

## **How Data Rich and Information Poor is Monitoring? Analyzing the Dutch National Monitoring**

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### **Biographical Sketch of Author**

Jos Timmerman is programme manager and interim director for the International Water Assessment Centre, a collaborating center under the UNECE Water Convention, and programme manager at the Institute for Inland Water Management and Waste Water Treatment (RIZA). He is specialized in strategies for water quality monitoring and assessment with emphasis on the specification of information needs.

### **Abstract**

Water quality management arose around 1850, by which time environmental conditions became truly intolerable as a result of industrialization. Nevertheless, regular water quality monitoring was not established before the 1950's in the USA, the former USSR and in some European countries and extended to Canada and most of Western Europe in the late 1960's and 1970's. As it appears, every now and then new problems become manifest (like in the 1990's oestrogenous substances, tributyltins, and drugs). For management of each of the different problems, additional monitoring effort is required, leading to an ever growing monitoring need. As a result of the ever-new arising problems, the number of regulatory water quality descriptors in industrialized countries is commonly exceeding one hundred. Inevitably, this has led to an explosive growth of monitoring networks in many countries.

The growing information needs have consequences for monitoring. In the 1950s and 1960s, information collected through monitoring was felt as essential for water management and the budgets for monitoring were rapidly growing. This eventually led to what Ward and others (1986) described as the 'data-rich but information-poor syndrome' and calls are out today for less quantity of information and more targeted, tailor-made, information.

This paper will analyze the developments in Dutch national water quality monitoring. On the basis of this analysis, we will conclude if the water quality monitoring in the Dutch situation can be characterized as wasteful, or if the amount of data that is collected reflects the policy needs.