

Water Management and Global Environmental Change Policies

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The environmental problem does not exist. It is much worse. There are many environmental problems. Often, the similarities between these diverse problems are emphasized, like the "social dilemma"-character of the "human dimensions of global change", the undeniable mutual influence -often reinforcement- of these problems, or the relation between poverty and the seriousness of their effects on human well-being. Nevertheless, the differences between the various environmental problems are much greater than their similarities. Next to his proposition that mankind is becoming more and more independent of nature while nature is getting more and more vulnerable to human activity, an interesting proposition that I will not discuss in my contribution, Toth also stresses in his clear paper the differences between the various environmental problems as difficulties for a successful approach to combat them. The differences are formulated in terms of diverging scales of time and space and in terms of uncertainty and "surprises". The argument results among others in the conclusion that "no single globally defined uniform policy is likely to succeed locally if it is defined with no respect to the local specifics of the root causes and their interactions across regional and global scales". A worldwide carbon tax is mentioned as an example of such an inefficient uniform instrument (Toth, 1994).

In this commentary I will try to both underline and to tone down this proposition by drawing additional aspects into consideration. I will use water management as a frame of reference.

Water problems make up a considerable part of the environmental problems with which our world struggles. The problems are worst for the poor people across the globe (World Bank, 1992, p. 11). Water quality is bad and worsening in the low income countries and generally acceptable and slightly improving in the high income countries (id., p. 46). In Europe, the improvement of drinking water quality has been the single most important cause of the increase of life-expectancy (id., p. 99). Nevertheless, even in Europe water-

supply is threatened. In the Community this is generally not a quantitative, but a qualitative problem. Especially the pollution of aquifers with nitrates and pesticides and the pollution of surface waters with nitrogen, phosphorus and various other substances give cause for concern (Commission EC, 1992, p. 21-24). Meanwhile, the amount of water that is withdrawn for various uses is still increasing and the water has to be purified in ever more expensive ways (id., pp. 19-20).

My central proposition is that the globalisation of ecology and economy is not kept up by political, institutional and judicial integration and that a successful approach to environmental problems therefore meets additional problems of attuning to both the time-scales and the geographical scales (Toth, 1994). Moreover, among the uncertainties which Toth correctly points out, in my opinion not only uncertainties about the relationship between "human dimension" and the deterioration of sustainability and environmental quality are important, but also uncertainties about the possibilities for producing the desired changes in these human "inputs". Next to the "policy analysis community" there is also a "policy studies community" that stresses precisely these aspects. For a fruitful input into the policy process both types of policy scientists are important.

To a certain extent one can maintain that these aspects were not meant to be included in the paper. However, it is my impression that these aspects are also being underestimated by Toth because he seems to associate the concept of "policy" more with the "what", the changes to be striven for, than the "how", the question of how these changes of the identified "driving forces" can be attained. This question draws attention to the real-life effectiveness of policies targeted towards behavioural changes of companies and households, as a necessary condition for effectiveness, towards the implementability of the chosen policy measures in practice, and as a necessary condition for both implementation and effectiveness towards the political feasibility and acceptability with the public of such policy choices. The "testing of alternative policies" assumes a different meaning if considered from this perspective. Nevertheless, no management strategy will work unless these aspects are also taken into account.

The political and institutional aspects of change strategies are hardly dealt with except for the statement on the need for a differentiated approach. Precisely because these aspects are so much less "globalised" than ecology and economy, I think that the validity of this statement can be doubted. To prevent the manageability of our society from sinking below a critical limit for defending sustainability or environmental quality, or to raise it above that level, is it quite important that parts of these political and institutional aspects become more Europeanised or even globalised, in combination with a geographically and temporally differentiated elaboration.

Generally applied, financial incentives can form such an indispensable context within which various more differentiated change strategies become more feasible, implementable and effective, certainly in a market economy. Without wanting to repeat the discussion on financial instruments that receives regular attention in other platforms of the European Union, we observe that extraordinarily interesting examples of such instruments are evident in the field of water management. They demonstrate the potential implementability and effectiveness of financial strategies, but also that their bottle-neck lies in a low degree of feasibility (Bressers, 1984, 1988). Though a broad uniform application can even prevent a serious disturbance of the terms of competition by environmental policy, we observe that fear of such disturbances, in addition to conservatism, is an important factor to explain the limited feasibility of such instruments in the political process of the separate member states. I will briefly discuss a recent study by students of my institution on the influence of strong water management policies, including effluent charges, on the terms of competition, in relation to this point .

The study concentrated on a "worst case". Of all Dutch environmental policies in past decades, water quality policy has proved the most intensive for both the ecology and the economy. Secondly, policy measures were almost completely financed by effluent charges that consequently are among the worlds highest. Thirdly, the students selected a branch of industry that can be internationally compared and for which they could plausibly state that the effects on its terms of competition were the largest. The paper and cardboard industry met these criteria. With various indicators the development of the competitiveness of the Dutch paper industry over time was examined. Only very weak

relationships with all water-related costs were found. Next, the time series were compared to similar data from Belgium, a country with a comparable economic structure and paper industry. In Belgium an effluent charge was not introduced until 1989 (Flanders) and 1991 (Wallonia). Some regulatory side effects have already been demonstrated (Peusens, 1994). No other water quality policies were actually implemented at a large scale until that period either. For these reasons, the Belgian paper industry can be used well for comparison. Comparing the Dutch to the Belgian case showed no negative effects on the competitiveness of Dutch paper industry at all, one way or another (De la Fuente, 1994).

This project provided a "worst case" study: extreme differences in intensity of policy, the use of charges, an internationally oriented sector in a competitive market with products that are not "image-loaden". Even so, the much feared deterioration of competitiveness slips through one's fingers in an empirical research, that is, if one does not rely on model calculations or anecdotal information. Nevertheless, though even in cases of financial incentives on the level of individual member states an influence on competitiveness seems to be more fear than fact, the low degree of political feasibility of such strategies remains a fact to be reckoned with.

Besides the more uniform financial incentives, general standards can also form an important institutional context. The European drinking water standards have been the driving force behind the recognition of the urgency of threats to the usefulness of groundwater and surface waters as sources for drinking water production in large parts of the European Union. Directly and indirectly, these standards have stimulated policy developments in various member states. The feasibility and implementability would not have been obvious without these European standards. Together with the pressure on public finance, the increased consciousness of the ecological challenge changed the "policy networks" of organisations in the water policy field in the 1980's in countries like the United Kingdom, The Netherlands, Germany and the United States. They became more open, more businesslike and less dominated by an engineering orientation (Bressers and O'Toole, 1994). These changes on their turn have made also new innovative management strategies more feasible.

A general context in combination with a more differentiated elaboration can work. This general institutional and policy context is the more important because fear of deterioration of mutual terms of competition forms a permanent threat to the legitimacy of strong environmental policies with the public and the companies. The danger exists that without such a context member states do not attune their environmental policies on the basis of an equal bottom line of environmental quality, but on the basis of equal costs for their industries. With an unequal degree of environmental deterioration and an unequal contribution to the threats to sustainable development, unequal efforts for the environment seem justified however, and are to be viewed more and more as a normal part of the conditions of the place of business of a certain region.

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