Opening Comments

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Abstract. At a time when information and knowledge about the environment and the economy are increasing, problems of both environment and economy are growing more serious. It is the role and opportunity of a university institute concerned with research on environment and economy to convert information about the environment into knowledge, and to explore applications of that knowledge in areas of economic management and policy. The main barriers to production and dissemination of information that can contribute to effective environmental knowledge are those that affect the reliability, adequacy, accessibility, and understandability of environmental information. Such barriers may be systematic, biasing the gathering of information and selecting in advance who may benefit from it; they may be barriers of translation, with distortion of content or significance; barriers of sophistication, that determine both content and context; or, most difficult in the environmental field, barriers imposed by problems of scale and relationships of different scales. To be useful, information cannot be purely objective, but must have subjective value added. There is a staircase of 'knowing', progressing from Observation and Measurement, to Data, to Information, to Knowledge, to Understanding, and finally to Wisdom, presenting increasing barriers of subjective value, interpretation, and integration at each step.

Introduction

As Dean Haight has just mentioned, the Institute for Research on Environment and Economy (IREE) was created to focus research and teaching in a coherent way upon issues that link environment and economy in the modern world.

It is often pointed out that economy (management of the household) and ecology (knowledge or study of the household) are but different sides of the same coin. And environment (all that which surrounds) cannot, in the larger sense, be anything other than a term for our household, the physical, chemical, biological, institutional and conceptional surroundings within which we live and of which we are a part. These various attributes of our household are linked together by our knowledge, perceptions and ideas. Each of us occupies a different household, and as groups – families, professions, societies or nations –, we recognize and value different combinations of our surroundings and our households. These recognitions and values are transferred from one to another through information. It is through information, and its ability to transport or store, or make useful to others, our knowledge, perceptions and ideas, that we can communicate and achieve joint action or influence one another. It is information that connects the knowledge of our
household (ecology) to its management (economy), within the awareness of our surroundings (the environment). Thus any institute concerned with research on environment and economy must be concerned, first of all, with environmental information, what it is, how it is obtained, what it represents, and how it is moved, stored, received or used. It is fitting, therefore, that the first public activity of the new IREE should be concerned with environmental information.

Information, and the role of Universities and Research Institutes

What is the role of a university with respect to environmental information? IREE, by its name and its expressed intention, will be studying both sides of the ecology/economy coin. It will be concerned with what we know about the environment, and what we do with what we know. Maybe it will be concerned also with what we don't know, and what we do because we don't know. I hope so. For the economy, the management of our household, is the expression not only of what we can do and know how to do, but of what we would like to do, and with what happens when we do things without really knowing what we are doing. The state of our economy often shows this only too well.

After all, a university is first and always concerned with knowledge – with discovering new knowledge, through research, or with imparting knowledge to others, through teaching, communication, experimentation and example.

The 'knowledge business' of a university often starts with observations and data, which lead to information. The university role is largely one of turning information into knowledge, and (and here comes the skill that distinguishes a great university from those not so great) turning that knowledge into understanding and wisdom among those it can reach.

For it is not information, or even knowledge alone, that is needed in the world today, (although we cannot do without them), – but wisdom that we must have to manage our environment wisely – to make decisions, develop wise and sensible policies, and follow those policies for individual and common good now and in the future.

It is therefore also very appropriate that IREE should collaborate with the Institute for Research on Public Policy in this endeavour. The evidence is all about us, that we are not managing wisely either our environment or our economy today. I need not catalogue such evidence to this audience. Present trends make it hard to escape a forboding that in the near future, problems both of the environment and of the economy will grow more severe, unless some very wise changes are made, at all levels of society. We have not only to manage our household better; we have to know it better, and put that knowledge to use, for the good of the environment if we want it to be of benefit to ourselves also.

These problems are growing more serious, at a time when our knowledge, while still far less than it could be, of the characteristics and the processes that govern both the economy and the environment is greater than it has ever been; and when our policies, regardless of whether individually we agree with them, are, in comparison with most periods in human history, well-intentioned, open, and sincerely applied. It is this paradox, this predicament, that, I hope, IREE will be addressing in the years to come.

Clearly, to improve our chances of dealing with our present predicament, vigorous and