

Sanitation and pollution problems and measures to solve these problems

By Sir Geoffrey Newman-Morris

"Man's activities continually degrade the quality of the atmosphere surrounding him. As his life style becomes more sophisticated he increases the volume and toxicity of health threatening materials which he adds to the air he breathes. In this country (Australia), the most ubiquitous contributor to atmospheric pollution is that virtually indispensable member of most Australian families, the motor car." This quotation came from the book, "Australian Health Services" published in 1972 and written by Dr. J.C.H. Dewdney, School of Health Administration, University of New South Wales.

In marked contrast is the remark made by Mr. Michael Somare, Chief Minister of Papua New Guinea and quoted in the Melbourne Age of the 20th March, 1973, "In all the seven hundred languages of our country we have never needed words for slums, unemployment, air pollution." *It seems obvious that pollution is to a large extent an ill associated with civilisation.*

AIR POLLUTION

Let me summarise briefly those common forms of air pollution that are becoming more and more obvious in Australia.

1. As already mentioned, the motor car with the problems of carbonmonoxide, hydrocarbons and lead.
2. Industrial processes involving the combustion of coal and oil.
3. Other contributors to atmospheric pollution include those from aerial spraying of pesticides and

fertilisers and various forms of waste disposal.

The results of air pollution are difficult to quantify. Great effort has gone into estimating how much certain control measures would cost, sometimes with a view to delaying or in avoidance of their implementation. However, it is obvious that the community as a result of air pollution suffers from impaired health, shortened life span and the reduction of "quality of life".

Other fields of pollution which must be studied are:

a) Water pollution. Water provides a very convenient medium for the disposal of waste products. Many of our activities may lead to water being unfit for any other purposes.

Well known examples are mercury and detergents.

b) Noise control. Noise pollution, I suppose, is best defined as "unwanted sound". Its ill-effects are two-fold.

1. Actual damage of body structures are especially the delicate structures in the ear.

2. An interference with the activities of every day life causing loss of sleep, accidents and lowering of efficiency.

In the second part of this paper I want to touch on the *Governmental approach in Australia* to dealing with the problems of environment and pollution.

The catch phrase now is "*Total Environmental Control*".

In 1968 the Senate of the Commonwealth Parliament resolved to set up a select Committee to enquire into, and report upon, air pollution in Australia including the causes and effects, methods of prevention and control and matters incidentally too.

The *final recommendation* of this body states that "Consideration be given to the co-ordination of studies of the total environment pollution problem, that is, air pollution, water pollution, soil pollution and noise pollution. As a result of this there was brought into being an Australian Environment Council composed of Commonwealth and State Ministers with specific responsibilities for Environmental matters but it was not until, April 1972 that the first meeting of this body was held and a Standing Committee composed of one official representing each member of this Council was formed. Subsequently, a three man part-time environmental advisory committee was formed to act in an advisory and consultative capacity to the Minister.

A standing Committee of the National Health and Medical Research Council has been formed with the task to "consider all aspects of environmental contaminants that may affect health, and to report on measures to alleviate these and in particular to consider a uniform approach to any problem".

In a press statement dated January 5th, 1973 the Minister of Health (Dr. Douglas Everingham) says, "The National Health and Medical Research Council has recommended standards aimed at controlling air pollution from:—

1. Motor vehicles and
2. Industry.

With regard to motor exhaust emissions the new recommendations are similar to those adopted by the United States Government for introduction to that country in 1973 providing for controls over nitrogen oxides, carbon monoxide and hydrocarbons. Motor vehicle manufacturers would need to produce control mechanisms on all cars manufactured after December 31st, 1975."

The Attorney General, Senator Murphy has ordered the establishment of a group within his department aimed at devising a National Environmental Legal code. With the present Labor Government a new Ministerial Department has been formed to deal with Environmental and conservation matters with a medical man, Dr. Moss Cass as the Minister.

Finally I would like to deal with a few individual aspects of pollution that have attracted my attention.

1. **The fishing problem.** (I am a fisherman) The Victorian State Government have brought down a regulation limiting the level of mercury in edible fish to 0.5%.

It has been found by a study of the mercury content of sharks in Bass Strait in the open seas that by and large the mercury content of their flesh exceeds this arbitrary level.

