

# River Basin approach: planning, management, competent authority

Gheorghe Constantin

Director

Ministry of Environment, Water and Forests

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# EU water policy

- Water Framework Directive
  - 22 December 2009 : River Basin Management Plans adopted
  - 2015: achievement of good chemical and ecological status (or 2021 or 2027)
- Floods Directive
  - Flood risk management plans by 2015
- EU policy on Water Scarcity and Droughts
- Blueprint for Safeguarding Europe's waters based on:
  - Assessment of all River Basin Management Plans
  - Review of strategy on Water Scarcity and Droughts
  - Assessment of vulnerability of water and natural resources

# Water Framework Directive

Ensure coordination of water environment policy and regulations across Europe to:

- Prevent deterioration and enhance status of aquatic ecosystems, including groundwater and coastal waters
- Promote sustainable water use
- Reduce pollution
- Contribute to the mitigation of floods and droughts

**River Basin Management Plan is one of the core elements of the Water framework Directive**

# River Basin Planning

- Establishing principles for river basin planning
- Set up proper administrative arrangements
- Ensure the framework for public consultation and participation
- Ensure coordination with other plans and planning processes

# Role of River Basin Planning

- Improve and support sustainable and integrated water management to deliver the requirements of the Water Framework Directive
- Provide a framework for developing institutional arrangements and coordination with other plans
- Provide opportunity for public participation and partnership activities
- Provide a framework for transparent decision making considering environmental, social and economic needs within the river basin district

# River Basin Management Plan

- **Characteristics of the District**

- pressures and impacts
- risk assessment based on water quality and quantity, aquatic environment and hydromorphology
- protected areas
- economic assessment of water services

- **Environmental objectives and timescale for achieving**

- **Program of measures to achieve objectives**

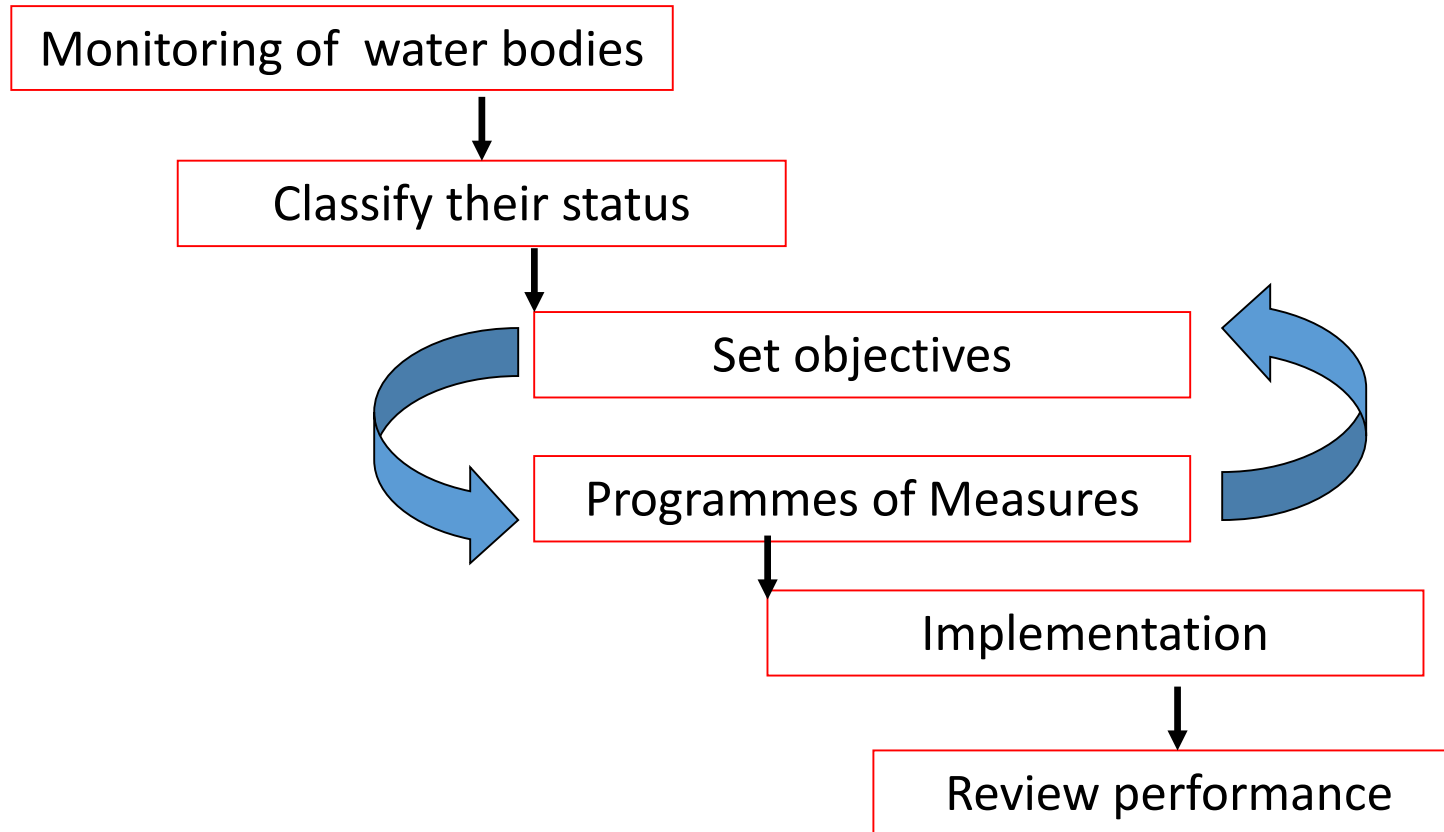
- **Monitoring networks and programmes**

