



Bulletin

Vol. 25, No. 48

December 2, 1970

PUTTING POLLUTION IN ITS PLACE

The following excerpts are from a recent address by Mr. Jack Davis, the Minister of Fisheries, to the Twelfth Annual Seminar on Canadian-United States Relations at Columbia University:

...Here on earth, we have our own thin envelope of soil and water and air. We have our planets and our animals. We have an environment that is being forever reshaped and renewed by living organisms of every kind.

Following endless cycles of birth and growth and death and decay, our earthly community is "motoring over". It is renewing itself. Its carbon atoms, its oxygen, its nitrogen and its phosphorous compounds are going around and around. They are going around in cycles and there is no such thing as waste, self-cleansing being a feature of our natural earthly scheme of things.

Man is caught up in this process. But his numbers are growing and his impact on our earthly biosphere is growing. His "spin-offs" are growing and his power to destroy our environment is growing by leaps and bounds.

We are scattering our man-made substances around. They are breaking up life cycles and cutting food chains off at their source. Thoughtlessly, we

are sowing the seeds of our own destruction. We are defiling the very world we live in....

LIMITS OF ADAPTABILITY

Man may not be the master of all he surveys. But he can be masterful. He can try to understand the life systems which he sees around him. He can influence them. He can shape them. He can improve them in a hundred different ways.

Perhaps we shall never understand nature completely. We shall never know the meaning of life itself. But we can describe its workings and obey its imperatives. Through careful study and better management, we can add to the quality of our environment, we can stop downgrading our resources and we can put the accent on renewability instead.

The scientific approach has served us well in the past and it can serve us well in the future. But specialization by itself is a curse. It has already got us into trouble. We must take a much broader approach to industrial development, town planning and the use of leisure time.

ECOLOGY A TOUGH TASKMASTER

Our forward planning will have to bend to new imperatives. It has had to bend to physical and economic imperatives in the past. It will have to bend, increasingly, to ecological imperatives in the future.

"Eco-systems", like economic systems, are circular. They are complete in themselves. They are self-compensating and self-adjusting. They respond to outside pressures and they can be destroyed by too much tinkering. Bankruptcy may not be as bad as chemical warfare, but it can be an awful experience nevertheless!

Eco-systems, like economic systems, have their rewards and their penalties. They reward the perceptive and they penalize the slothful. They reward those who try to understand the system and they penalize those who try to bend it to suit themselves.

For instance, I know some industrialists who

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believe that we can go on polluting for years. They talk about the "assimilative capacity" of the oceans and the air. But they are wrong in this. They are wrong because the assimilative capacity of our natural systems is limited. They are wrong because of this synergistic effect of heaping one pollutant on top of another. And they are wrong because it is easier - and far cheaper - to deal with pollution at its source.

WORLD MONITORING

Pollutants, unfortunately, are no respecters of man-made boundaries. They travel with the winds across whole continents. They are flushed out to sea and find their way to the ends of the earth. Fumes from the smoke stacks of Northern England have found their way into Swedish lakes. Soot from the Ruhr Valley has fallen on the Ukraine. DDT used by farmers in Oklahoma has been turning up in the flesh of birds in the Antarctic. And mercury discharged by chlor-alkali plants on the Canadian Prairies has been found in whales in Hudson Bay.

Distance is no longer a barrier, so we are interdependent whether we like it or not. We have common problems which call for common solutions. We have a common interest in combating pollution. Common markets are now commonplace on the economic front. But their size will be dwarfed by the common environmental front on which man will have to battle in the Seventies.

We already need a worldwide network of monitoring stations. They are needed to monitor our water, our air and our soil. A global monitoring system in turn will lead to common standards. Common standards will call for common measures to deal with pollution. Local pollution havens will disappear and neighbourliness among nations will take its place. By keeping our pollutants to ourselves we shall not only be acting as a good example to others but also serving the best interests of mankind.

POISONS MUST BE RECYCLED

I have already talked about strange new substances. Man is introducing more than 500 a year into his earthly environment. Many of them are poisonous. They are anti-life. They may kill or maim or modify the living things around us. They can do this in mysterious ways. They can do it for a long time before we really know what is going on. Then it may be too late.

We must, therefore, be careful. We must be very careful indeed. We must take steps to have them checked out before they are put on the market. Either that or recycle them and re-use them. This is the only answer from a biological point of view.

