

the controlled release of atomic energy it is estimated that all of the radioisotopes under human control consisted of about 10 grams of radium. Today a nuclear plant is being built near Oswego, N.Y., which, it is estimated, when in operation, will every day release into the atmosphere radioactivity equivalent to 130 grams of radium.

We are hearing recommendations for major modifications of the earth which have drastic ecological implications. Some of these are utterly irresponsible and others are well-intentioned proposals from able persons who are simply unaware of the ecological implications. I have several times heard leading chemists, thinking about ways of aiding agriculture, propose ways of intervening in the nitrogen cycle which, if successful, could spell the end of life on earth.

We are talking about modifying the weather (which, incidentally, man has inadvertently been doing since his early history), of connecting the Atlantic and Pacific Oceans by a tropical sea-level canal; of mining the ocean bottoms and at the same time trying to farm the surface waters, and of innumerable other schemes with vast ecological implications which are simply not recognized by their proponents.

All this is very frightening to one who does see some of the implications, and I know ecologists who have simply given up and hope that they will not be around to see the final disaster for man. However, in the Ecological Society of America, we have not given up. We have formed a vigorous Committee on Public Affairs which represents a place that policymakers can come to for competent ecological advice.

The Ecology Study Committee, which represents the long-range planning arm of the society, has studied alternatives and has concluded that we must establish some sort of a "National Institute of Ecology" which can bring together in readily retrievable form the existing information about ecosystems, which can insure that research is conducted on vital questions where we are at present largely ignorant, and (perhaps of greatest interest to this subcommittee) which can put a mass of authoritative knowledge and thinking at the disposal of policymakers who need advice on ecological questions. We want this institute to have the capacity to undertake studies in depth when it is presented with a problem for the solution of which the necessary data do not yet exist.

The trouble in the past, at least in this country, has been that policymakers have either failed to recognize ecological implications or have directed their questions to bodies of scientists and engineers that were not qualified to give advice on ecological problems. Environmental management policy has been based on considerations of economics, engineering convenience, and political expediency, but seldom on esthetic consideration and even less often on sound ecological considerations.

Mr. DADDARIO. Dr. Cole, when you say that in this country we haven't done these things, where have they handled the situation better or are you just pointing to our own problem.

Dr. COLE. I just didn't want to be too broad on this. I think England has done a bit better than we have, but it has been far from what it should be anywhere.

Chairman MILLER. Doctor, isn't England putting rather high-level atomic waste into the North Sea?