- **Consultation and participation**

# Planning linkage between RBMP and FRMP

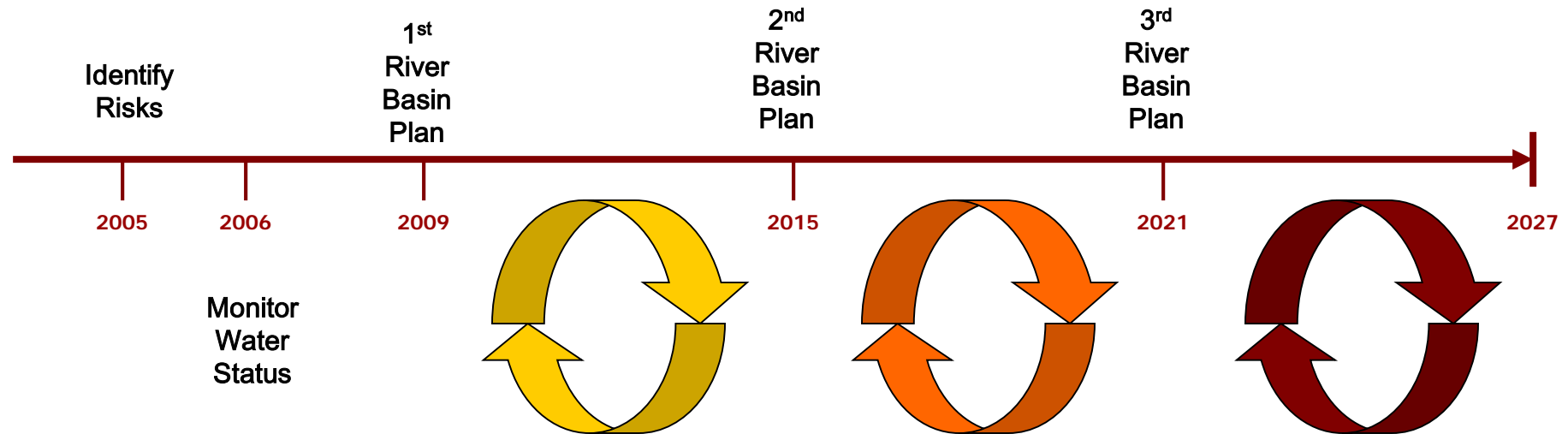
- Flood risk management coordinated in same river basin districts as Water Framework Directive
- Synchronization of planning timetable
- Coordination of public consultation
- Integration of Flood Risk Management Plans into the River Basin Management Plans
- Coordination of complementary objectives

# River Basin Planning Process





# WFD – Planning Cycles



# River basin Management

- 1. Integrating elements of the water system

- Water quality- water quantity
- Flooding and drought
- Ground water – Surface water
- Water chain management

- 2. Water management and other policy fields

- Water management and land use
- Water management and recreation
- Water management and housing
- Water management and nature, etc.

- 3. Cross border water management

- geographical borders
- administrative borders (regions, administrations)

# Water Framework Directive Management

- Update legal framework and transposition of the WFD
- Establish the River Basin Districts
- Set up/strengthen the administrative framework
- Improve the coordination of involved public authorities
- Update the water monitoring system
- Establishing a reporting system
- Ensure public information and participation
- Coordination at the International River Basin District level

# Integrated Water Resources Management

- Integrated planning and management of water resources and land
- Takes account of social, economic and environmental factors together
- Integrates surface, groundwater and the ecosystems through which they flow
- Emphasises the importance of public participation in water decision making
- Emphasises accountability and transparency in water decision making
- Emphasises that the **River Basin** is the appropriate level for effective water management

# Improving the legal framework

- To transpose the Water Framework Directive
- To increase institutional capacity
- To ensure the reliable access to safe water and sanitation
- To address the environmental and ecological needs related to water
- To meet international commitments to provision
- To avoid inappropriate and ineffective water management which leads to a degraded water environment
- To stop the unsustainable exploitation of water resources by implementing water management measures at local, regional and national levels

