

WATER POLLUTION and CONTROL

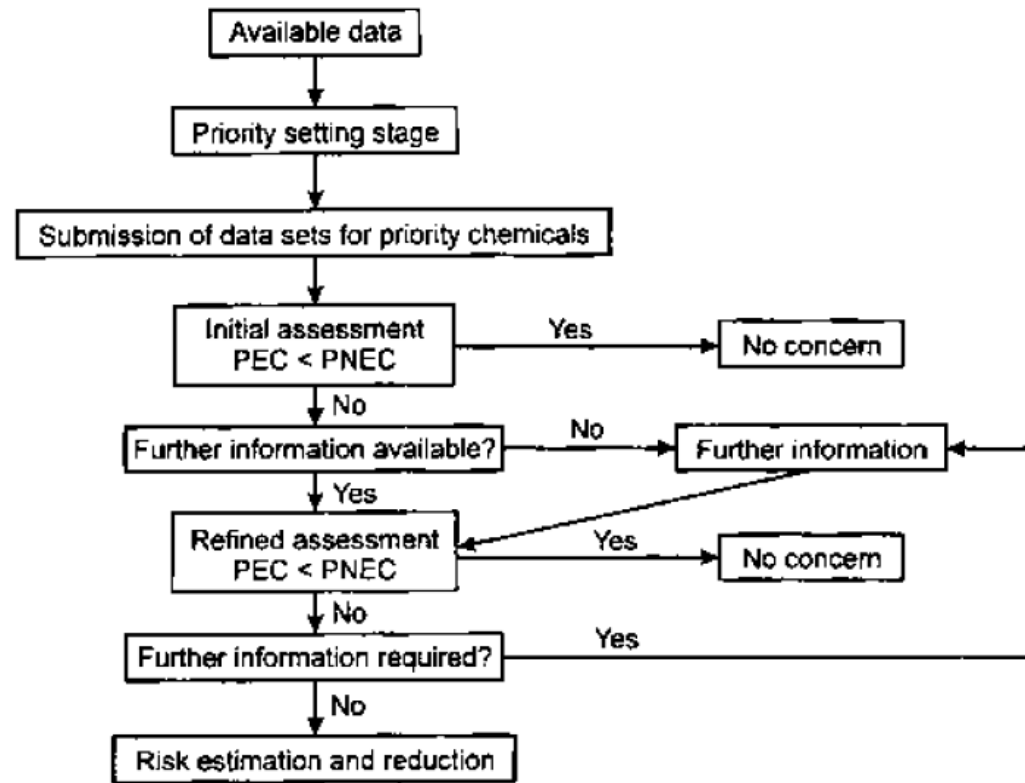
Pollution Control

- It is important to stress that there are a large number of alternative approaches to pollution control through regulation and it is for policy makers to examine the facts in any particular situation and to decide which is likely to be the most successful method.
- In most countries, controls on the discharge of substances which are liable to pollute natural waters have been limited to specific authorisations related to point source effluents discharging from pipes.

Environmental Risk Assessment

- The application of risk assessment techniques is a fundamental part of the procedures for classifying new substances as having potential environmental or health problems.

Figure An overall framework for environmental risk assessment (Based on DOE, 1994)

