

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

**Background:**

The NRW Fortschrittskolleg ‘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 the Bonn University, the United Nations University – Institute for Environment and Human Security (UNU-EHS) and the International Centre for Sustainable Development of Bonn Rhein-Sieg University of Applied Science (HBRS). The graduate school is funded under the ‘Fortschritt NRW’ initiative of the state government 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 (animal and plant), 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, 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 five cross-cutting themes: Water, Food, Hygiene & Public Health, Health Systems and Society, within the context of urban transformations and consequent changing urban systems. The wide range of possible research topics aims at answering three overarching questions that form the thematic clusters of the research:

- (1) How to ensure health-sensitive food systems?
- (2) How to develop One Health governance systems?
- (3) How to promote health through management of water systems?

Research topics to be addressed within these three clusters include (but are not restricted to) tuberculosis, vector-borne diseases (e.g. dengue, malaria, yellow fever), water-related diseases, flood risk, water management, disaster risk, disease outbreaks (emergency response), climate change adaptation, ecosystem-based disaster risk reduction, on-site management of feces, sewage and sludge, antimicrobial resistance, green and blue infrastructure, and pollution (water, soil, air). Applicants are encouraged to refer to the research priorities of the individual institutions when selecting research

topics (<http://www.zef.de/2603.html>). 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, economics, sociology, biology, ecology, geography, microbiology, medicine, etc.) will conduct research on one of the three overarching questions in one of the four metropolitan regions (Ahmedabad, India; Accra, Ghana; São Paulo, Brazil; Ruhr Metropolis, Germany). Each doctoral research study will be situated in one country yet 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 (ZEF, HBRS) or receive a scholarship from UNU-EHS for 3 years starting from June 1, 2017. 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 (<http://www.zef.de/index.php?id=2187>) 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 candidate 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 and 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 interdisciplinary and action-oriented. 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 consists 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 addressing the following four guiding questions (1 page)
  - What are the main challenges to be addressed in the research theme you would like to focus on?
  - Which disciplines and methods are needed 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:  
[http://www.zef.de/uploads/media/Application\\_Form.pdf](http://www.zef.de/uploads/media/Application_Form.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 December 23, 2016**. Only shortlisted candidates will be contacted.

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

Shortlisted candidates will be contacted and are required to submit a **five-page concept note**. The concept note should outline the proposed research topic and place it into the wider One Health context. It should highlight the specific approaches and methods planned to address the proposed research topic and refer to possible practical applications of the research results.

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:**

Timo Falkenberg  
 Coordinator 'One Health' Graduate School  
 Center for Development Research  
 Walter-Flex-Str. 3  
 53113 Bonn

phone: (+49) 0228 – 73 – 4634  
 email : [Falkenberg@uni-bonn.de](mailto:Falkenberg@uni-bonn.de)