Of course recycling will call for more plant and equipment. It will mean more plumbing and more employees. The end products of industry will cost us more as consumers. But most people are prepared to pay this price. They are prepared to pay for an in-

surance policy which will keep industrial pollutants where they belong - that is inside the plants themselves.

Nor is the cost likely to be all that great. More plumbing and more employees may add 5 per cent to the cost of a new product. But wage settlements can eat up that much cash at a single sitting. Productivity gains can offset the expense of recycling in two or three years. Some industrial waste can be converted into useful by-products and better house-keeping often brings its own rewards.

CLEAN-UP JOB BY INDUSTRY

To the industrialists among you, let me say this. I have great faith in our private enterprise system. I have great faith in the ability of industry to tackle any job that it faces. It is efficient. It is effective. These are reasons why I would rather have industry clean up its own mess than see the job done at public expense.

But there is a physical argument also. We should deal with waste products when they are in their most concentrated form. We must not wait until they are broadcast to the four winds or flushed away in the local sewage system to concentrate them again. We can avoid this difficulty by recycling poisons inside the factory fence.

Nor am I picking on North American industry as if it were alone in this respect. Industry in the U.S.S.R. is faced with the same problem. Pollution in the Soviet Union is now the number one topic. It has become a "political" question which the Soviet leaders must deal with as best they can.

Evidence of pollution is widespread in the U.S.S.R. Pulp mills are fouling Lake Baikal. Chemical plants have damaged the sturgeon stocks in the Volga River. Oil spills are common in the Caspian Sea. Whole communities have had their drinking water contaminated by heavy industry. Costs, in other words, are being visited on the unsuspecting public in the U.S.S.R. They have not been "internalized" in the socialistic scheme of things and they have not been "internalized" here either....

CANADA AND THE U.S.

Canadian-American relations have been strained at times. They have been strained because industries on one side of the international boundary were careless and their wastes caused considerable damage on the other side of the line. Recycling within the factory fence would have prevented this from happening. And surely we can learn from experience. We don't have to make the same mistakes again and again.

The Trail smelter case was a classic example in the 1920s. Poisonous gases from our big lead-zinc smelter in southeastern British Columbia floated down over the forests of Washington and Idaho. Trees died in the millions, washouts occurred, important

TRUTH AND JUSTICE BROUGHT TO LIGHT



Truth



Justice

After half a century in the dim recesses of a Canadian Government warehouse, Truth and Justice have finally been returned to the light of day. In mid-August, the two ten-foot bronze statues were erected on pedestals on either side of the front steps leading into the Supreme Court Building in Ottawa.

Several times during the placement of the statues, officials of the Department of Public Works wondered if Truth and Justice would ever hold their rightful positions. Delay followed delay as workmen toiled all day and into the early morning hours to complete their task.

The problems started when a truck bearing 21 tons of white granite from Beebe Plain, Quebec, broke down and arrived in Ottawa 12 hours late. Then holes that had been drilled in the pedestal to take the anchor bolts of the sculptures were found to be improperly placed and redrilling caused a further delay.

Problems continued. A huge tempered lifting-pin bent like a stick of soft liquorice when a crane attempted to hoist the first pedestal into position. Meanwhile, Truth and Justice waited patiently gazing up into the night sky lying chained across the backs of two trucks. At last, 47 years and 24 hours late, they were hoisted to their pedestals, where they now stand looking tranquilly out over the lawn of the Supreme Court.

ORIGIN OF THE WORK

Originally, the two figures were to have been part of a memorial to King Edward VII. In 1912, the Department of Public Works awarded a prize of \$35,000 to the sculptor, the late Walter S. Allward of Toronto, for the memorial. Truth and Justice, cast in plaster in 1920, were the only part of the memorial ever completed.

The remainder of the memorial remained unfinished when, in 1922, Mr. Allward was commissioned to create the Vimy Memorial. Truth and Justice were cast in bronze to preserve them and laid to rest in wooden crates, eventually finding a resting place in a Public Works warehouse.

Mr. Allward sculptured the allegorical figure of Justice standing patiently with arms crossed and resting on the hilt of a great sword. Strength and might characterize the sculpture, but the face has an indefinable quality of tenderness.