This has caused considerable distress in the fishing industry. Many of the fishermen owned expensive boats rigged only for shark fishing and not convertible, except at great cost, to fishing for other deep sea fish.

I wonder whether there has actually been an increase in mercury content or whether there has just been an increased awareness and an improved technique of estimating mercury levels.

I am well aware of the tragic occurrence of Minamata disease resulting from mercury poisoning from pollution in the waters of Minamata Bay.

I quote: "Minamata disease, which causes death, paralysis, loss of hearing, reduced vision, speech unpediments and perception disorders, is a direct result of mercury wastes being dumped in public waterways.

The first known victims of modern industrial pollution have won a four-year court battle in Japan for compensation from a chemical company which polluted water with industrial wastes.

The case has important ramifications because it is the first in which a cause and effect relationship in industrial pollution in Japan has been admitted."

Be that as it may, no case has been reported in Australia, as far as I know, of a human being suffering from any degree of mercury poisoning as a result of repeated ingestion of fish.

2. **The aluminium can problem.** Recently, in my role as Chairman of the Australian Red Cross Society, I was present at a function in South Australia where one of the leading aluminium producing firms, at a public function, offered the sum of ½ a cent to Red Cross for each aluminium drink can that was handed in for recycling. It was estimated that this would produce for the Red Cross in South Australia five thousand dollars a year.

The opening was associated with some publicity from the Brewery and samples of the aluminium cans were given out filled with the product of the Brewery,

because of the occasion of this announcement was the fact that the Brewery had moved from using steel cans to aluminium cans in the packaging of their product.

The Governor of South Australia, Sir Mark Oliphant, that well known Scientist with a great interest in the environment, was asked to declare open this program, and he said to me afterwards that he did this with some concern. It was claimed that perhaps (with publicity) 80 to 85% of the aluminium drink cans could be reclaimed for recycling, but the average experience prior to this was that if 50% reclamation took place this was satisfactory.

Sir Mark said he had wondered what had happened to the other 50% as aluminium was completely non-biodegradable whereas steel did rust away.

3. The beach problem. I have got a small holiday cottage on the shores of Port Phillip Bay in Melbourne. There is not as much passenger sea transport as there used to be but it is quite a busy harbour and along the beaches every day in the flotsam and jetsam there are many plastic bags of various shapes and sizes which are I believe completely non-biodegradable.

I suppose that this does not intervene much into the field of pollution but it certainly has a very marked impact on the environment.

Beaches all over the World seem to be a natural repository for waste products either left there by humans on land or cast overboard by ships at sea.

4. The D.D.T. Problem. Here obviously one of the factors that should be borne in mind is the relative benefit to mankind of the use of this pesticide with its very vast power for the reduction of disease,

the improvement of health and the improvement of the quality of life in relationship to the fact that it is a toxic drug which I gather is cumulative.

The overall philosophy of this study of course is momentous. The whole problem of overpopulation and of family planning comes into this and eventually the maintenance of a proper balance between the birthrate and the deathrate.

5. The toilet paper problem. Is this real? Our children at school have been taught to suggest to their parents they do not use coloured toilet paper because apparently the dyes used are non-biodegradable so that paper does not emulsify in the sewerage disposal areas.

6. Noise pollution. The Rolling Stones at Koo-yong.

In conclusion let me repeat what I think is a reasonable definition of a sound human environment. "It is that social situation which promotes the prevention and alleviation of human suffering and which effectively eliminates, dirt, disease and dissemination".

I hope in many countries that there is an active approach to this problem. There is no doubt that it has attracted world wide interest especially since the great conference in Stockholm last year.

I am constantly being made aware that in the Red Cross organisation in which I have a particular interest that most of the Red Cross Societies through out the World are now urging the International Red Cross to take an active part in the struggle against increasing pollution and in the fight to maintain a proper quality of life.

The control of environmental pollution in Taiwan Area, Republic of China

It is my pleasure to present a brief introduction on the control of environmental pollution in Taiwan area, Republic of China to this Convention.

In accordance with the rapid development of

industry in Taiwan recent years, the problem of environmental pollutions has become a great concern not only of the related governmental authorities, but also of the general public. Although the need of