

The decision to avoid polluting a river, by burning waste, pollutes the air. If we decide to bury the waste, we may pollute the soil and/or the ground water. This fragmented approach leads to a multiplicity of institutions for the management of resources and waste disposal. Pollution control is an integral part of resource management. Our institutional structure for resource management, both federal and provincial, comprises a number of departments with responsibilities usually limited to particular aspects of individual resources or groups of resources. The forestry departments are examples. In addition, other departments and agencies, while not primarily resource oriented, have policies and programs which have an impact on resource use and ultimately on environmental quality—the health department, for example.

Generally, our governments are organized in relation to human activities—agriculture, fisheries, industry, transport, health and welfare, education and so on. The resource-directed departments—for example, mines and minerals provincially; energy, mines and resources federally—have been very specialized not only in terms of the resources they are charged with managing but in areas of management responsibility. It is becoming increasingly obvious that if we are to succeed in controlling the quality of our environment, as much as possible we must manage our resources as an integrated whole. Comprehensive planning must be applied to the whole field of natural resource management if we are to succeed in balancing economic growth with environmental quality in order to achieve an optimum quality of life.

The emotional reaction to some of the conspicuous ecological problems that we have confronted in recent years has brought a consciousness of the pollution challenge, of the necessity of preserving our environment. But it has also brought us dangerously near to making some very serious errors through overreacting. The fact, of course, is that pollution control is not without cost.

I believe that control measures must inevitably be applied. The problem is how to apply them at a cost that our economy and society can bear. I suppose the costs that will confront this society, as it seeks to improve the ecology, will be reflected in two general ways. First, there will be a great deal of pressure on the public sector to provide services and facilities which will improve the disposition of waste and improve our methods of handling the materials that flow from human activity. On the other hand, we will impose great costs on industries, and these are properly chargeable to them. Many industries operate at a given cost because they are free to dispose of their waste products without any regard for the social cost or the cost to the environment; and, of course, Canadians will demand that they absorb these costs in their industrial processes. These costs will inevitably be passed on to the consumer. So we get right back to ourselves: we will pay for this improved standard of environment one way or another, be it through taxes or through higher prices of the commodities and services that we use and absorb.

The massive offshore oil-spill of January, 1969, in the Santa Barbara channel of California led to dire forecasts

#### *Canadian Pollution Awareness Week*

that the channel would be a dead sea and a marine desert ever after. This is perhaps one of the great benefits that could flow from the bill which the hon. member for Burnaby-Richmond-Delta (Mr. Goode) has put before us. At the time this oil-spill was very much in the news, we were faced with new reports along the following lines:

Conservationists . . . fear that Santa Barbara channel will become what they are calling a dead sea from oil pollution.

Marine biologists fear the worst for the balance of nature . . . The full damage to sea life, they say, may never be measured.

Commercial fishermen in the area now claim that their business is going to be destroyed for years.

*Life* magazine rather outdid itself in a bit of biblical prose: "Now the churning of our passage was dark in a sea gone dead". It was beautiful!

The University of Southern California was endowed with a sum in the order of \$250,000 by the petroleum industry, with absolutely no strings attached; the only condition was that the industry would exercise no control or influence over the project, its findings or its publications. The direction of the study was under an Australian marine biologist, Dr. Dale Straughan. The reports have finally come in. Dr. Straughan reported, at the recent international pollution conference held in Rome, no significant deviation from the expected kinds and abundance of fish eggs and larvae in the area. She reported that a survey of the sandy beaches over 12 months following the oil-spill failed to pinpoint any damage due to oil pollution. Researchers did detect an over-all decrease in intertidal zones, but the decrease occurred on shores far removed from the Santa Barbara spill, as well as on those fouled by oil. Dr. Straughan commented:

This decrease was not associated with oil pollution but generally with increased human activity on some beaches and increased amounts of chronic pollution other than oil.

In terms of fisheries' analysis, the California department of fish and game announced as follows:

all fish appeared healthy and (it was) . . . unable to find any indications of impairment in the food chains or damage to the fish populations.

• (4:20 p.m.)

Commercial catches by Santa Barbara-based fishermen were small when oil was on the water and the fishermen were remaining in port. However, boats from other ports continued to fish the channel. The department stated as follows:

Comparison of the total commercial fish catch from the Santa Barbara channel and channel islands for these six months in 1969 . . . with the same six months in 1968 . . . shows no decrease in catch for the area. At the time of this spill, living birds in the channel numbered 12,000. By May the population rose to 85,000 because of seasonal migration.

Mortality from all causes, including oil, is estimated to have been between 4,500 and 5,000 birds—

So we see that in a highly emotional, highly publicized, highly charged situation—certainly dramatic and spectacular in terms of pollution of the environment—in fact the after-effects were not as predicted by those who cried so emotionally at the time. Perhaps nature does have a