 125 kB)
- [Vesienhoidon toimenpiteet 2016-2021_Suunnittelun vaiheet](#) (pdf, 817 kB, sisältää linkit allaoleviin ohjeisiin)

Toimialakohtaiset ohjeet:

- [Pohjavedet ja pilaantuneet maa-alueet](#) (päivitetty 1/2016) (pdf, 1,1 MB)
- [Yhdyskunnat ja haja-asutus](#) (päivitetty 1/2016) (pdf, 860 kB)
- [Maatalous, turkistuotanto ja happamuuden torjunta](#) (päivitetty 1/2016) (pdf, 1 MB)
- [Metsätalous](#) (päivitetty 1/2016) (pdf, 1,1 MB)

PINNALLA JUURI NYT

Kirjasto

[Vesienhoidon suunnitelmat](#)

[Vesienhoidon toimenpideohjelmat](#)

Tietoa mm. vesien tilasta:

[Vesikartta](#) (Vesienhoidon karttapalvelu)

[Ympäristötietojärjestelmät](#) (Ympäristö- ja paikkatietopalvelu asiantuntijoille)

[Laki vesienhoidon ja merenhoidon järjestämisestä \(1299/2004\)](#) (Finlex)

[Rahatpintaan.fi](#) (Tietoa vesienhoidon rahoitusmahdollisuuksista)

[Tutustu ja vaikuta vesienhoitoon, merenhoitoon ja tulvavahinkojen ehkäisyyn](#) (Ymparisto.fi)

Topics of the presentation

- ▶ WFD basics
- ▶ Organizations involved
- ▶ **Implementation of WFD in Finland**
- ▶ Court cases

What happened first, before 2005?

- ▶ As a result of WFD, huge research activity started to define River Basin Districts, typology, classification system, basics for HMWB etc.
- ▶ Same time Ministry of the Environment started to implement directive to Finnish legislation
 - ▶ Set up of working group
 - ▶ Decide what elements goes to act and on the other hand on decrees
 - ▶ What is the role of WFD: planning instruments -> take into account
 - ▶ No budgetary impacts to government and no direct restrictions to private sector
- ▶ Act was ready 2004, at the same time researchers had developed
 - ▶ alternatives to deviation of RBDs
 - ▶ typology and
 - ▶ several criteria how to define status of each biological quality elements
- ▶ After five years, we had basic legislation, RBD's, several national and regional working groups, huge number of research studies

Second step 2005-2009

- ▶ Work with decrees continued and partly finalized
- ▶ Ecological classification system was finalized, first time national results on status on 2006
- ▶ Development of:
 - ▶ WFD measure library
 - ▶ Decision what is the content of River Basin Management Plans and Program of Measures
- ▶ First River Basin Management Plans were published 12/2009 and approved by government
 - ▶ Big debate on cost of measures!

Second planning cycle 2010-2015

- ▶ EU Commission review on 1st River Basin Management Plans and started bilateral meeting with MS
- ▶ The “Blueprint” was published by EU Commission
 - ▶ outlines actions that concentrate on better implementation of current water legislation, integration of water policy objectives into other policies, and filling the gaps in particular as regards water quantity and efficiency
- ▶ Increase number of small water bodies
- ▶ Decision to classify status of all water bodies -> expert judgement
- ▶ More realistic measures especially for agriculture

Topics of the presentation

- ▶ WFD basics
- ▶ Organizations involved
- ▶ Implementation of WFD in Finland
- ▶ Cases

Case 1

- ▶ SAC 2014:176. The Supreme Administrative Court assessed widely the matters regarding the conditions of the area and measures required in order to attain environmental objectives established in the RBMP and POM in the permit consideration of a new peat production site.
- ▶ The Court established that the activity for which the permit was applied, would delay the attainment of the environmental objectives in the water body that was classified as moderate.
- ▶ Thus, the Court established that the activity would cause significant pollution of water even if it would be practiced with Best Available technology.
- ▶ Hence, the permit was rejected.

Case 2

- ▶ SAC 2015:63. The subject matter was a application of an operator to revise a permit that had been granted for the operators hydro power plant in the 1950's.
- ▶ The permit decision had required that the operator builds a fish passage but the operator hadn't done so. Since the requirement had not been fulfilled, the operator claimed that the permit should be revised so that the requirement for building a fish passage would be revoked and replaced by a requirement to pay a fee for as a compensation for the damages caused to the fish stocks.
- ▶ The water body in question had been designated as heavily modified and the attainment of good ecological potential required improvement of the chances of the fish migration.
- ▶ In the light of the information in the RBMP, the Supreme Administrative Court rejected the applicant claim and determined that the designation of a water body as a heavily modified does not mean that the ecological conditions in the water body would not need to be improved.

Case 3

- ▶ SAC KHO 13.4.2017 T 1711 (muu päätös). The Administrative Court had retained in force a decision of the permit authority that granted a permit for a groundwater abstraction activity based on Water Act.
- ▶ The Administrative Court had examined, whether the activity would cause such deterioration of surface water bodies -due to the decreasing volume of groundwater discharging into the water bodies - that the permit would need to be rejected in accordance with the criteria set in the Weser-judgement.
- ▶ The surface water bodies most likely to be affected by the activity had mostly been classified as moderate in the RBMP. The measures established in the POM in order to attain good ecological status were directed towards reducing the volume of nutrient loading and restoring the habitats of benthic organisms and fish stocks.
- ▶ The Court determined that from the activity there was not to be expected further deterioration of the water body in a way that would require the permit application to be rejected.

River Basin Management Plans based on the EU Water Framework Directive

- The aim is to achieve good surface and groundwater water status by 2015; with some exemptions the deadlines can be extended to 2021 or 2027.
- Plans cover the whole river basins
- Plans include identification of cost-effective measures to achieve good water quality status
- Plans are drawn every six year
- Planning is based on broad cooperation with different stakeholders
- Planning includes public consultation and involvement of all stakeholders
- The government adopts the River Basin Management plans in Finland