# Water legal framework

- Promote integrated water management policy
- Define river basin management principle
- Establish planning goals and competencies
- Could promote self-financing
- Regulate relationships between Government and public and private entities
- Provide legal obligation to share information
- Integrate national and transboundary water management
- Provide the framework for managing possible conflicts of interest – regulator, monitor, licensee, manager of facilities

# Establish the River Basin Districts

- Identify the River Basin which your waters belong
- Decide on the sub basing approach
- Establish River Basin Districts (include more than one River Basin for administrative purpose)
- Assign the groundwater bodies to the River Basin Districts

# WFD Article 3 Submissions: River Basin Districts including International River Basin Districts

## Legend

- River Basin Districts
- International River Basin Districts (within EU25)
- International River Basin Districts (outside EU25)
- Coastal waters
- No River Basin Districts submitted
- EU25 boundary

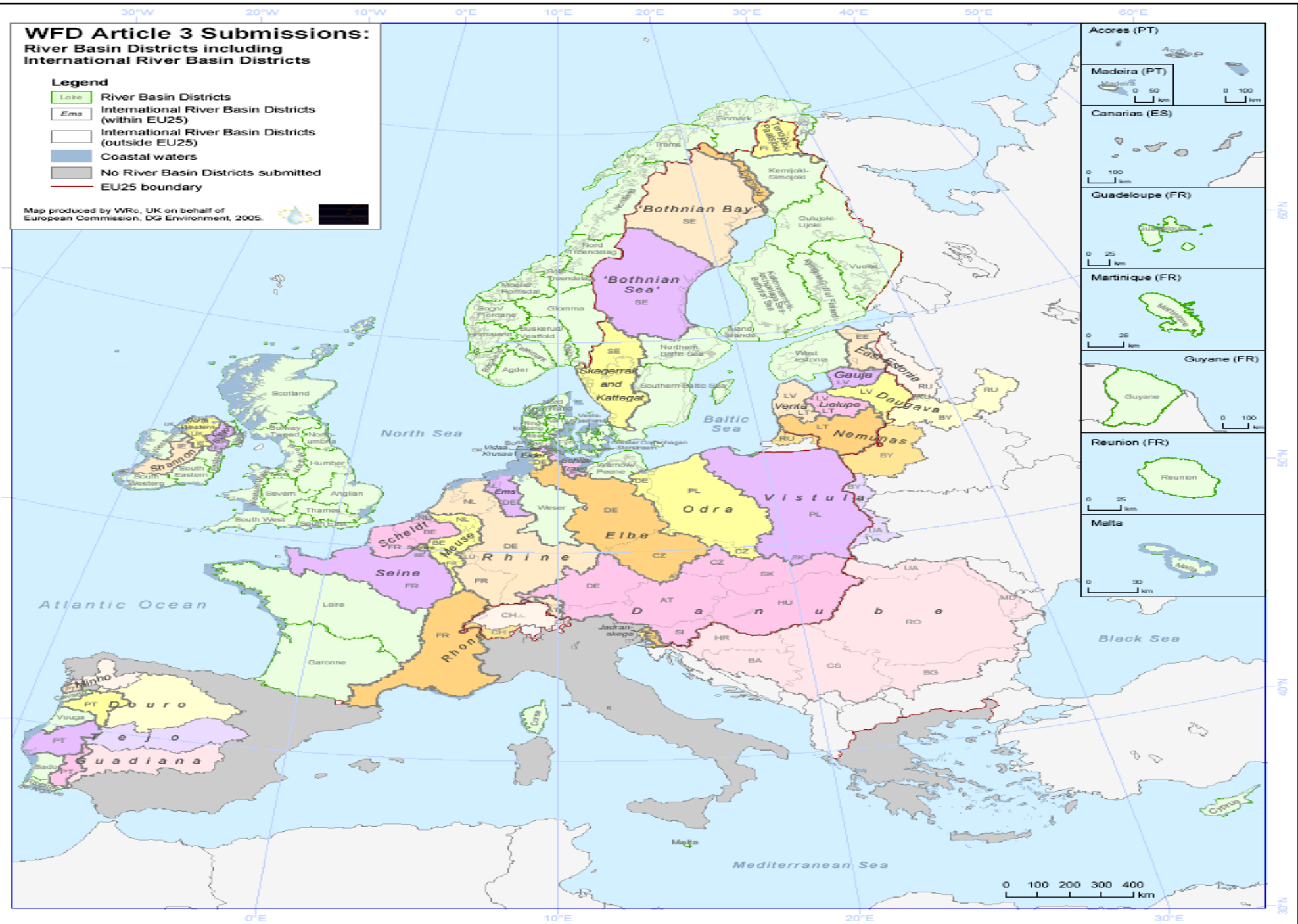
Map produced by WRe, UK on behalf of  
European Commission, DG Environment, 2005.



