

# Twenty PhD Positions Available in the Bill & Melinda Gates Foundation Funded Project on Pro-poor Sanitation Innovations

**Project title: Stimulating local innovation on sanitation for the urban poor in sub-Saharan Africa and South-East Asia**

## Background

UNESCO-IHE, The Netherlands, and the following partners: Makerere University in Uganda, KNUST in Ghana, AIT in Thailand, 2iE in Burkina Faso, ITB in Indonesia, UCT in South Africa, UFMG in Brasil, and Univalle in Colombia were awarded a US\$8 million grant from the Bill and Melinda Gates Foundation. The grant will be used to finance a 5-year capacity building and research project to stimulate local innovation on sanitation for the urban poor in sub-Saharan Africa and South-East Asia. To support the research component of the project 20 PhD positions for junior researchers are funded by the project.

## Project description

The project entitled 'Stimulating local innovation on sanitation for the urban poor in sub-Saharan Africa and South-East Asia' has two principal objectives: (i) to stimulate local innovation on sanitation for the urban poor through research, and (ii) to strengthen the sanitation sector in developing countries through education and training. The direct beneficiaries of the project are individuals from developing countries and academic institutions involved in the project that are instrumental in stimulating local innovation on sanitation for the ultimate recipients of the project outcomes - the urban poor in sub-Saharan Africa and South-East Asia.

The project will: (i) increase the number of adequately trained sanitation professionals in developing countries, (ii) provide research possibilities, education and training for the new generation of 'all-round' sanitary engineers, (iii) make (post-graduate) education in sanitary engineering more accessible to individuals from developing countries, and (iv) further strengthen the pro-poor sanitation component at the academic institutions involved.

The 5-year project (2011-2016) will be jointly executed by UNESCO-IHE (principal grantee) and 8 above listed partners from developing countries in sub-Saharan Africa, South-East Asia and South America (sub-grantees), supported by several external sub-contracting parties and individuals.

The project contains 7 components: (i) the post-doctoral program; (ii) the doctoral program and PhD scholarships; (iii) masters education and MSc scholarships; (iv) the new online Masters in Sanitary Engineering and scholarships; (v) two new online training courses; (vi) the new Professional Diploma and scholarships; and (vii) online courses and scholarships, and it targets more than 600 direct individual beneficiaries.

The research part of the project is clustered around 5 thematic areas/packages on pro-urban poor sanitation, each to be coordinated by one partner (the Research Package Leader - RPL): (i) smart sanitation provision for slums and informal settlements (Makerere University); (ii) emergency sanitation following natural and anthropological disasters (UNESCO-IHE); (iii) resource-oriented decentralized sanitation (AIT); (iv) low-cost wastewater collection and treatment (2iE); and (v) faecal sludge management (KNUST).

Outcomes of the project can be summarized as: (i) the research capacity and facilities of the partner institutions will be enhanced; (ii) an international academic network on pro-poor sanitation will be established; (iii) practical applications of innovation in sanitation for the urban poor will be put in place; (iv) a proposal for the business spin-offs will be developed; (v) human resource capacity will be increased in the sanitation sector; and (vi) there will be increased access of professionals from developing countries to education and training.

### PhD position information

- The positions are based at the premises of the 8 project partners.
- The PhD fellow will report to the professor in charge at the host academic institution.
- The PhD position is funded on a fellowship arrangement in accordance with standard practice applied at host institutions;
- Expected starting date is early 2012;
- Duration of the assignment is maximum 4 years;
- The PhD fellow will have high degree of involvement in execution of the research package assigned to the host institution under this project.
- The PhD fellow will be awarded the doctoral degree by the host institution.
- The list of 5 research themes and number of PhD positions per partner and research theme is shown in table below.

