**Biomagnification and Bioaccumulation Case Studies**

**DDT**

Dichlorodiphenyltrichloroethan

An organochlorine insecticide

Very non-polar

Similar in structure to oestrogen and therefore has feminizing effect on animals

In birds it weakens egg shells so that the parents break them as they try to incubate the eggs

The birds are highest risk are those close to the top of the food chain

DDT was one of the main subjects of Rachel Carson’s 1962 book “Silent Spring” which helped to kick start modern environmentalism

It was banned in most developed countries in the 1970s and 1980s

It is now know to cause birth defects, damage to the nervous system and cancers

It is still use today in many poorer countries to controlling sect problems? Why

**Minimata Disease**

Caused by the heavy metal mercury

First documented in Minimata, Japan in 1957

A chemical factory was releasing methyl mercury into Minimata Bay between 1932 and 1968

This bioaccumulated in shellfish and was biomagnified in fish

Both were the staple diet of local human populations

Mercury caused severe damage to the nervous system and Minimata Disease was first identified due to the high incidence of cerebral palsy in children in the area.