Revitalising Informal Settlements and their Environments (RISE)

PhD: Monash Sustainable Development Institute

Title: Adaptation, localisation and performance of nature-based wastewater treatment systems in urban informal settlements

Location: Clayton campus

Employment Type: Full-time

Duration: 3 years and 6-months fixed-term appointment

Remuneration: The successful applicant will receive $29,500 p.a. as a full-time stipend (pro-rata).

The PhD Position
A competitive scholarship is available to undertake full-time PhD research as part of the Revitalising Informal Settlements and their Environments (RISE) Program based at the Monash Sustainable Development Institute in Melbourne (Clayton and Caulfield campuses).

The aim of this PhD project is to study the performance of the RISE sanitation interventions and the local adaptations required for application of a water-sensitive cities approach in urban informal settlements. The PhD project will make a significant and novel contribution to understanding the factors that affect the performance of nature-based wastewater treatment systems in a global context, with particular emphasis on the application and implementation of such approaches in urban informal settlements, in which a billion of the world’s poorest people currently reside.

The PhD student will work alongside other RISE academics and practitioners as the program designs and builds these interventions in communities in Indonesia and Fiji. The student will be supervised by a team comprised of water-sensitive cities, water quality, implementation and transdisciplinary specialists.

The research student will also be expected to adopt a social science lens to study how the RISE approach to co-design and community custodianship of built infrastructure contributes to implementability, performance and longevity of these systems.

Applicants should have a Bachelor degree with honours in a relevant science or engineering discipline (or equivalent qualification).

Essential: Experience, background and/or familiarity with wastewater, water-sensitive design and/or wetland treatment systems and associated water quality, chemistry and hydraulic performance monitoring.

Desirable: Experience or familiarity with international development and/or social science methods in the context of sustainability.
Revitalising Informal Settlements and their Environments (RISE) Program

RISE is a AU$60 million interdisciplinary action research program involving a randomised control trial (RCT) of water-sensitive, nature-based sanitation, drainage and water supply upgrades in urban informal settlements in Makassar, Indonesia and Suva, Fiji. Working with communities, governments, local leaders and partner institutions, RISE is co-designing location-specific solutions that integrate green infrastructure, such as constructed wetlands, to strengthen the whole-of-life water and sanitation cycle. The success of RISE will be measured by the health and wellbeing of residents – particularly children under five years of age – and the ecological diversity of the surrounding environment.

RISE is a consortium of 27 world-leading academic, government, industry and NGO institutions, funded by the Wellcome Trust, the Australian Department of Foreign Affairs and Trade (DFAT), the New Zealand Ministry of Foreign Affairs and Trade (MFAT) and the Monash Sustainable Development Institute (MSDI). The RISE team includes more than 170 researchers and practitioners from a range of disciplines and backgrounds, including ecology, biology, medicine, engineering, urban design, science, community development, and social science disciplines.

RISE is based at MSDI and is led by Professor Rebekah Brown and an interdisciplinary team from Monash Art, Design and Architecture and the Faculties of Science, Engineering and Medicine, along with world-leading researchers from Stanford University and Emory University. Other external partner organisations include University of California Berkeley, Cambridge University, the Asian Development Bank, Southeast Water, Fiji National University and Hasanuddin University in Makassar.

Data are collected by local field teams in Fiji and Indonesia, but the PhD student may get the opportunity to conduct on-site fieldwork in Suva and Makassar if travel restrictions allow.

**Supervision**
The supervisory team includes Professor Annette Bos (MSDI), Dr Brett Davis (RISE/MSDI), Professor Peter Breen (Department of Architecture) and Kerrie Burge (RISE/MSDI).

**Eligibility**
This opportunity is open to domestic (Australian and New Zealand citizens/permanent residents). Ideally the successful applicant will commence no later than April 2022.

The successful applicant will need to meet the criteria for PhD admission at Monash University and demonstrate excellent research capability. Details of eligibility requirements, including English-language proficiency skills, are available at [https://www.monash.edu/it/research/graduate-research/graduate-research-programs](https://www.monash.edu/it/research/graduate-research/graduate-research-programs)

Scholarship holders must be domestic and enrolled full-time, on-campus. Applicants who already hold a PhD will not be considered.

Note: Applicants who do not meet the above requirements will not be considered.

**Enquiries**
Please contact Dr Brett Davis (brett.davis@monash.edu) for further information on the project.

**Submit an Expression of Interest (EOI)**
Interested candidates that meet the requirements must submit an Expression of Interest (EOI) form and include the following:
• A cover letter that includes a brief statement of the applicant’s suitability and their motivation to apply (one page maximum)
• A research proposal (one page maximum)
• A curriculum vitae, including a list of any published works, academic awards and prizes, conference presentations and relevant work experience
• A full statement of academic record, supported by scanned copies of relevant certified documentation (including transcripts)
• A copy of the applicant’s honours or master thesis
• Evidence of English language proficiency (if appropriate)
• Contact details of two academic referees.

The EOI form can be found [here](#).

For any enquiries relating to your eligibility or application, please contact msdi-gr-enquiries@monash.edu.