60°N

50°N

40°N



60°N

50°N

40°N

30°N

0 100 200 300 400  
km



# Administrative Framework for River Basin Management

Typical overall structure to support River Basin Water Resources Management

- Central government
- National level coordinating and policy body
- River Basin Organisation
- River Basin Council
- Local authorities

# Role of Central Government

Central government is responsible for the implementation of the EU water directives to ensure water of adequate quantity and quality.

This means:

- Ensuring the legal framework supports effective water management
- Ensuring a proper implementation framework, including monitoring and reporting
- Ensuring water management is properly financed, including cost recovery
- Ensuring cooperation between all organisations and institutions related to water management

# Role of National Level Body

The National Body leads the work of Central Government in key areas:

- Developing Water Policy
- Coordinating all organisations and institutions related to water management
- Decision-making on national programmes, laws, regulations
- Planning and management at national level, including inter-basin and international trans-boundary issues
- Raising public awareness and understanding

# Role of Basin Organisations

Basin organisations are the main authority for water resources planning, development and management

- Planning for water resources development within the basin
- Day-to-day management of water resources (allocation, licensing, etc.)
- Raising local awareness of problems and solutions
- A Water Council serves also to coordinate with stakeholders

# Objectives of the River Basin Management Decision Support System

- Information System to assist in river basin planning and management
- Database of water resources and water quality data for each river basin
- Assessment of current water use and water status in each river basin
- Prediction of future water usage over 6 years and effect on water status
- Assessment of current and future predicted water pressures in each basin
- Basis for determining basin-wide water allocations
- Analytical tool for evaluating Program of measures implementation
- Application of systematic approach to development of river basin management plans

# Organization of the water sector in Romania

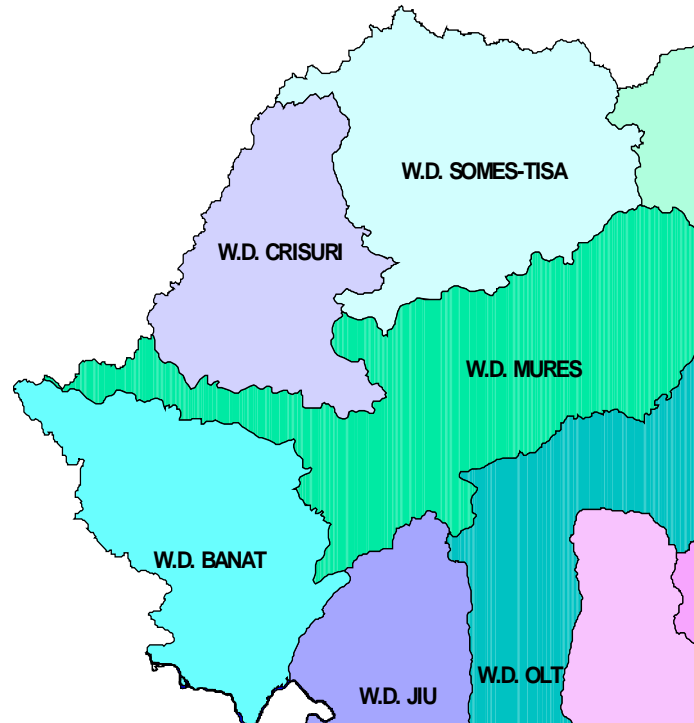
- Ministry of Environment and Forests – central public authority in water management sector
- National Administration “Apele Romane” - implementing authority of water management policy
- 11 Water Basin Administration
- National Institutes (e.g. National Institute of Hydrology and Water Management, National Meteorological Administration)
- Local authorities

# National Administration “Apele Române”

Basic management  
unit: river basin  
11 river basins  
11 river basin  
administrations

Activities:

- water resources management
- water protection against pollution
- flood control management
- application of international water agreements.



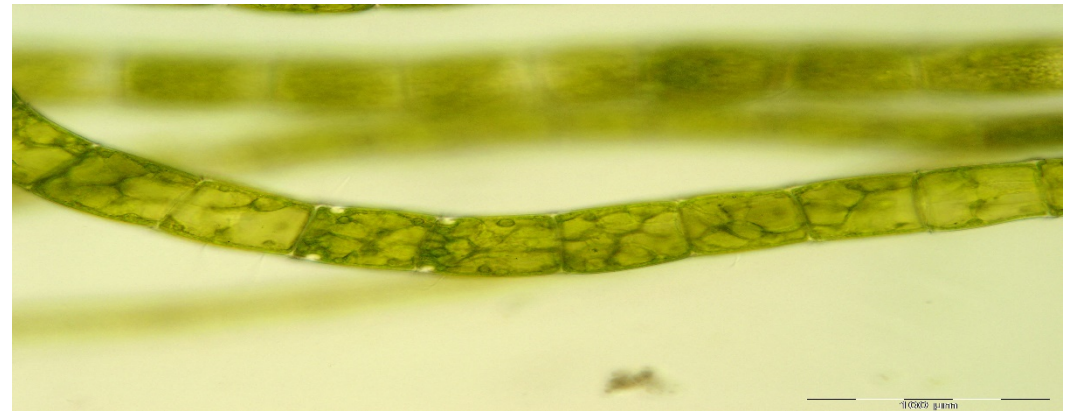
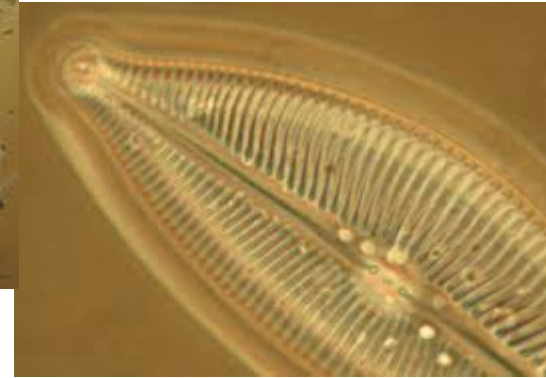