The second figure, Truth, holds out to the world a mighty book of knowledge inscribed with the Latin version of her name, *Veritas*. Mr. Allward chose Truth and Justice for the memorial because he hoped that "through truth and justice war might cease and peace descend over all the earth".

Years later, in 1969, the two sculptures were uncovered in the warehouse, examined and photographed. During the long period of storage, Justice had lost the hilt of the sword. Eleanor Milne, in charge of sculpture work in the Parliament Buildings' Centre Block, modelled a new one in clay and had it cast in bronze to fit the statue. After surveying suitable sites for the two figures, the Public Works' Advisory Committee on Art proposed the entrance to the Supreme Court. The Chief Justice and the National Capital Commission concurred, and Truth and Justice finally found themselves in a dignified setting.

ARCTIC EXPLORATION EXPANDS

At the height of summer, more than 1,000 men were working for the petroleum industries in the Arctic islands, while the gas and oil exploration program spread into new areas. Six major operators, including Panarctic Oils Ltd., the partnership between the Federal Government and a consortium of Canadian firms, were active in the archipelago. Panarctic has four rigs at work in various locations.

WATER TRANSPORT

Exploration companies mobilized a fleet of ships to move supplies to the Arctic islands in preparation for an expanded exploration program this winter.

Panarctic chartered two ships to carry supplies needed for a new drilling program on Ellesmere Island. One, the *Chesley Crosbie*, sailed from Montreal with 2,200 tons of freight for the main supply base at Eureka, 600 miles from the North Pole. The Canadian tanker *Edward Simard* carried 1 million gallons of fuel.

King Resources Company of Denver, Colorado, which has 4.5 acres farmed out from Panarctic, chartered two ships and shared a third to transport supplies needed in a new seven-well drilling program in the archipelago. King's base camp is on Bathurst Island. King Resources controls a total of 36 million acres of oil and gas permits in the islands.

The Danish-owned *Thora Dan*, a veteran of Canadian Arctic waters, moved 5,000 tons of cargo from Britain to Resolute Bay, on Cornwallis Island, the site of a new supply depot for the Cardwell division of Bow Valley/Acres/Santa Fe, a Canadian-U.S. consortium. The supply depot will service three or more major operators as well as drilling companies, caterers and other companies. Supplies include casing, mud, cement, bits, dry food, lumber, steel, welding supplies and wirelines.

Most of the supplies will be stored in an inflatable building.

AIRPORT PROGRAM

Many of the difficulties experienced by exploration and development companies in moving men and supplies into the isolated regions of the Arctic islands will be overcome soon under a new \$5,616,000-Remote Airports Program being undertaken by the Department of Indian Affairs and Northern Development. Some ten airfields will be built in the Yukon and Northwest Territories over the next nine years, of which six will be located in the eastern Arctic.

Construction of the first of these six fields has begun at Pangnirtung on Cumberland Sound, Baffin Island. The Pangnirtung field is expected to be fully completed by September 1971.

Other fields will be located at Chesterfield Inlet, Pond Inlet, Whale Cove, Igloolik and Cape Dorset, all in the Baffin Island-Hudson Bay region.

TIME TO DIGEST

Honesty caused a problem at a restaurant in Bournemouth, England recently when a wartime customer returned from Canada to settle a 27-year-old debt.

In 1943 an officer, identified only as Squadron Leader Jamieson, lunched at the restaurant and afterward realized he didn't have his wallet with him. He promised to return and pay, and the waiter accepted his word as an officer and a gentleman.

It wasn't until this year that he was able to go back and, after a meal of roast lamb, he summoned headwaiter Victor Hempel and paid ten shillings and sixpence for the meal, added ten shillings for the lunch in 1943, and left.

Restaurant manager Mr. Martin Laws said: "Vic was shattered. Obviously the lunch couldn't have cost ten shillings all those years ago. Maybe he was giving us a tip at the same time."

