

**NRW Forschungskolleg**  
**“One Health and Urban Transformation –**  
**identifying risks and developing sustainable solutions”**

**Background:**

The NRW Forschungskolleg ‘One Health and Urban Transformation’ is a transdisciplinary graduate school jointly operated by the Center for Development Research (ZEF) in cooperation with other institutions of Bonn University, the United Nations University – Institute for Environment and Human Security (UNU-EHS) and the International Centre for Sustainable Development of the Bonn Rhein-Sieg University of Applied Science (HBRS). The graduate school is funded by the Ministry of Culture and Science of the German State of North-Rhine-Westphalia, aiming to foster transdisciplinary, action-oriented research on the complex challenges of our time.

**Research Context:**

One Health is understood as the interactions between agricultural (soil, plant and animal), human and environmental health, an approach exploring innovative solutions across disciplinary boundaries to achieve optimal health for all. Human development and coinciding urban transformations are influencing these interactions and their overarching and underlying systems (agricultural, health, socio-economic, demographic, political, ecological), resulting in potential health risks, reduced quality of life and life-years lost. Further, urban transformations are embedded in local and international systems and their mutual interaction influences One Health outcomes. Identifying, exploring, quantifying, balancing and mitigating such risks are central components of the One Health approach. The graduate school adopts such a One Health perspective, focusing on six cross-cutting themes: Water, Antimicrobial Resistance, Infectious Diseases, Society, Sustainability, Institutions and Governance, within the context of urban transformations and consequent changing urban systems. The wide range of possible research topics aims at answering the overarching research question:

*How can One Health contribute to sustainable health improvements and food security?*

This research question is to be addressed within one of the two research clusters: (1) Governance and (2) Food Systems. Within the governance cluster focus lies on the operationalization and implementation of One Health, urban planning and health policy. One dissertation will be explicitly focused on a comparative governance analysis between all four study areas. The focus of the food systems cluster is on understanding One Health interactions, including its underlying mechanisms with regard to diets, food security, environmental degradation, food safety, etc. In both clusters a set of the cross-cutting themes will be addressed. Research topics within these clusters include (but are not restricted to) zoonotic diseases, vector-borne diseases, food-borne diseases, water-related diseases, disease outbreaks (emergency response), water management, disaster risk, climate change adaptation, vulnerable populations, on-site management of feces,

sewage and sludge, antimicrobial resistance, green and blue infrastructure, pollution (water, soil, air), and the migration & health nexus. Both pathogenic and salutogenic approaches are welcome. Applicants are encouraged to refer to the research priorities of the individual institutions when selecting research topics. Please note that supervision of PhD topics can only be provided for topics linked to the expertise of the respective hosting institution.

Doctoral candidates from various disciplinary backgrounds (e.g. public health, agronomy, epidemiology, political science, economics, sociology, biology, ecology, geography, anthropology, microbiology, medicine, etc.) will conduct research in one of the research clusters in one of the four metropolitan regions (Ahmedabad, India; Accra, Ghana; São Paulo, Brazil; Rhein-Ruhr Metropolis, Germany). Each doctoral research study will be situated in one country while including a comparative element to the other regions. The focused research questions of individual candidates should be embedded in the One Health perspective and understood in the wider interdisciplinary context of socio-economic, socio-ecological and socio-political systems and their transformations.

#### **Graduate School Structure:**

Each successful candidate will be employed by one of the cooperating partner institutions or receive a scholarship for 3 years starting from January 1, 2021. It covers a Junior Research position and a budget for travel and research. In the first year, the doctoral students will be enrolled in the Bonn International Graduate School of Development Research (BIGS-DR) at ZEF (<https://www.zef.de/doctoral-program.html>) and additionally attend specific One Health courses. During this period students will develop their research proposal and plan under the guidance of their tutor and doctoral supervisor. In the following year the candidates will conduct field research in one of the four regions. During the final year, the doctoral students will write up their thesis at ZEF, HRBS or UNU-EHS in Bonn, Germany. Different faculties of Bonn University (agricultural faculty, mathematical-natural-science faculty, medical faculty) will award the degree.