# Macrophytes





# Phytobentos























# Macroinvertebrate



## Macroinvertebrate Identification Key

GROUP 2

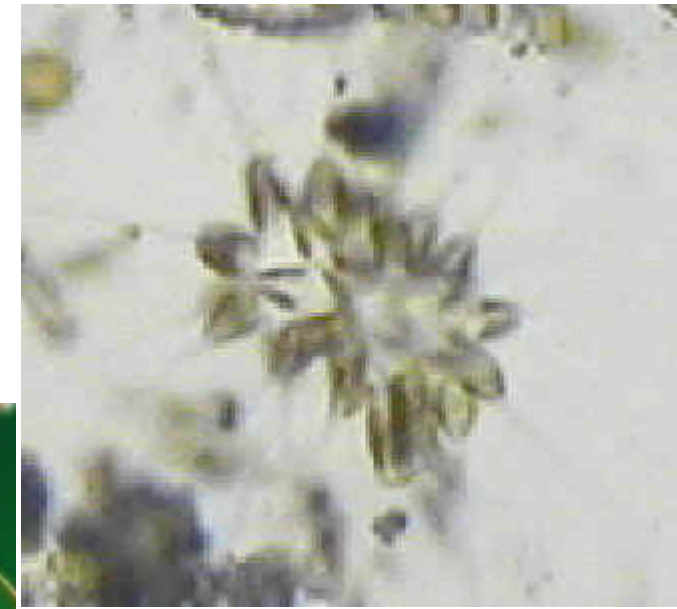
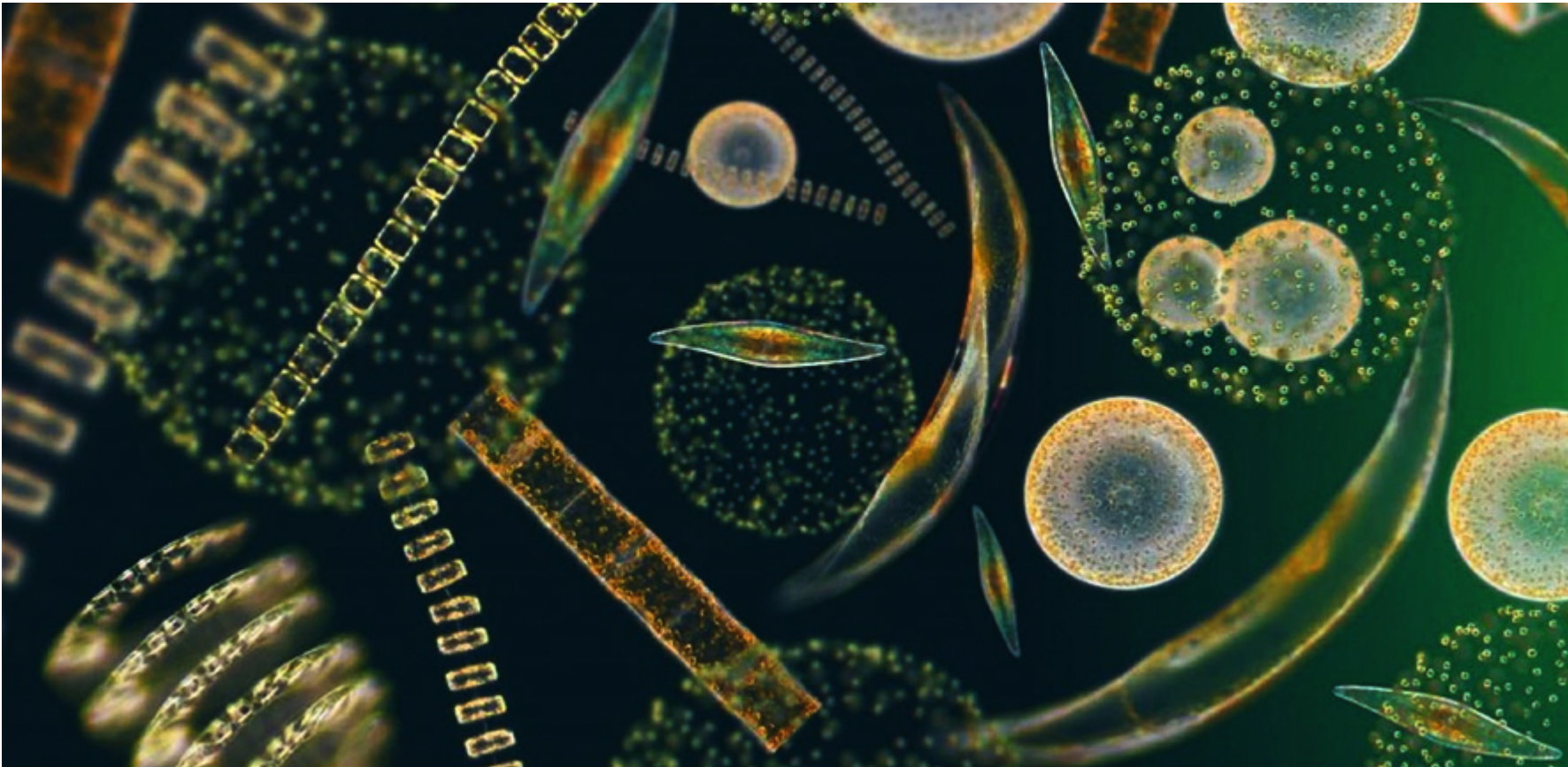
TOLERATE SOME POLLUTION