ACCOUNTING PROBLEM

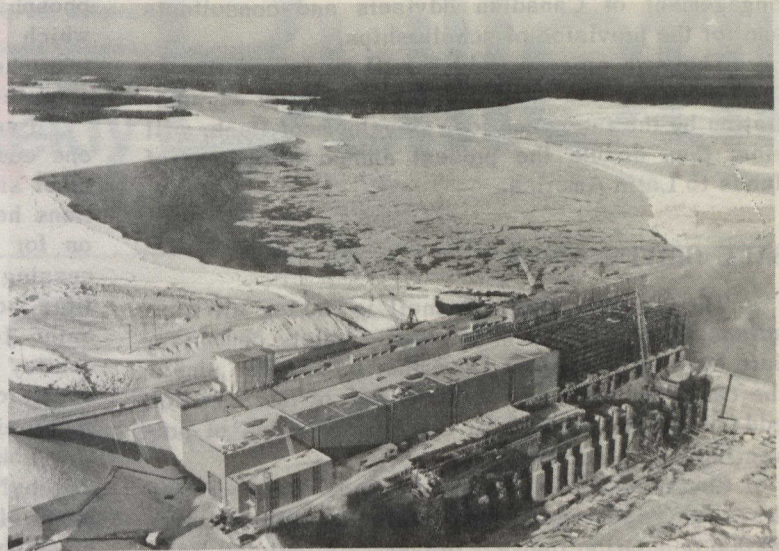
He also gave the restaurant a problem. Mr. Laws said: "We are run by the Council and have a very strict accounting system. No money can be paid in unless it is tallied to a bill number. Now we have to search through our records for 1943, find the bad debt and enter the money in that year's accounts...."

NELSON RIVER DEVELOPMENT

In northern Manitoba, 500 miles from the load centres in the south, Manitoba Hydro is working to harness the Nelson, one of the great rivers of North America. The Nelson, with its tributaries, drains an area of 440,000 square miles, including the 9,400-square-mile expanse of Lake Winnipeg, before emptying into Hudson Bay.

The first phase of the Nelson River scheme includes construction of a 1,200,000-kilowatt station at Kettle Rapids and possibly a control structure at the outlet of Lake Winnipeg to improve flow regulation. Originally, Manitoba Hydro also planned to divert much of the Churchill River (the other one...) into the Nelson some miles upstream from Kettle Rapids. However, the present Manitoba Government has postponed action on this plan and is studying alternatives. Ultimate plans envisaged as many as ten or more generating stations spaced out along the lower section of the river between Lake Winnipeg and Hudson Bay, with a total installed capacity approaching 7 million kilowatts.

The Kettle Rapids station has been under construction since 1966, with the first four of a total of



The Kettle Rapids station under construction.

12 units scheduled to go on line in 1971. The earth and rockfill main dam and its concrete intake structure and spillway will reach 5,200 feet across the river valley and create a net head of about 100 feet. The construction site is two miles from the Hudson Bay railway, northern Manitoba's only land link with the outside world. (One of a series.)

RAILWAY PROBLEMS PROBED

The Ministry of Transport, in association with the government of Manitoba, the Metropolitan Corporation of Greater Winnipeg, Canadian National Railways and CP Rail, plan to investigate new approaches and solutions to problems created by railway lines in urban areas by means of a pilot study of the rail problems of Metropolitan Winnipeg.

Blighted areas near rail-yards, traffic hold-ups at grade-crossings and problems caused by trucks seeking access to downtown terminal facilities are examples of the railway problems found in many Canadian cities. These and other situations will be studied in Winnipeg with a view to defining the future role of railways in Canadian cities.

The study will examine the existing Winnipeg network of track in relation to the present and future needs of the railways, conflicts with the city's road system, property values and the effect of railways on the environment. Possible joint use of track, yards and terminals will be investigated and a number of feasible alternative system plans will be developed. The costs and potential benefits will be considered and a recommended Metropolitan Railway Plan will be drawn up to reflect the urban and transportation requirements of Metropolitan Winnipeg.

The first step in the organization of Winnipeg's railways will be acquisition and removal of the Midland Railway by the City of Winnipeg, assisted by a grant and loans from Central Mortgage and Housing Corporation.

TECHNICAL AID TO LATIN AMERICA

Officials of the Canadian International Development Agency are at present visiting Colombia and Peru to initiate preliminary plans for the development of a bilateral technical-assistance program to these countries – the first step in an expanded assistance program for Latin America announced several months ago in the Canadian Government's review of foreign policy.

The first CIDA team was in Colombia from November 15 to 27; the second is visiting Peru from November 27 to December 11. Additional teams are expected to make similar visits to Brazil and Central America early next year.

