

people for the day when oil is gone or has lost its worth.

One logical way we can deal with such imponderables in resource management is by using modern predictive techniques derived from systems analysis and operations research. In principle, the workings of the whole world can be analyzed with the aid of modeling and computer simulation, much as the workings of ecosystems are being evaluated by systems ecologists now. In principle, continuing study will permit us to predict the consequences of alternative schemes of resource utilization, and optimization of strategies will permit us to find the best. Because change is constant, and the assessment of values will change with time, it will be essential to correct the model continually as information accumulates. The errors and uncertainties associated with efforts thus far to make predictions for shorter periods demonstrate the need for such refinement. Since no better method has yet been developed, it is imperative that these presently available techniques be used.

Who is to model the resources of the world? Who is to keep track of the changing supplies and needs? Who is to implement the conclusions reached? These are largely political questions. Gordon (1976) reviews the dangers of economic forecasts. Attempting to postulate a resource policy here would go beyond the intention of this paper. Other questions must still be raised.

Perhaps the most important imponderable is whether or not the courses chosen will be the best. One reason why is that deciding to act forecloses options. It well may be asked what "best" we seek. A national resource policy, especially one which is part of a plan for the entire planet, cannot be fair to all. But it should recognize that uses other than consumptive ones may be the best in the long term. Such a policy must work now. It must sustain the people who devise it in the present time. Even so, it should not require irretrievable decisions before these must be made. Indeed it should prevent premature actions from being taken. Our ideas of what is best are rarely the same as our children's. Surely our great-grandchildren will see things differently still, as tastes and technology change. It is important that we not seek to resolve differences in value judgments by settling things forever when this need not be. The greater the diversity of environments we can maintain, and the greater the representation we can preserve of significant variation in culture, the richer will be the possibilities for life in the twenty-third century, and beyond.

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