Lead has been added to gasoline (petrol) since the 1920s as an anti-knocking agent, to improve fuel performance and reduce wear on vehicle engines. In developed countries, concern about the health impacts of lead (see map 14) emitted by vehicles grew during the 1970s. Thus, together with the fact that lead interferes with the pollution control devices in automobiles, spurred the introduction of lead-free gasoline.

Blood lead levels of children have been falling dramatically in countries that phased out leaded gasoline, with an average 7.8 percent reduction per year. Using unleaded gasoline makes economic sense: countries can save five to 10 times the conversion cost in health and economic benefits between US$ 110 and US$ 319 billion every year.

Many poorer countries, however, have yet to make the switch because of the costs involved in modernizing refineries.

Eliminating lead from gasoline is the single most important action to reduce children’s exposure to lead and is a prerequisite for additional air-pollution control measures: unleaded gasoline is needed for using catalytic converters, which reduce emissions of nitrogen oxides and other harmful air pollutants.

Brain gain

Percentage of children who would gain 1.95 or more IQ points over a lifetime if not exposed to lead 2000 by WHO sub-region

1970 to 1993: total amount of lead added to gasoline dropped 75%, from over 375 000 tonnes to under 100 000 tonnes.