

## The spread over time and space

Countries infected by H5N1 virus from 2003 to 2004



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## Countries infected by H5N1 virus from 2003 to october 2006



The disadvantage of this country-by-country map is that it makes it seem as if an entire national territory is infected when infectious outbreaks are often scattered. The advantage is that it shows the rapid geographic spread of the HPAI H5N1 virus.

### **Migrating birds, vectors or victims?**

Recent studies showed that in some enzootic regions certain aquatic migratory birds, ducks in particular, were carriers of the H5N1 virus without presenting symptoms. The same virus was found on dead birds far from the closest outbreak of HPAI. However, it is certain that commercial exchanges of domesticated birds and their products (eggs, chicks, meat, feathers, and droppings) play a considerable role in the diffusion of the virus in the short and long term. Additional work is needed to identify the degree to which wild migratory and sedentary birds contribute to transmission compared to the movement of domesticated birds and poultry products linked to human activity.