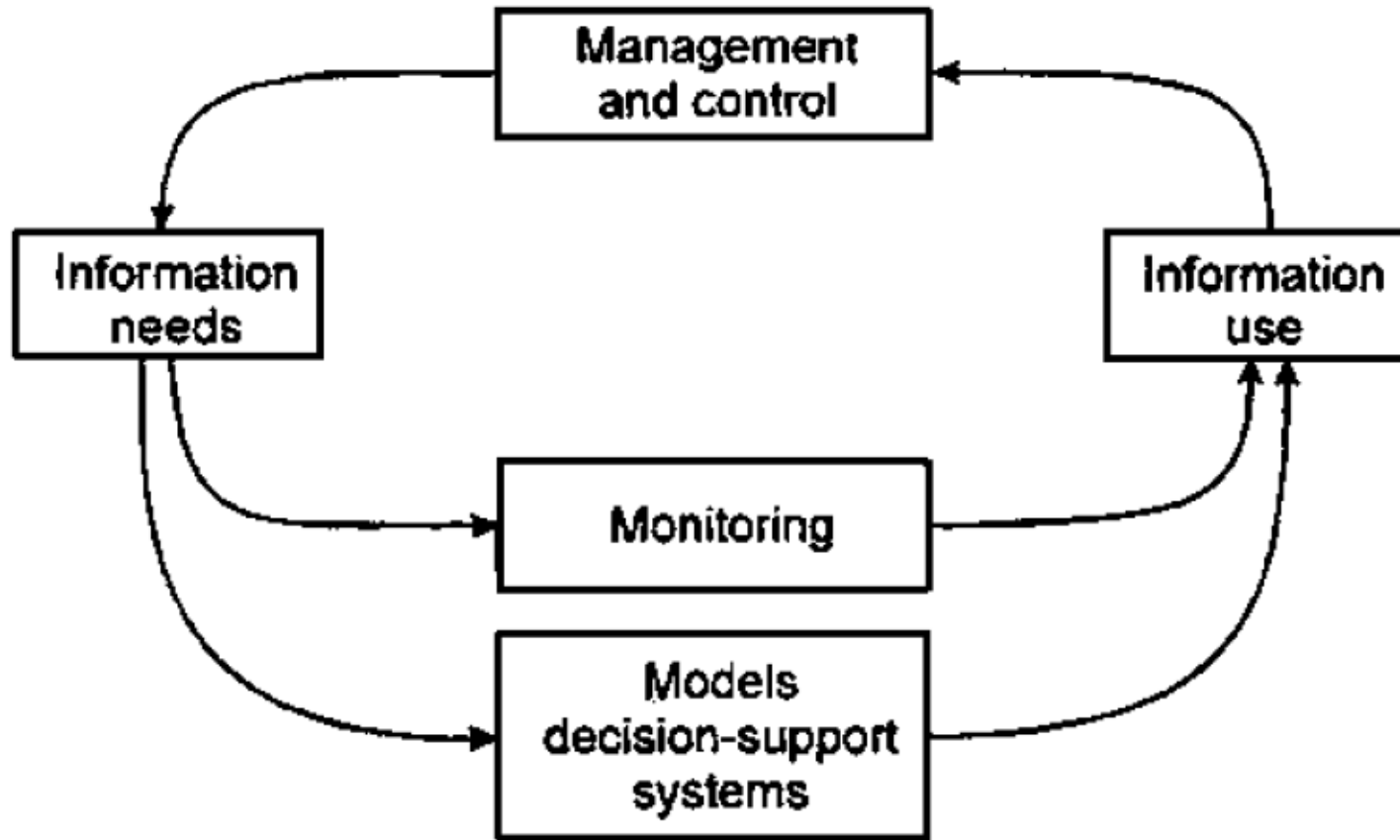


PEC = predicted environmental concentration
PNEC = predicted no effect concentration

