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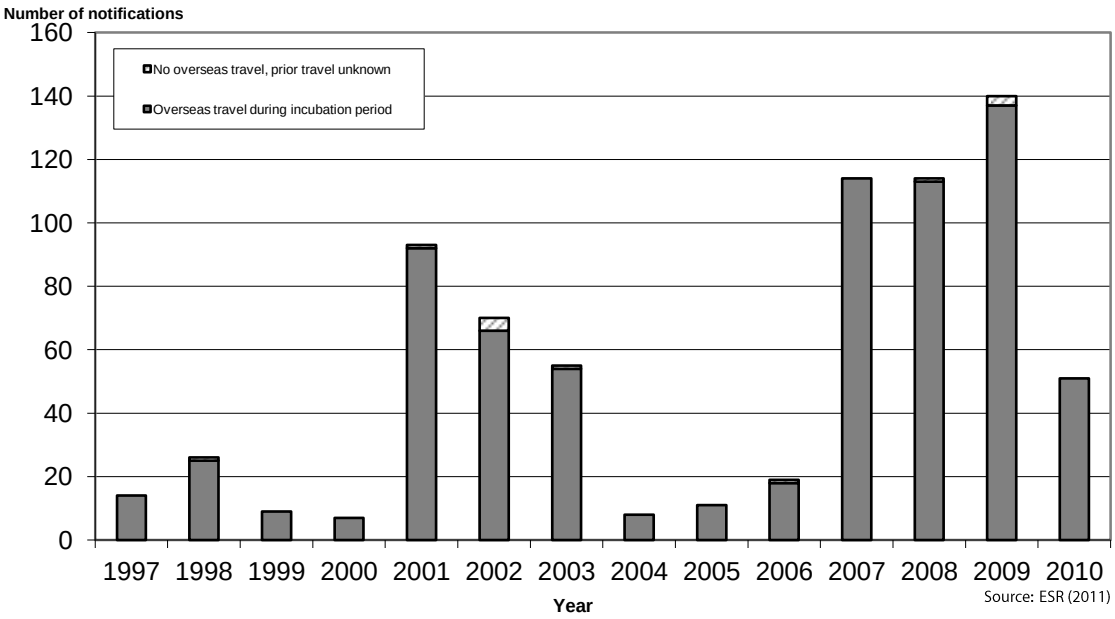
VECTOR-BORNE DISEASE NOTIFICATIONS IN NEW ZEALAND

Vector-borne disease is an important environmental health issue, and is inherently linked to the environment. Vector-borne zoonotic diseases, which can pass from animals to humans, involve four agents: the human victim, the pathogen, the vector and the (wildlife) reservoir (Ostfeld et al 2006). For example, West Nile fever is caused by the West Nile virus pathogen, transmitted by mosquito vector from a reservoir of wild birds (Heymann 2004; Stürchler 2006). Pathogens causing particular diseases can be carried by different vector species and be hosted by different wildlife reservoirs.

Pathogens coexist parasitically with wildlife reservoirs, and vectors act as obliging modes of transport helping pathogen dispersal (Holt and Dobson 2006). The opportunity for human–wildlife interaction continues to increase, as human environmental activity expands and encroaches into native forest and previously undeveloped land. Increased human exposure to wildlife results in the opportunistic emergence of new human diseases and a greater likelihood of transmission of known disease pathogens (Moore 2007; Goldberg et al 2008). As a result, newly emerging and pre-existing vector-borne diseases will continue to be an important environmental health issue.

Figure 1:
NUMBER OF NOTIFICATIONS OF DENGUE FEVER IN NEW ZEALAND, BY EXPOSURE RISK FACTOR AND YEAR, 1997 - 2010



Source: ESR (2011)

NUMBER OF DENGUE FEVER NOTIFICATIONS

There was a marked increase in dengue fever notifications from 2006 (19 cases) to 2009 (140 cases) (Figure 1). In addition, three cases of dengue fever in 2009 had no prior overseas travel, or it was not known whether there was prior travel. There have been outbreaks of dengue fever in a number of Pacific Islands and in Queensland, Australia during this period. A decrease in notifications of around 60% from 2009 occurred in 2010, with 51 notifications, all of which were known to be overseas during the incubation period.

References

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