Congress Searches for Foresight

House and Senate seek advance knowledge of technology's effects

Interior

Altered environment: dams create unwanted side effects.

• We build a dam, produce needed power and water—and disturb the hydrological cycle.

• We build automobiles that carry us rapidly from place to place—and befoul the general air.

• We extend an irrigation scheme, bringing new fertility to desolate areas —and with it a deadly disease (page 317).

• We invent efficient new systems to store and retrieve information — and stand in danger of losing our individual privacy.

• We discover new elements never seen on earth before — and hang a sword over the human race.

The list could be endless; mankind blithely eats its bananas and throws the skins under its own feet.

Currently, political men and policy makers in science as well are seeking ways to anticipate the unpleasant offshoots of science and technology and at least prepare for them if prevention is impossible.

In three separate places within the U.S. Capitol last week, the search for an early warning system was underway.

Concerned Congressmen introduced bills, heard testimony and argued over the best way to do what almost everyone agrees is long overdue. And the household names of the science world appeared at hearings before Senator Edmund S. Muskie's Intergovernmental Relations Subcommittee on Senate Resolution 68. It would create a Select Committee of the Senate on Technology and the Human Environment.

Praise for the idea came like a litany from scientists, administrators and educators: Dr. Donald F. Hornig, Presidential Science Adviser; Dr. Detlev Bronk, president of Rockefeller University; Dr. Howard R. Bowen, president of the University of Iowa; Dr. Harrison Brown, foreign secretary of the National Academy of Sciences; Dr. Glenn T. Seaborg, chairman of the Atomic Energy Commission; Dr. Leland J. Haworth, director of the National Science Foundation.

Over on the House side of Capitol Hill, Representative Emilio Q. Daddario (D-Conn.) was backing his own bill to create a "Technology Assessment Board" as an arm of Congress to look at side effects current advances might have.

And on the Senate floor, Gordon Allott (R-Colo.) introduced a bill to create a joint committee of House and Senate to "make a continuing study of the programs and operations of the Federal Government relating to science and technology."

Senator Muskie (D-Me.) is essentially building a record to impress his colleagues and gain their support.

The Muskie resolution runs head on into two standard reactions of Senators: don't create any new committees, and don't take any authority away from my own committee.

The second reaction was strong enough earlier to force Senator A. S. Mike Monroney (D-Okla.) to drop from his successful reorganization plan for Congress a provision that would have made a broader science committee of the Senate Aeronautical and Space Sciences Committee, at the expense of other committees (SN: 1/28).

But brick by brick, name by name, Senator Muskie builds his case. If, because of his colleagues' dislike of change, he doesn't get the resolution passed this season, he is confident he can do so next time. The select committee should avoid the wrath of powerful committee chairmen because it will hold no legislative power. Its membership will be drawn from the very committees that might be expected to object—a device employed successfully in the House several years ago when its select committee on science and technology was assembled.

Although the hearings were limited to broad areas of policy, aides pointed out that if the select committee were established, it would peer into specific areas and be able to command the most expert testimony available. Members

would then return to their own lawmaking committees with a clearer idea of the consequences of their actions.

If it were 1913, for example, a worried citizen might tell the select committee, "This man Henry Ford has set up an assembly line for his automobiles. He will be able to turn them out like flapjacks. They'll kill people and horses on the roads, and poison the air to boot."

Then the committee might delve into the matter and determine that there are indeed aspects of the automobile that need taming—instead of waiting, as Congress has, for 53 years to establish auto standards.

Current grist for the committee's mill is presented by Dr. Luna B. Leopold of the Geological Survey. Even a simple dam on a stream can "short-circuit" the hydrological cycle, increase evaporation of the available water and lower adjoining water tables, he says. Further, evaporation increases the concentration of salt in the water. If used for irrigation, the fluid can build up salt levels to the point of poisoning the soil. If even more water is applied in an effort to leach out the salts, the fields can become waterlogged, killing any crop. On the once-fertile Indus River plain in West Pakistan, Dr. Leopold reports, an estimated 100,000 acres are being lost in these ways each year.

If only it could have been foreseen. . . .