Model and Decision Support Systems

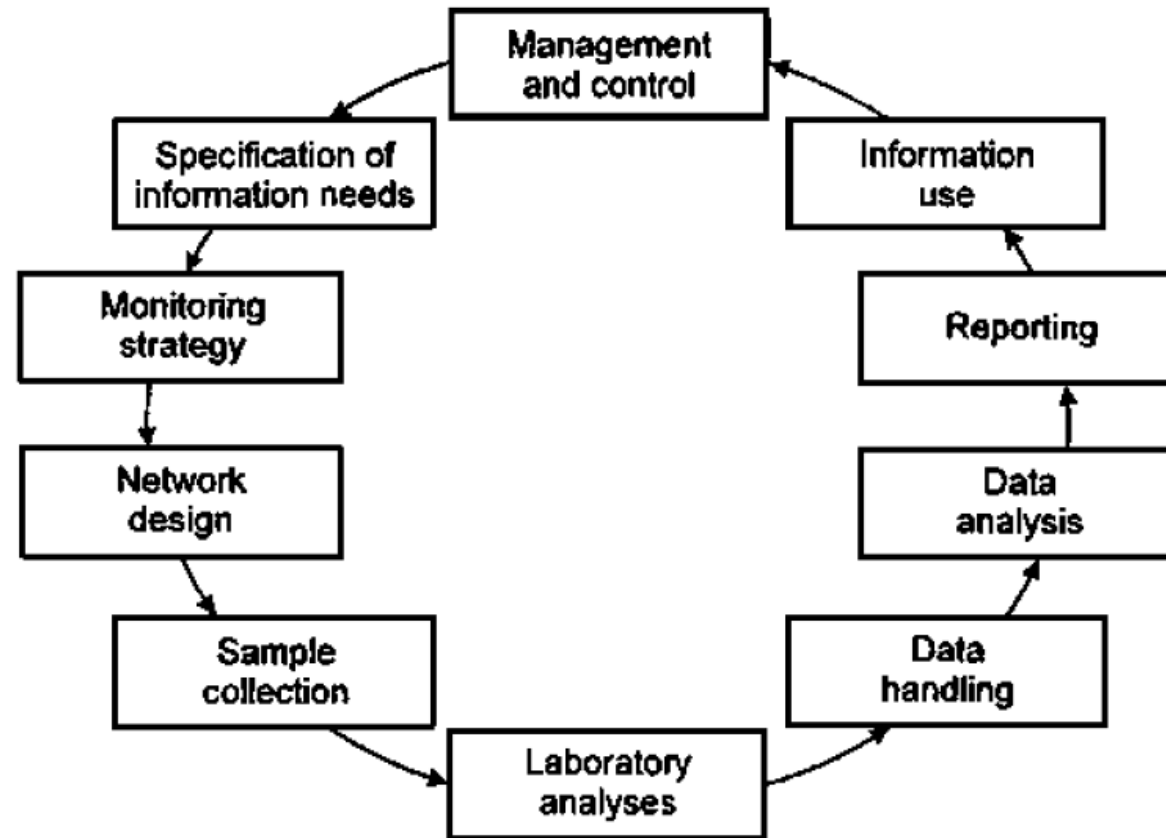
Information needs are focused on the three core elements in water management and water pollution control, **namely** the functions and use of water bodies, the actual problems and threats for future functioning, and the measures undertaken to benefit the functions and uses.

Monitoring is the principle activity that meets information needs for water pollution control. Models and decision support systems, which are often used in combination with monitoring, are also useful information tools to support decision making.



Components of environmental management system

- Water Pollution Control A guide to the use of water quality management principles 1997, 526 pages, ISBN 0419229108.