Team members are examining areas where Canadian technical capabilities may be effectively used, particularly in agriculture, forestry and fisheries, education and community-development needs.

Technical-assistance funds will be made available to assist in the development of human skills and talents. It is expected they will be used for the engagement of Canadian advisers and consultants and for the provision of scholarships.

The new program, which will be in addition to the funds provided each year since 1964 for administration by the Inter-American Development Bank, will more than double the present annual allocation of funds to Latin America.

SAFE DRIVING WEEK

The Canada Safety Council is asking all Canadians to support its major traffic safety campaign, Safe Driving Week, from December 1 to 7. The aim of the campaign is to advise every one of the 9-million odd drivers in Canada on the various ways of preventing traffic accidents.

Governor-General Roland Michener is supporting the campaign by signing certificates for cities of over 40,000 population that get through Safe Driving Week without a fatal accident. Support will come from Prime Minister Trudeau as well.

Drivers may show their interest by driving with lights on during the day while travelling undivided highways, a practice which makes their vehicles more visible.

During previous Safe Driving Weeks, the number of traffic deaths has been consistently lower than during other weeks at this time of year.

MENTAL HEALTH IN 1969

Admissions of psychiatric inpatients increased by 5 per cent to 92,885 during 1969.

Half these patients were admitted for the first time. Among the males the median age was 37 and the most common diagnosis was alcoholism. Among the females the median age was 36, the most common diagnosis neurosis.

Of 92,075 inpatients discharged in 1969, 56 per cent had stayed less than one month, 31 per cent one to four months, and 6 per cent four to 12 months.

PUTTING POLLUTION IN ITS PLACE

(Continued from P. 2)

scenic values were lost and Canadian-American relations deteriorated rapidly. Washington got in touch with Ottawa. Ottawa got in touch with the Consolidated Mining and Smelting Company. COMINCO decided to change its ways in a hurry.

Changing its ways meant recycling. So COMINCO decided to convert its smelter gases into something useful. This turned out to be fertilizers. Fertilizers have been a major export commodity from Western Canada into the U.S. Pacific Northwest ever since.

So, instead of being bad neighbours, we became good neighbours. COMINCO kept its sulphur dioxide inside its factory fence. It neutralized its fumes with phosphate rock and it made synthetic fertilizers which were helpful to plant life. Technology triumphed and industry triumphed. Behaving like good neighbours we were all better off in the end.

I can list a dozen other cases where industry in one country has caused a pollution problem on the other side of the line. Some of these problem situations have been cleared up but others have dragged on for years. I am thinking, for instance, of processing plants in Northern Maine. Their starch and fibre-laden effluents have been drifting down the Saint John for a long time. They have helped to destroy the salmon runs in New Brunswick. We don't seem to have any fences worth talking about and good neighbourliness has suffered as a result.

Lake Erie, on the map, is half a Canadian lake and half an American lake. But neither country is proud of it at the present time. It has become a big, sluggish sump for the industrial heartland of North America. The waters of Lake Erie have been deteriorating for years. Some people say they have passed the point of no return....

Recycling makes a great difference. It makes a great difference if it is done *within* the factory fence. Big industries can locate beside small ones without upsetting their local environment. People can live near factories and small communities can survive side by side with big ones.

So it is with nations. Blow things off into the air or dump them into local waters and there is bound to be a fuss. Recycle your effluents and the complaints will cease. Your virtues, like ours, will be more obvious. We are bound to be better neighbours as a result of precautions of this kind.

In the early 1950s, I came across a little book entitled *Good Fences make Good Neighbours*. It was written by Joseph Barber, a well-known U.S. administrator and author. He made a good point. It was that straight talk was better than grumbling, clear headedness was better than fuzzy thinking.

I am all for straight talk. I am all for clear thinking. I want Canada to keep its pollutants at home and I want the United States to keep its industrial pollutants to itself. Recycling within the factory fence is a good principle. It is a sound principle for industries and it is a sound principle for nations to follow. I hope you agree.

Essentially, my message is this. We must keep our man-made pollutants under lock and key. We must keep poisons inside the factory fence. It's good advice from an economic point of view. Its essential from an ecological point of view. Biologically speaking, we don't have any other alternative. Our environment is too precious. And the "quality of life", the world over, is too important for us to fail humanity by failing to put pollution in its place.