| HOST         | RESEARCH THEME  |  |  |  |                          | TOTAL     |
|--------------|---|--|--|--|--------------------------|-----------|
|              | Smart sanitation provision for slums & informal settlements | Emergency sanitation following natural & anthropological disasters | Resource-oriented decentralized sanitation | Low-cost wastewater collection & treatment | Faecal sludge management |           |
| UNESCO-IHE   |   | ■ ■  | ■  |  |                          | 3         |
| AIT          |   |  | ■ ■  |  | ■                        | 3         |
| KNUST        | ■   |  |  |  | ■ ■                      | 3         |
| MU           | ■ ■   |  |  |  | ■                        | 3         |
| ZiE          |   |  |  | ■ ■  |                          | 2         |
| UCT          | ■ ■   |  |  |  |                          | 2         |
| ITB          |   | ■  |  | ■  |                          | 2         |
| UFMG         |   |  | ■  | ■  |                          | 2         |
| <b>TOTAL</b> | <b>5</b>  | <b>3</b>   | <b>4</b>                                   | <b>4</b>                                   | <b>4</b>                 | <b>20</b> |

### Position requirements

- Candidates should be young researchers from developing country, preferably from sub-Saharan Africa and South-East Asia, however researchers from other developing regions are encouraged to apply;
- Candidates must have a Master degree in a discipline relevant to the research themes, e.g. sanitary engineering, civil engineering, environmental sciences, environmental engineering, biochemistry, biotechnology etc.
- Applicants must demonstrate a strong interest and experience in conducting and managing experimental and interdisciplinary sanitation-related research;
- Applicants with pronounced affinity for laboratory and/or practical research and fieldwork will be preferred;
- The applicant must be proficient in English and have developed communication and writing skills;
- Applicants for the position in Brasil must originate from Portuguese-speaking African countries (PALOP).

### How to apply?

Applications, including curriculum vitae, the names and contact details of two referees, and a motivation letter, should be sent by email to a responsible professor at host institution by **23 December 2011**. Please put the subject heading "PhD application to BMGF project" and clearly indicate in the body of the mail preferred thematic areas and host institutions (assuming that preferred host institutions are engaged in preferred thematic area). Short-listed candidates will be contacted in the first week of January 2012. For further information please contact the relevant professor (see contact details below).

### UNESCO-IHE INSTITUTE FOR WATER EDUCATION

Damir Brdjanovic, PhD  
 Professor  
 PO Box 3015  
 2601 DA Delft  
 The Netherlands  
 Email: d.brdjanovic@unesco-ihe.org

### INSTITUT TEKNOLOGI BANDUNG

Tjandra Setiadi, PhD

Professor

Labtek X Building  
Jl. Ganesha No. 10  
Bandung, Indonesia  
Email: tjandra@che.itb.ac.id

#### **UNIVERSITY OF CAPE TOWN**

Neil Armitage, PhD  
Associate Professor  
Private bag X3  
Rondebosch 7701  
South Africa  
Email: Neil.Armitage@uct.ac.za

#### **ASIAN INSTITUTE OF TECHNOLOGY**

Thammarat Koottatep, PhD  
Associate Professor  
PO Box 4, klong Luang  
Pathumthani 12120, Thailand  
Email: thamarat@ait.ac.th

#### **THE KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**

Esi Awuah, PhD  
Associate Professor  
Department of Civil Engineering  
Private mail bag  
University Post Office  
KNUST – Kumasi, Ghana  
Email: esiawuahrt@yahoo.com

#### **INTERNATIONAL INSTITUTE OF WATER AND ENVIRONMENTAL ENGINEERING**

Amadou Hama Maiga, PhD  
Professor  
01 BP 594  
Ouagadougou 01  
Burkina Faso  
Email: amadou.hama.maiga@2ie-edu.org

#### **MAKERERE UNIVERSITY**

Frank Kansiime, PhD  
Professor  
College of Agricultural and Environmental Sciences  
PO Box 7062  
Kampala, Uganda  
Email: fkansiime@muenr.mak.ac.ug or cniwagaba@tech.mak.ac.ug

#### **FEDERAL UNIVERSITY OF MINAS GERAIS**

Marcos von Sperling, PhD  
Professor  
Av. Antonio Carlos, 6.627 – Campus Pampulha  
Escola de Engenharia – Bloco 1 – Sala 4622  
31270-901 – Belo Horizonte – Minas Gerais – Brasil  
Email: marcos@desa.ufmg.br