Information system chain

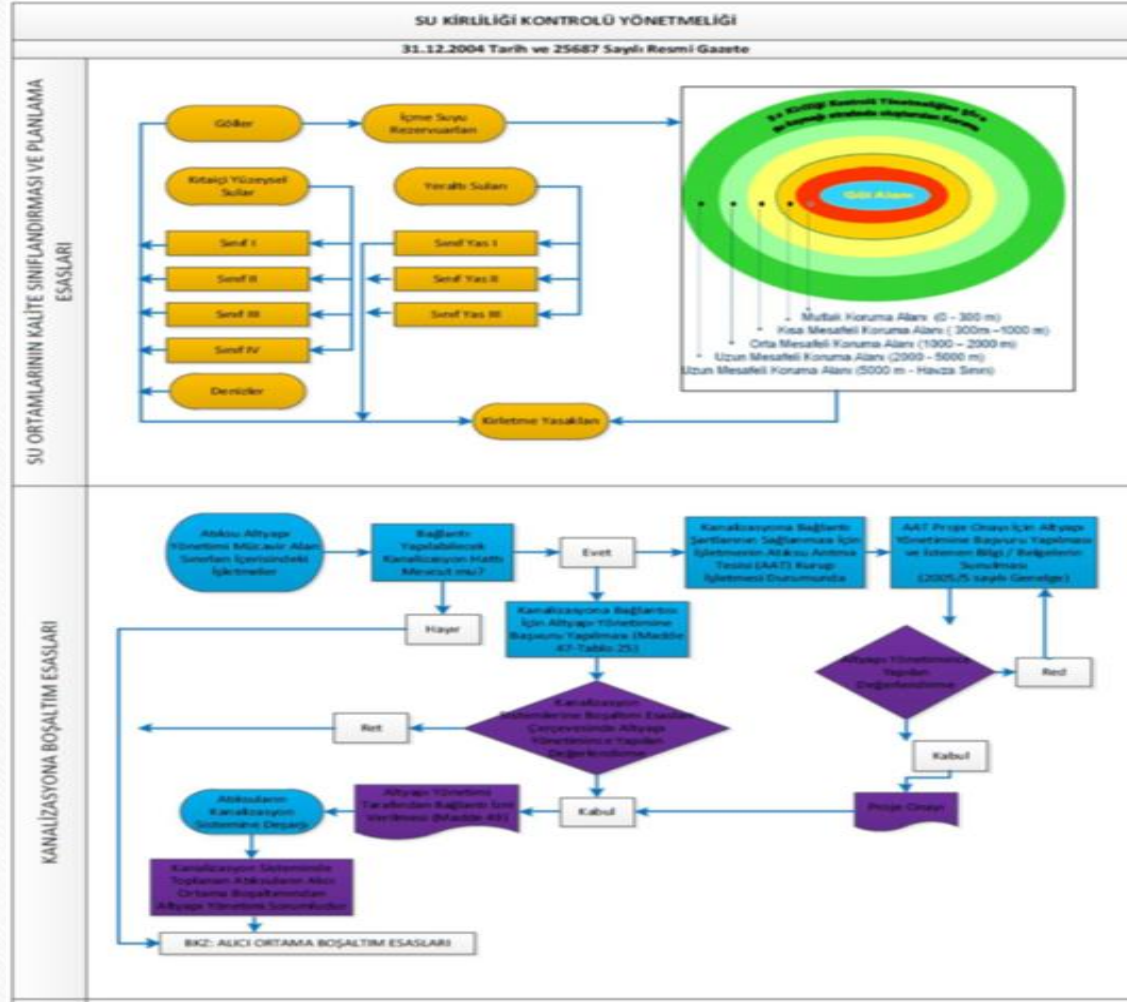
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Table . Selection of analyses and resources for different levels of water pollution control monitoring programmes

Monitoring level	Sampling freq. (a ⁻¹)	Water analysis	Sediment analysis	Biological monitoring	Source monitoring	Required resources
Simple	6	°C, pH, O ₂ , TSS, major ions, visual observation			°C, pH, O ₂ , TSS, COD, BOD	Small sampling team, general chemistry laboratory
Intermediate	6-12	As above plus PO ₄ , NH ₄ , NO ₂ , BOD, COD	Trace elements	Biological indices	As above plus PO ₄ , NH ₄ , NO ₂ , and trace elements	Specialised chemical laboratory, team of hydro-biologists
Advanced	> 12	As above plus soluble organic pollutants, DOC, POC and some trace elements	As above plus organic micro-pollutants	As above plus chemical analysis of target organisms	As above plus toxicity tests and organic micro-pollutants	Major centralised laboratory, ecotoxicologists, national research institute

Source: Adapted from Chapman, 1996

LEGAL REGULATIONS



You can reach the «Water Pollution and Control Regulation» parameters and limit values via the link below:

<http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.7221&sourceXmlSearch=&MevzuatIliski=0>

References

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