<p>Dragonfly larva</p>  <p>15-50mm</p>	<p>Damselfly larva</p>  <p>10-50mm</p>	<p>Water beetle larva</p>  <p>2-6mm</p>	<p>Whirligig beetle</p>  <p>3-15mm</p>	<p>Riffle beetle adult</p>  <p>2-4mm</p>
<p>Dragonfly nymph</p>  <p>30-50mm</p>	<p>Damselfly nymph</p>  <p>10-50mm</p>	<p>Water beetle</p>  <p>3-40mm</p>	<p>Whirligig beetle larva</p>  <p>3-12mm</p>	<p>Water strider</p>  <p>10-25mm</p>
<p>Dragonfly adult</p>  <p>17-200mm</p>	<p>Damselfly adult</p>  <p>25-55mm</p>	<p>Backswimmer</p>  <p>5-16mm</p>	<p>Waterboatman</p>  <p>5-16mm</p>	<p>Cranefly larva</p>  <p>10-25mm</p>
<p>Scud (amphipod)</p>  <p>5-21mm</p>	<p>Crayfish</p>  <p>10-150mm</p>	<p>Water scorpion</p>  <p>20-43mm</p>	<p>Sowbug</p>  <p>5-22mm</p>	<p>Freshwater clam</p>  <p>30-270mm</p>





