BfR
German Federal Institute for Risk Assessment

The BfR:
Science in the service of humanity

09/03/2026, WOHC side event: Connecting European One Health initiatives

Martin Richter
Head of Unit – Diagnostics, Pathogen Characterisation and Food Borne Parasites
Department of Biological Safety

The German Federal Institute for Risk Assessement

>1.300 employees
Food and Agriculture
14 national reference laboratories

Biological safety







Ge… Protection of Laboratory Animals (Bf3R)





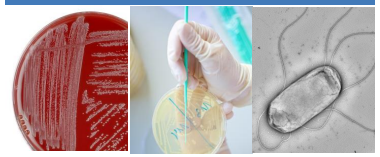
Safety of consumer products

Quelle: Fotolia, C Taylor

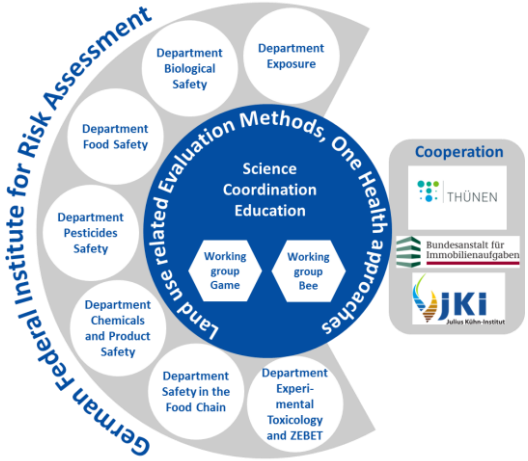
International FoodNetCenter of the University of Bonn

Land use related evaluation methods and One Health - Center (LaBeOH)

Biological safety



Monitoring of human pathogens, prevalence and epidemiology













Journal of Health Monitoring

Journal of Health Monitoring · 2023 8(S3)
DOI 10.25646/11403
Robert Koch Institute, Berlin

Jessica Dietrich[1], Jens-Andre Hammerl[2], Annette Johne[2], Oliver Kappenstein[1], Christopher Loeffler[1], Karsten Nöckler[2], Bettina Rosner[3], Astrid Spielmeyer[1], Istvan Szabo[2], Martin H. Richter[2]

[1] German Federal Institute for Risk Assessment
Department for Safety in the Food Chain
Berlin, Germany
[2] German Federal Institute for Risk Assessment
Department for Biological Safety
Berlin, Germany
[3] Robert Koch Institute
Department of Infectious Disease Epidemiology
Berlin, Germany

Impact of climate change on foodborne infections and intoxications

Abstract

Background: Temperature, precipitation, and humidity are important factors that can influence the spread, reproduction, and survival of pathogens. Climate change affects these factors, resulting in higher air and water temperatures, increased precipitation, or water scarcity. Climate change may thus have an increasing impact on many infectious diseases.

Methods: The present review considers those foodborne pathogens and toxins in animal and plant foods that are most relevant in Germany, on the basis of a selective literature review: the bacterial pathogens of the genera *Salmonella*, *Campylobacter* and *Vibrio*, parasites of the genera *Cryptosporidium* and *Giardia*, and marine biotoxins.

Results: As climate change continues to progress, all infections and intoxications discussed here can be expected to increase in Germany.

Conclusions: The expected increase in foodborne infections and intoxications presents a growing public health risk in Germany.

This is part of a series of articles that constitute the German Status Report on Climate Change and Health 2023.

CAMPYLOBACTER · SALMONELLA · VIBRIO · CRYPTOSPORIDIUM · GIARDIA · MARINE BIOTOXINS · ONE HEALTH

The number of infections with germs such as *Salmonella* or *Campylobacter* correlates positively with maximum temperature and precipitation amounts.

Environmentally associated germs such as waterborne *Vibrio* are increasingly finding their way into food, especially seafood, and causing an increase in infections.

Rising temperatures and humidity favour fitness and possibly virulence of parasites such as *Cryptosporidium* and *Giardia*.

Ocean warming is leading to increased growth of toxin-producing algae, whose toxins can enter the food chain via marine animals.

Thank you!

German Federal Institute for Risk Assessment

Martin.Richter@bfr.bund.de

German Federal Institute for Risk Assessment
bfr.bund.de/en

All rights reserved.

BfR | Identifying Risks – Protecting Health

Consumer health protection to go

BfR2GO – the BfR Science Magazine

bfr.bund.de/en/science_magazine_bfr2go.html

Follow us

- @bfrde | @bfren | @Bf3R_centre
- @bfrde
- youtube.com/@bfr_bund
- social.bund.de/@bfr
- linkedin.com/company/bundesinstitut-f-r-risikobewertung
- soundcloud.com/risikobewertung