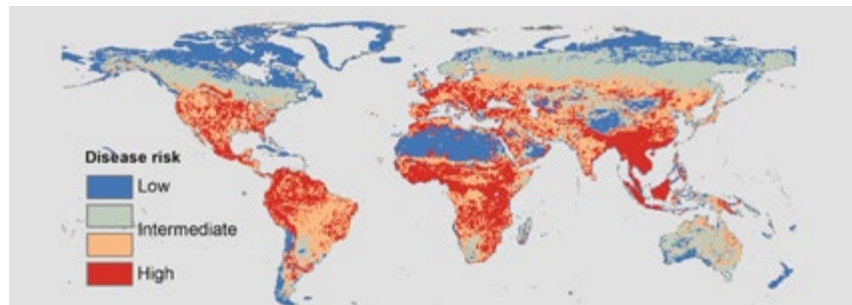


Biodiversity in animals affects the risk of a pandemic

The variation in mammal species and population sizes in a particular area jointly determine the risk of transmission of diseases such as COVID-19 from animals to humans. This is shown by a study of more than 4000 mammal species around the world.



If the likelihood of pandemics is to be reduced, it is important to know where the risk of the transfer of pathogens from wild animals to humans is greatest. Researchers led by the Wageningen Wildlife Ecology & Conservation chair group obtained a picture of the different species and numbers of individuals found together in an area. They then took these mammal communities and calculated the extent to which a pathogen would infect multiple hosts. That allowed them to predict the risk of disease. The results predict a high risk of disease in tropical areas, where biodiversity is greatest. But areas of risk are also found in more temperate zones

such as parts of Europe, North America and Eurasia.

The scientists also calculated how the risk of disease could change over the period to 2035. Even minor changes in the relative presence of various species influence the risk of disease. 'A few more of one species and a few less of another can be all it takes,' says wildlife ecologist Fred de Boer. 'Given that a quarter of all mammal species are in danger of extinction, it is important to understand how this affects the risk of transmissible diseases,' says Yingying Wang, who obtained her PhD for this research.

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