

SUSTAINABLE WATER MANAGEMENT IN GERMANY

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1 Introduction

The Agenda 21, as agreed upon at the 1991 conference in Rio de Janeiro, contains „sustainable development“ as a policy goal to be pursued in all environmental matters. However, to be effective, this abstract goal needs to be translated into detailed action plans for several environmental compartments as for e.g. water.

Recognising that problems concerning water quality and quantity tend to be of a regional rather than a global nature, the German Federal Environmental Agency has commissioned a study to identify sustainable and non sustainable trends in water management.

The study is based on interviews with German water management experts, who were asked to give their opinion on the concept of sustainability, supply their personal definition and give (counter-) examples for sustainability.

Common perceptions as well as conflicting ideas were then identified and again discussed with the experts previously asked. They were further elaborated in an international seminar and in a national workshop with the aim to formulate a common national definition of sustainable water management.

2 Definitions

Few terms in modern environmental policies are as ambivalent as the term sustainable development. Some emphasize the economic dimension while others underline the ecological aspects of sustainable development.

The World Commission on Environment and Development has given a generally accepted definition of sustainable development.

„Sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs“.

Applied to water management the following definition for sustainable water management may be given:

„Water management has the task, to manage and to protect the waters in such a way that also future generations can use the water resources without limitations“.

This definition is very anthropocentric and does not take the right of nature into account. Nor does this definition respect the requirements set by the Agenda 21 which are the following:

- water management action must be subject to democratic control and local co-determination
- the basic economic functions of the local community must be supported
- the basic functions of water management, water supply and sewage disposal and the maintenance of recreation areas must be guaranteed for all citizens.

An extended definition was developed and discussed with German water experts:

„The preservation or reconfiguration of waters and the factors influencing them with the aim of maintaining the natural characteristics of the waters, some of which are also subject to a dynamic development process, both in the morphological sense and in respect of their biology, physical-

chemical properties and ecological systems and thereby to ensure the natural basis for life for a form of long-term economic and social development compatible with nature“.

This definition reflects the state of the present discussion. It will be further developed in the presentation.

3 *The current state of discussion*

The Federal German Water Resources Policy Act (Wasserhaushaltsgesetz) is based on two principles:

1. the precautionary principle
2. the polluter pay principle

By those two principles essential aspects of the concept of sustainability are addressed and responded to. It is understandable why many of the interviewed water experts claimed that German water management already respects the principles of sustainable development. But the question still remains and was posed especially by the Non Governmental Organisations, as to whether, in practice, the statutory principles are correctly implemented. Nor is the water engineer's self-perception a sufficient guarantee that sustainable water management is actually practised.

Thematically the discussion was divided into the following issues of water management:

- water quality,
- the morphology of waters and landscape,
- quantitative water management,
- sewage water management,
- influence of the European Union on German water management,
- administrative and legislative aspects.

It was generally noted that the water quality of German surface waters has improved during the last decade. There was consent between the „official“ water experts and the representatives of the NGOs that the morphological structure of German surface waters is in a bad state, due to the systematic development work conducted on waters in the past, to improve navigability, to use water-power and as a mean of flood protection. It was generally accepted that water ways have to be renaturated in the future and this will be one of the main coming tasks in German water policies but also one of the main conflict fields with the traffic sector. It had been also a general consent that the negative impact of agriculture on the water quality, both of surface waters and groundwater, is growing and that there will be no sustainable water management without sustainable agricultural production and land use.

Divergent views existed between the representatives from the several Länder, if by setting quality standards for surface waters the natural restoration capacity should be taken into account or if quality standards should reflect the anthropogenic uninfluenced state of the aquatic environment. The discussion about this aspect was more guided by economic reflections than by ecologic ones.

A decentralised treatment of sewage waters was favoured by the representatives of the NGOs. They noted that a decentralised treatment of waste water, which favours anaerobic processes, does not only lead to cost reduction but also to higher energy efficiency and would be therefore more sustainable. Agreement was reached that decentralised waste water treatment could be installed in sparsely populated areas.

Different opinions existed about the influence of the EU on German water management. A focal point during the debate was the proposal of the water frame guide line by the European commission. In opposition to the administration the representatives of the NGOs evaluated the EU-water policy positively. Especially the proposal to guide water management in catchment areas was favoured by the NGOs. The

administration underlined the difficulties in structuring the existing water administration into catchment areas. The existing administration and Länder boundaries do not take into account the management of waters in catchment areas. Several German catchment areas do also need international co-operation. It was mentioned that the existing international commissions for transboundary water ways like for the Rhine, Elbe, Danube and Oder permit part of the co-operation that is necessary for managing catchment areas, without parallel administrative structures having to be created for this purpose. At the same time, it might not always be possible to avoid long, drawn-out co-ordination processes.

The positive results achieved over the past years are taken as a sign that the administration can be reduced. At the same time the increased costs in the field of water supply and sewage disposal put the administration under strong pressure to justify any further measures that it takes. This also holds true for a wide range of generally small and highly diverse organisations involved in water management: municipal companies, private companies, special-purpose associations, water and land associations and statutory associations, etc. A further problem at present is the poor integration of all the areas of policy that are dependent on the land. Area development, water management, nature conservation and agriculture are nearly always accommodated in separate authorities, making it virtually impossible for a coherent policy to be developed.

Citizen participation is guaranteed up to a certain extent by the municipal self-administration. On the point to what degree and how other forms of citizen participation could be implemented as foreseen by the AGENDA 21 started a controversial discussion between members of administration and representatives of the NGOs. The NGOs suggested the installation of local water councils with the participation of all interested stakeholders. The administration mentioned that it is in some cases the last instance to prevent the violation of environmental laws (e.g. construction of buildings in flood areas). It seems that this debate which does not only cover administrative issues but also constitutional and democratic issues is only at its starting point.

4 Conclusions

If a number of aspects of water management in the Federal Republic of Germany are rated as non-sustainable, then this should not be interpreted as meaning that the existing water management system has proved to be inefficient. The efficiency of a system can only be judged on the basis of the requirements that are placed on it. It is an undeniable fact that too many limits were disregarded and all too rapidly exceeded in the use of water resources in Germany. This applies in the case of time limits (such as the use of profound groundwater), spatial limits (e.g. long-distance supply), the boundaries between the media (e.g. the separation of surface water and groundwater) and also in respect of river basin boundaries (the overcoming of watersheds).