

an "up-to-date set of uniform standards for the formulation and evaluation of water resources projects" and he asked me to be chairman of this ad hoc council. Henry Caulfield, who is to testify after me on this subject, was chairman of the interdepartmental staff committee that provided necessary staff assistance. That committee drafted the present policies, standards, and procedures which in their final form, were approved by the President on May 15, 1962. In this form, together with a statement by Senator Anderson, who was then chairman of the Senate Committee on Interior and Insular Affairs, they were published as Senate Document No. 97 of the 87th Congress, second session, and still constitute the basic framework for project and basin analyses. They are regarded as of landmark quality in benefit-cost analysis by most scholars and practitioners in this field. The Water Resources Council, the formal statutory successor to the ad hoc council formed in October 1961, is actively concerned with problems in the application of the evaluation standards and with their further improvement.

This quick recitation of the history of the use of economic analysis in water and related land resource use and development is only a reminder that the water resources agencies have not only been pioneers in this realm but have championed it as well. Our efforts in this regard, as well as the magnitude and significance of the water development programs and projects, have attracted the attention of many university scholars and other students of analytical and policy processes. This attention is welcomed and encouraged, for as recently as 15 years ago few academic economists and other scholars were concerned with water resources. Now, however, an entire field of resource economics has developed with a considerable number of well-established scholars. These scholars have helped the agencies in the project evaluation tasks. Indeed we have a most healthy exchange with the various university water resources study programs. We have invited scholars to advise us; we have helped finance some of their studies; and we have sent staff personnel to study under them and to participate in seminars with them. We have been participants at many of the meetings of the professional economics, public administration, and planning societies as panelists on benefit-cost discussions. We know this exchange has been mutually fruitful.

I believe there is no other Government program that exceeds us in this endeavor to use economics. In order for a project to be authorized and to be funded for construction, it is necessary not only to undergo the usual Bureau of the Budget review and to meet the critical examination of the congressional substantive and appropriations committees but also to face interagency comments and to pass benefit-cost analysis. In addition to these procedural requirements and tests and the usual scrutiny by the interest groups, we also must pass the searching appraisal of the jury of our economic and resource peers in the universities. The numerous articles in the scholarly journals and books in the academic press on the subject of water and resources planning and evaluation manifest this close attention.

It is well to acknowledge, however, that benefit-cost analysis is not a foolproof device nor a precision instrument. Its usefulness and essentiality are without doubt, but its imperfections and inadequacies should not go unmentioned. Many scholars have warned that it can be mis-