#### **Applications:**

Qualified applicants can be from any country and from various disciplinary backgrounds. They should hold an excellent master's or equivalent degree in agricultural science, development studies, economics, geography, hydrology, microbiology, political science, public health, sociology or other related disciplines, and have a profound interest in working in an interdisciplinary and action-oriented way. Fluency in English is mandatory for all applicants; additionally candidates researching in Brazil or Germany require fluency in Portuguese or German, respectively. Experience in health-related research and working in interdisciplinary research teams are assets.

#### **Your application should consist of:**

- Motivation letter (**1 page**)
- A tabular curriculum vitae (CV)
- Two recommendation letters from professors and/or supervisors

- Academic degree documents (PDF)
- Short PhD research proposal (**1 page**) addressing the following four guiding questions
  - What are the main challenges to be addressed in the research theme you would like to focus on?
  - What methods will be utilized to address the selected research theme?
  - What are your key skills and competences for addressing One Health and the selected research theme?
  - How can expected research results be implemented to support practical applications?
- Abstract of your Master / Diploma thesis (in English language)
- Certified proficiency in English (German, Portuguese)
- One Health Application Form – downloadable here:

[https://www.zef.de/fileadmin/webfiles/downloads/projects/onehealth/Application/Applications\\_Form\\_2020.pdf](https://www.zef.de/fileadmin/webfiles/downloads/projects/onehealth/Application/Applications_Form_2020.pdf)

Please assemble all required application documents into one PDF-file (maximum size: 20 MB) and send it in one single e-mail to [falkenberg@uni-bonn.de](mailto:falkenberg@uni-bonn.de). The name of the PDF-file and the subject of the e-mail should contain your full name (e.g. "John Doe"). For help merging the documents in the given order and compressing your documents to this size, please see the following guides: a [PDFMerge application](#) and a [wiki how-to-guide](#) on reducing PDF file sizes.

All documents are to be submitted in English. **Closing date for applications is 2<sup>nd</sup> October 2020.** Only shortlisted candidates will be contacted.

#### **Two-Tier Application Process:**

Shortlisted candidates will be contacted and are required to submit a **three-page concept note**. The concept note should outline the proposed research topic and place it into the wider One Health context. It should include a clear problem statement and hypothesis, and highlight the specific approaches and methods planned to address the proposed research topic. Additionally, the practical applications of the research results should be outlined.

Candidates with successful concept notes will be virtually interviewed, with part of the interview conducted in the respective academic language of the study region (English, German, Portuguese).

#### **For further information please contact:**

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[www.zef.de/onehealth.html](http://www.zef.de/onehealth.html)

### One Health PhD Application Form:

First name(s):		Family name(s):	
Nationality:		Gender:	Year of birth:
E-mail:		Phone number(s):	
Physical address:		Languages:	
Bachelor degree in:	Grade:	Master degree in:	Grade:
Name and country of University (BSc/Ba):		Name and country of University (MSc):	
Starting Date and Date of Award:		Starting Date and Date of Award:	
Title of Thesis:		Title of Thesis:	
Proposed title of ONE HEALTH PhD thesis:			
Research country:		Cross-cutting themes:	
Relevant discipline(s):			

Please mark those boxes that your research will address (multiple selection is encouraged)

Research Country	Research Cluster	Cross-Cutting Themes					
		Water	Antimicrobial Resistance	Infectious Diseases	Society	Sustainability	Governance and Institutions
Brazil	Governance Cluster						
	Food Systems Cluster						
Germany	Governance Cluster						
	Food Systems Cluster						
Ghana	Governance Cluster						
	Food Systems Cluster						
India	Governance Cluster						
	Food Systems Cluster						