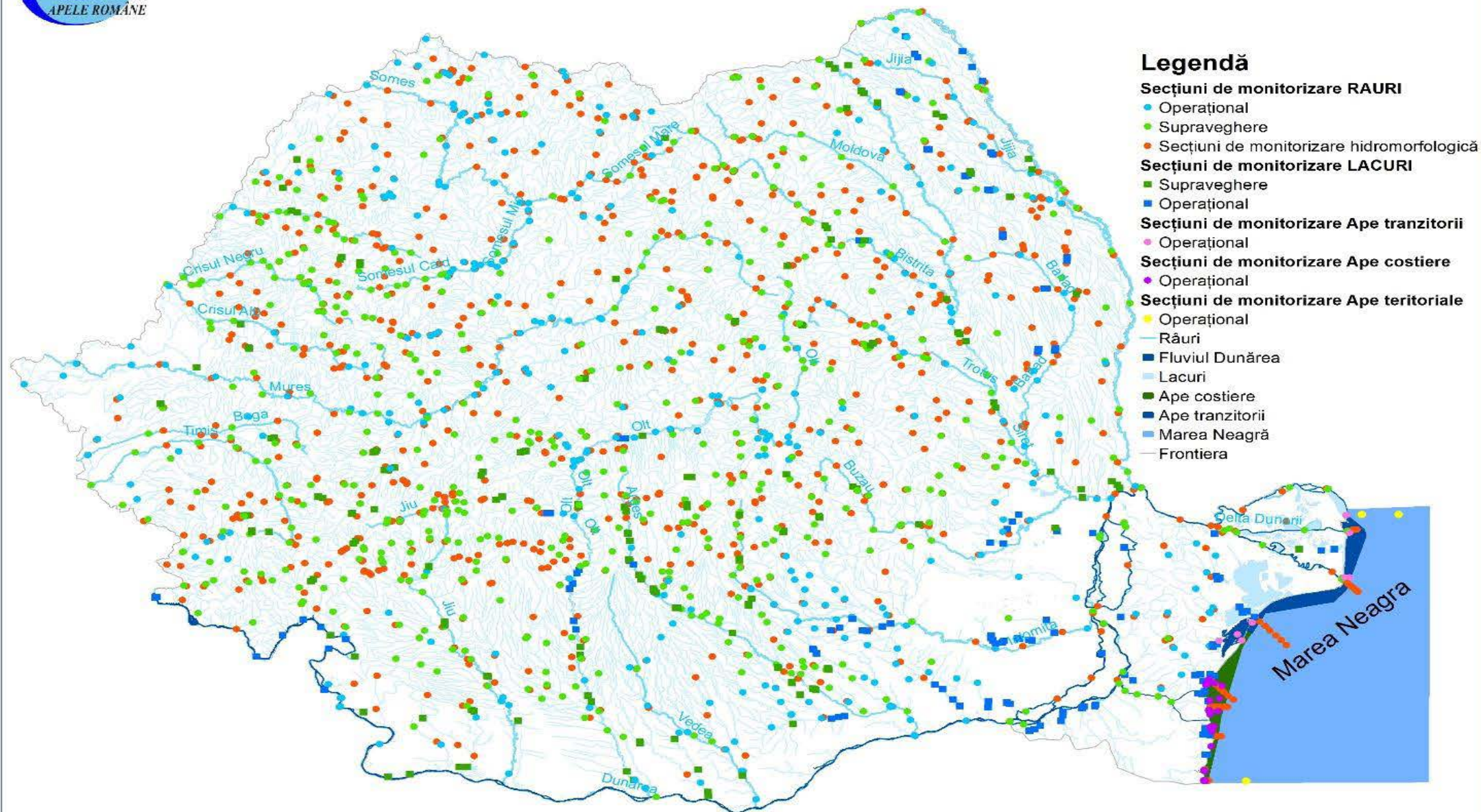
# Phytoplankton



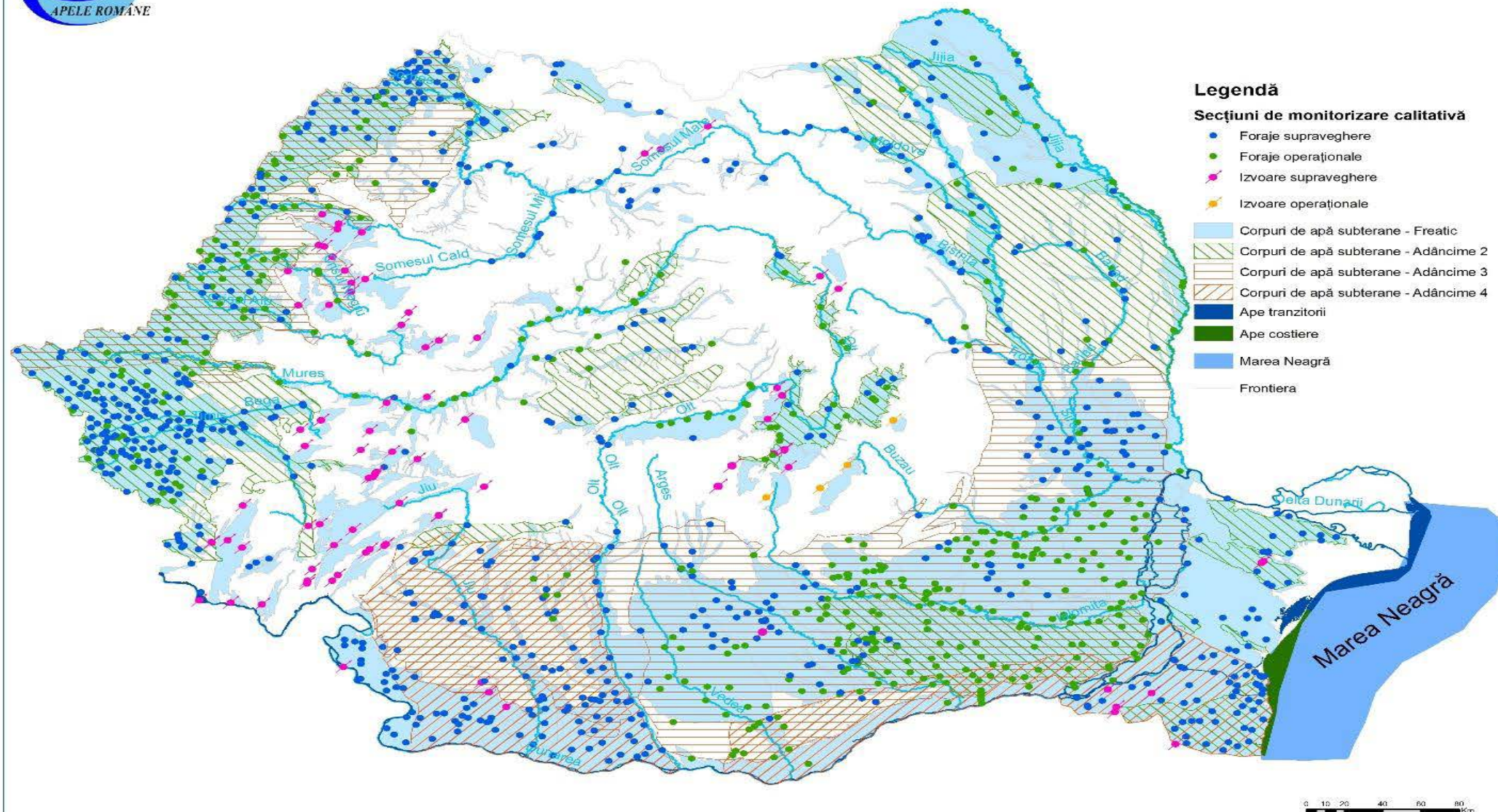
# Fish fauna















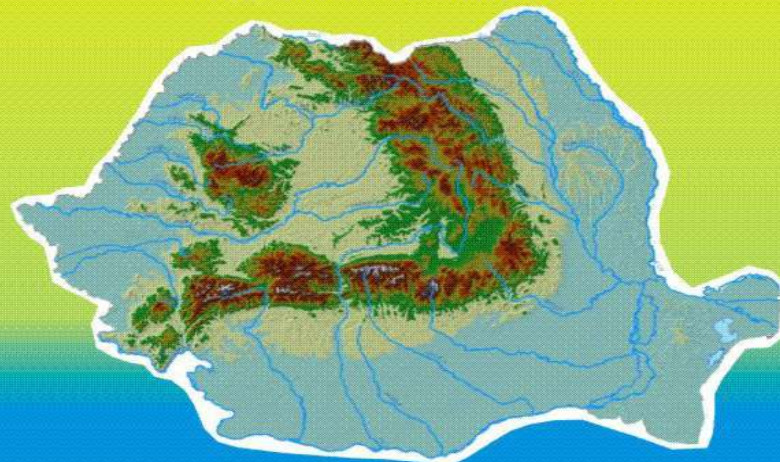
MINISTERUL MEDIULUI



ADMINISTRATIA NATIONALA  
"APELE ROMANE"

## PLANUL NATIONAL DE MANAGEMENT

### SINTEZA PLANURILOR DE MANAGEMENT LA NIVEL DE BAZINE/SPATII HIDROGRAFICE



Elaborat in conformitate cu art. 13 si anexa VII a  
Directivei Cadru Apa 2000/60/CE

22 decembrie 2009

# Progress in the 2<sup>nd</sup> RBMP approach in comparison with the 1<sup>st</sup> RBMP (1)

## Surface waters – main aspects

- Typology – biotic validation;
- SWBs delineation and HMWB designation - updated;
- Pressures and impact assessment: potential significant pressures definition, cumulative effect, WB level and sub-basin level (upstream and downstream), inventory of priority substances emissions, discharges and losses  
DPSIR approach with clear link between pressures, objectives and measures (updated risk assessment)
- Monitoring improvement: monitoring network development, increasing the number of monitored quality elements and parameters (i.e. Priority Substances – 21 used in assessment of the CS in the 1<sup>st</sup> RBMP / 39 in the 2<sup>nd</sup> RBMP)
- SWBs status evaluation:
  - Development and improvement of WFD compliant assessment methods:
    - Rivers - BQEs: phyto**benthos** –new method, phyto**plankton** – improved method, benthic invertebrates – adjusted H/G and G/H thresholds ; FCQEs: conductivity, COD, BOD, Ntotal; specific pollutants: cyanides and detergents
