ABSTRACT. The paper discusses a major project to introduce imputed values of environmental services into the national accounts. After a short discussion of how the project relates to the social measurement research underway at the National Bureau of Economic Research, the accounting principles are briefly presented. Preliminary accounting data, as well as the results of a study of the distribution of air pollution damage, which relied on these data, are also presented. The paper includes a brief discussion of the policy and research implications suggested by these preliminary results. Finally, the paper closes with a technical appendix demonstrating that a sector's contribution to air pollution emissions may be a poor indicator of its contribution to social damage.

I. INTRODUCTION

This paper discusses a relatively recent research effort to measure and place in a national accounts framework the services of environmental assets such as air, water, and to a certain extent, land. This activity is part of a major project under way at The National Bureau of Economic Research.

The concern of this project is suggested by its title: 'The Measurement, of Economic and Social Performance'. It is a concern shared by many who are searching for 'social indicators' more meaningful than conventional who are searching for 'social indicators' more meaningful than conventional indicators such as the GNP or the unemployment rate. However, the research effort is more modest in its objectives and more conservative in its approach than is, perhaps, suggested by the title.

The objectives are modest in that no attempt is being made to measure all aspects of economic and social performance. In the social sphere, we have no plans to measure, for example, changes in racial discrimination or the level of morality in government. Similarly, in the economic sphere, we will overlook the illegal gambling industry even though its balance sheet may dwarf many of the industries we shall consider. It is not that these areas of social activity are not worth measuring. It is only that we feel more confident if we direct our attention towards those areas for which...
we have analytical competence and for which we feel the data limitations are not overwhelming.

The approach is conservative in that it largely builds on our existing system of national economic accounts and the associated data base. The reason for this conservative approach, perhaps unsettling to some, considering the large amount of criticism directed against the GNP as a social indicator, is the belief that the accounting structure provides a framework that serves to discipline the data collection effort. It is conceivable that the project could have consisted of a large number of non-integrated efforts to measure activities that heretofore have not been measured. Or as another alternative, the project could have consisted of an effort to assemble in a single volume various sets of data in existence that are though to be in some way useful as social indicators.

Yet we felt that these alternatives would probably cause us to flounder and eventually drown in a sea of numbers. There are simply too many things that could be measured and, indeed, too many things that have been measured. What is needed is a framework that sets data collection priorities, that reveals significant data omissions, and that provides useful and digestible summary statistics. It is not surprising that those of us affiliated with the NBER – the organization that fathered the national accounts – should look to the national accounting system as the appropriate framework.

Our use of the national accounts as a starting point has an additional justification. We should not overlook the fact that in spite of its well-known weaknesses, the accounts already measure activities, which constitute a large portion of what determines social well-being. Consumption, production, government activity are important elements of welfare even though the national accountant – as suggested recently by defenders of the GNP – may not have had any intentions of measuring these factors with a welfare objective in mind. Rather than ignore the role of the national accounts as a social indicator (or as a source of social indicators), we instead are focusing on two of its principal weaknesses: (1) its neglect of certain non-marketed services and (2) its neglect of distributional considerations.

The NBER projects attacks these two weaknesses with two distinct but related research approaches. One group of researchers (Richard and Nancy Ruggles, Milton Moss, Thomas Juster, Robert Lipsey, Michael