

open scientific facilities dedicated to environmental research. Over the past two decades these institutions have focused on, among other things, the tracking of greenhouse gases, providing researchers with access to supercomputers for global research, and the development of innovative pollution control mechanisms. The Research Institute for Innovative Technology of the Earth (RITE) and the National Institute of Environmental Studies are two such centres.

The National Institute of Environmental Studies, which was established in 1974, has facilities to test the effect of pollutants on plants and animals. More specifically, they are engaged in research that monitors and attempts to improve the capability of plants to absorb, and thereby help control the emissions of, NO_x and SO_x .

In addition to the advances made in reducing NO_x and SO_x emissions, Japan has also been able to make significant progress reducing CO_2 emissions, lead concentrations in gasoline, and pollution from the steel industry. Technological innovation which facilitated these reductions have, in part, been stimulated by the goal of increasing production efficiency and by the availability of low cost financing.

SO_x Emissions

Japan has been able to achieve low levels of SO_x emissions largely due to a combination of technological innovation and sound energy policy. For example, since Japan imports almost of all of its natural resources it has been able, and willing, to select crude oil and coal that do not have a high sulphur (S) content. Similarly, encouraging the use of natural gas has contributed to the reduction in S emissions.

Furthermore, import policy and technological innovation have been complimented by market incentives to industry. Pollution taxes, proportional to SO_2 emissions, were instituted in the 1970's. This provided industry with an incentive to install desulphurisation equipment. As a result, SO_2 emissions have been decreasing steadily since 1970, and were largely controlled by 1975.

NO_x Emissions

As in the case of SO_x controls, stringent environmental standards for NO_x emissions (0.25g/kg.) were implemented in the 1970's. Complimenting regulatory action was the invention of Exhaust Gas Recycling (EGR), which provided a