

# ONE Health: Environmental health

To better comprehend the One health approach, last but not least, we have to consider the environmental health.

## Climate change & Neglected Tropical Diseases

Climate change is expected to impact across every domain of society, including health. The majority of the world's population is susceptible to **pathological, infectious disease whose life cycles are sensitive to environmental factors** across different physical phases including air, water and soil. Nearly all so-called **neglected**

**tropical diseases (NTDs)** fall into this category, meaning that future geographic patterns of transmission of dozens of infections are likely to be affected by climate change over the short (seasonal), medium (annual) and long (decadal) term.



It is anticipated that multiple NTD's will have changes in their transmission period and geographic range.

**Climatic factors such as temperatures, rainfall and changing weather patterns can influence disease epidemiology.**

Rising temperatures have an impact on

- vector reproduction,
- metabolism and survival,
- pathogen replication and
- vector and host distribution,

while rainfall can determine the suitability of habitats for vectors and hosts through increased breeding sites.

## Leishmaniasis: Europe and USA no longer safe from NTD's



Changing precipitation and warming temperatures have **improved habitat suitability** in previously temperate areas, allowing for autochthonous transmission of

leishmaniasis and other NTD's in parts of central Europe and the USA.

Leishmaniasis is gaining a foothold in Europe and USA with increasing number of cases every year as well in humans as in dogs.

Wealthy countries long believed itself safe from NTD's. Those old assumptions have now evaporated.

## Increased burden for poor communities

**Climate change could result in :**

- **continuous generations of sandflies,**
- **increased risk of parasite transmission and**
- **possible year-round transmission in high-risk areas.**

Low-income countries often lack the resources and infrastructure to adequately respond to regionalized climate change resulting in public health challenges such as an amplified burden of NTD's.

Therefore these shifts in prevalence, incidence, range and intensity of NTD's may be felt hardest in those poor communities already disproportionately impacted by them.



This project received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 815622.