Quinine Cartel On the Record

An international price-fixing conspiracy which has forced a 500 percent jump in the cost of two life-saving drugs was exposed in infinite detail by the Senate Antitrust and Monopoly Subcommittee last week.

The Senate now has 120 documents to support what has long been suspected: a cartel headed by Dutch and German companies has virtual control of the world's supply of quinine and quinidine.

Dr. John M. Blair, chief economist for the subcommittee chaired by Senator Philip A. Hart (D-Mich.), outlined the specific activities of the cartel representatives' efforts to control the world market. Dr. Blair has assembled the names of companies and their spokesmen and the dates, places and substance of their meetings in European hotels from December 1959 through October 1962.

The cartel, says Blair, has what amounts to sole access to the source of quinine, and decides what the price of the raw material shall be at any time, who can buy it and how much, and who can sell it to whom.

Quinine, which comes from the bark of cinchona trees growing in Indonesia and the Congo, has been subject to cartel control by Dutch and German interests for three-quarters of a century. Though some attempts have been made to break it up (particularly in the 1930's), none has been successful.

Quinine, once the world's only malaria cure was replaced after World War II by more effective, less toxic synthetics but was called back into use about 1963 when American soldiers in Vietnam began coming down with falciparum malaria (SN: 11/19/66), a strain that responds only to quinine therapy. Quinidine is a quinine derivative used to regulate heart beat, primarily in older persons.

Manufacturers who were buying quinidine in bulk form for less than

Agriculture

Worker strips bark from cinchonas.

$1.00 an ounce in 1965 are paying from $4.00 to $6.00 this year, and the cost to patients rose from approximately $5.00 to $10.00 for an average month's supply. The upward swing was tied to a shortage of supply that is apparently more contrived than real, Blair's study reveals. This is apparently so even though efficiently operating cinchona plantations in Indonesia are said to be less plentiful than they were a few years ago; President Sukarno's government apparently saw little value in them and failed to encourage their upkeep.

The question of quinine supply, at least to the U.S., has been kicking around for several years. The General Service Administration's decision in August 1958 to sell 14 million ounces of pure quinine from Federal stockpiles precipitated considerable concern among cartel members that the entire world market would be upset if the U.S. stockpile was sold to companies that would undersell the cartel suppliers. Diplomatic maneuvering between the Dutch ambassador to the U.S. and the State Department assured sale of most of the drug to the Dutch. Only one of three U.S. companies able to meet bidding requirements actually got any of the stockpile quinine.

By early 1964 when a decision was made to halt U.S. sales, all but 4.1 million ounces of the allotted 14 million had been sold. The cartel, using the Dutch firm as a front, managed to get about four-fifths of the supply at an average price of slightly over 21 cents an ounce.

British and French producers were involved in the cartel in hopes of getting a guaranteed cut of the Dutch and German supplies. In February 1960, at the third meeting of the cartel members, the Dutch assured the others the conspiracy would not be found out. They said the U.S. would not know it was selling to a cartel and accurately predicted GSA would ask no embarrassing questions.

The 1964 freeze on the U.S. quinine stockpile ostensibly came because of fears that the Vietnam war might lead to a significantly increased demand for the drug in treating malaria victims. In spite of steadily rising domestic prices for quinine and quinidine in the U.S., GSA never released any of its stockpile supplies for internal use. Some Government sources say the decision not to flood the U.S. market with low-priced quinine and to stop selling abroad was a move to guarantee that the cartel would never literally hold the entire world supply in their hands, even though it has a corner on the market.

What effect the Hart Committee hearings will have on the price of quinine and quinidine in the U.S. is hard to say; avenues of legal recourse are narrow. Although the possibility of establishing a code of international trade rules governing business practices is under study by the Hart Antitrust and Monopoly Subcommittee, diplomatic channels are likely to be the only recourse at the present time.

Canyon Controversy: Second Round

The apparent second-time loser in the legislative battle to win authorization of the Central Arizona water supply project claims he sees victory ahead.

". . . I am guardedly optimistic," says Representative Morris K. Udall (D-Ariz.), "there's just too much at stake here for people not to compromise."