



VectorNet – A European network for medical and veterinary entomology

Main author: Marieta Braks (National Institute for Public Health and the Environment)

Co-authors: Olivier Briet, Ewelina Czwieniczek

INTRODUCTION

Public and animal health authorities face many challenges in the surveillance and control of vector-borne diseases (VBDs). Those challenges are principally due to the multitude of interactions between vertebrate hosts, pathogens and vectors in continuously changing environments. The value of spatial information for vectors was first recognised by the European Centre for Disease Prevention and Control (ECDC), which funded the Tigermaps project that produced maps and projections on the distribution of the tiger mosquito *Aedes albopictus* in Europe (2008-2009)[1]. Subsequently, the European Network for Arthropod Vector Surveillance for Human Public Health (Vbornet, 2010-2013) was established, to assist ECDC in its preparation activities for VBDs by producing pan-European maps of the distribution of major vector species. In the subsequent VectorNet project (2014-2018), a joint initiative of ECDC and the European Food Safety Authority (EFSA), the established network was extended to include veterinary entomologists and veterinarians working in the field of vector-borne diseases in Europe and countries surrounding the Mediterranean Basin.

METHODOLOGY

VectorNet facilitates risk assessments of VBD threats through the collection, mapping and sharing of distribution data for ticks, mosquitoes, sand flies and biting midges that are vectors of pathogens of importance to animal and/or human health in Europe through the VectorNet community. The current project supplements this community that was built up over the preceding years with a more structured Entomological Network that is harmonised with other networks within the European public and animal health agencies.

RESULTS

One of the biggest successes of VectorNet is the creation of a sense of connection between medical and veterinary entomologists and professionals interested in vector-borne diseases in the public and veterinary health sector in a large VectorNet community. The maps of the most important vectors that transmit diseases to humans and animals, available online for health professionals and policy advisors and anybody who is interested, represent one of the

highly tangible achievements of VectorNet. The vector distribution maps are freely available online.

DISCUSSION

VectorNet celebrated its 10th anniversary in 2020 and the organisation is also becoming increasingly professional the more it develops. The main successes of VectorNet are that it has become a long-lasting, active network of entomologists and that experts from many European countries are actively sharing their data, knowledge and resources in connection with vectors.