Reviewing Taxa:
Scoping Research Trends of the Effects of Climate Change on Infectious Disease

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Introduction:

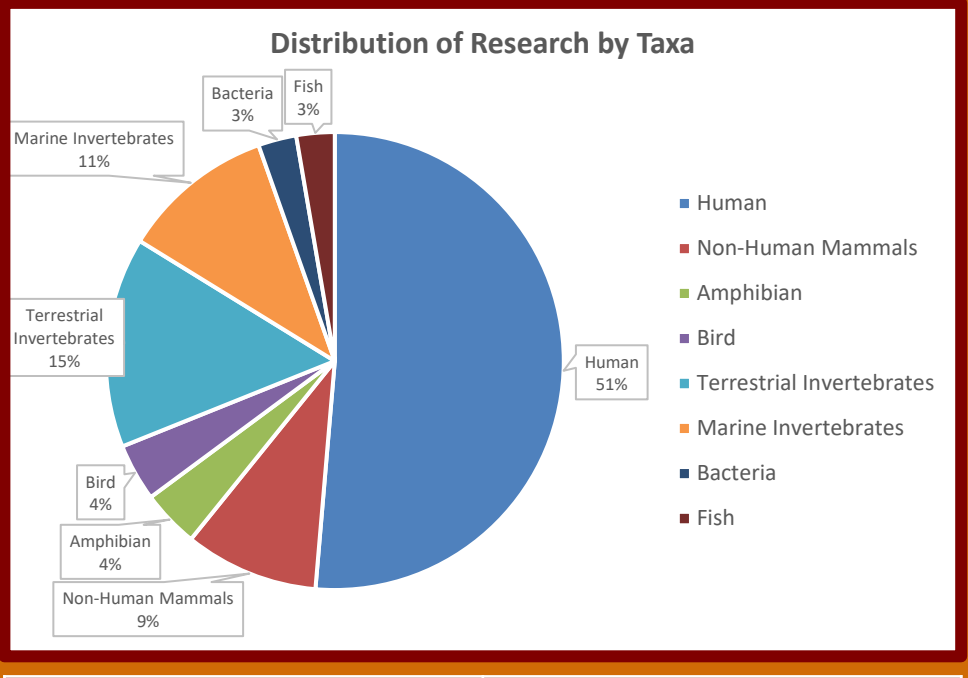
- Changes in global temperature commonly associated with human interference with the climate system in recent decades has vast implications on risks to human and natural systems.
- This is most evident in infectious diseases as shifting climate is likely to lengthen transmission periods of disease and alter their geographic range.
- We worked to determine the trends of empirical research on climate changes effects on infectious disease through scoping research from the entirety of 2018, to determine potential gaps in the research and how they may be expanded upon.

Methods:

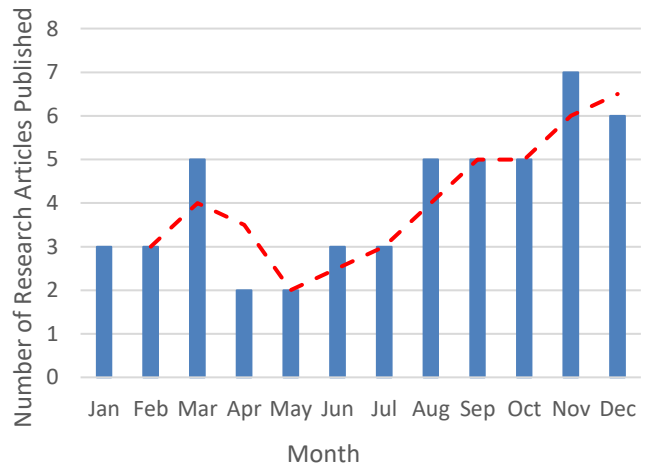
- Articles were collected from Web of Science (Clarivate™) literary reservoir utilizing a keyword search to single out topics of interest.
- Each article was screened by at least two researchers and then confirmed for inclusion/exclusion based on our scoping criteria.
- After which publications where fully read and reviewed, with descriptive data being extracted by researchers.
- Through this process a total of 1,045 articles from 2018 where reviewed, with a total of 75 manuscripts being confirmed for inclusion in the final results.

Results:

- Throughout the 75 papers included in the final scoping study, a total of 24 unique "Taxa of Interest" were researched. Then further grouped together and broken down into 8 different categories based on the shared traits between the individual species being studied.
- Humans make up the majority of current research on the effects of climate change on infectious disease. Comprising just over half of all research on the subject.
- Terrestrial Invertebrates comprise the second most common taxa researched, which could be attributed to the high number of insect vectors that were classified in that group.
- Bacteria and Fish make up the least amount of research the within the field.
- Research publication seems to be most prevalent in late fall to early winter months.
- With lulls in research most common throughout the summer months.



Categories	Taxa Per Category
Human	Human
Non-Human Mammals	Bat, Cattle, Reindeer, Ruminants, Saiga Antelope,
Amphibian	Amphiban
Bird	Bird
Terrestrial Invertebrates	Flies, Mosquito, Tick, Triatomine sp., Tsetse Fly
Marine Invertebrates	American Lobster, Amphipods, Coral, Marine Invertebrates, Snail, Zooplankton
Bacteria	Bacteria
Fish	Cod, Fish



Discussion:

- Based on the current research trends for 2018, it appears a majority research on the study of climate change on infectious disease is human centric. Followed by research published on terrestrial invertebrates.
- These two taxa being the most commonly researched implies that current research into climate changes effects on disease and disease transmission is primarily focused on maintaining human health and mapping the spread of disease vectors.
- However, this increased research focus on human and terrestrial invertebrates as the primary taxa of interest in the effects of climate change on disease has left other taxa neglected. As both bacteria and fish see the least amount of research in this topic. Followed closely by amphibians and birds.
- Ignoring other taxa that may reflect additional health risks or demonstrate the impact of disease on natural systems throughout the globe.