    - Lakes - BQEs: phyto**benthos** and benthic invertebrates –new method, phyto**plankton** – improved method ; FCQEs: pH, COD, BOD, nutrients (Ntotal, N-NO2, N-NO3, N-NH4, P-PO4); specific pollutants: cyanides and detergents
  - Finalization of the IC exercise for some BQEs and SW categories

**Increasing the confidence level (2nd RBMP: about 70 % SWBs with high and medium confidence /1st RBMP: about 60 % SWBs with medium confidence)**

**Increasing the number of SWBs evaluated**



# Progress in the 2<sup>nd</sup> RBMP approach in comparison with the 1<sup>st</sup> RBMP (2)

## **Surface waters - Inventory of priority substances emissions, discharges and losses**

- based on the recommendation of Guidance no. 28 on Preparation of Priority substances emissions inventory;
- made in 2014 based on information from 2012 and 2013;
- the first step: relevance test at the sub/basin level;
- second step: for relevant substances a more detailed analysis was made (information on concentrations upstream and downstream of discharge point, total loads calculation, diffuse load estimation, trends analysis in sediments, risk assessment, main measures applied) Inventory of PS emissions, discharges and losses at sub-basin level
- third step: identification of main gaps (lack/too little information or with good quality);
- next step: find solution for closing gaps identified in the previous step - improving monitoring



Thank you very much for  
your attention!