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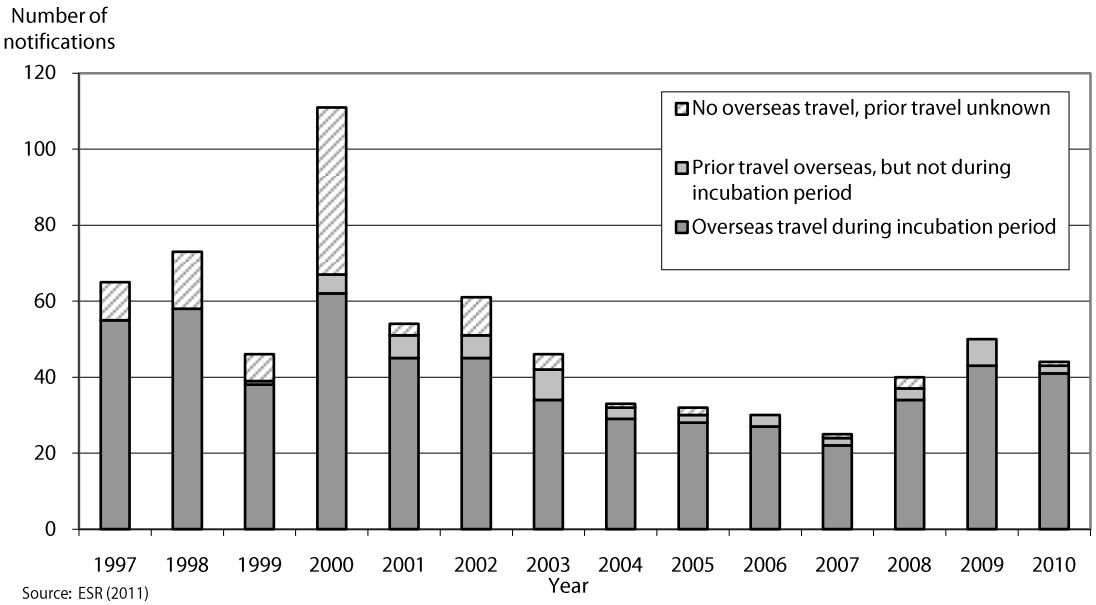
VECTOR-BORNE DISEASE NOTIFICATIONS IN NEW ZEALAND

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 MALARIA IN NEW ZEALAND, BY EXPOSURE RISK FACTOR AND YEAR, 1997 - 2010



Source: ESR (2011)

NUMBER OF MALARIA NOTIFICATIONS

Figure 1 shows the number of malaria notifications fell continuously from a peak of 111 cases in 2000, to 25 cases in 2007. In contrast, the number of malaria notifications increased during 2008 (40 cases) and 2009 (50 cases). 2010 numbers show a potential return to the trend of prior to 2008 and 2009.

References

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