

## Tshwane University of Technology

### Light-touch Baseline Narrative Reporting Document (November 2010)

In lieu of the full baseline data collection exercise taking place, please complete the following reporting document. One overarching document for the whole consortium is preferred. However, if it is easier, we are happy to also accept one form per consortium partner.

While the document predominately uses a narrative reporting format, we have also included space for inclusion of any quantitative data that may be available. Please try to include as much quantitative data as possible.

In addition, the final part of the form requests publication and grants data relating to co-applicants (named personnel within the original bid document). These are vital for successful review of the progress of the African Institutions Initiative and we request that you provide as much data here as possible.

Any queries regarding the forms should be sent to: [r.e.hanlin@open.ac.uk](mailto:r.e.hanlin@open.ac.uk)

Please endeavour to return the completed form(s) to us by **30<sup>th</sup> November 2010**.

#### **PART A: Capacity baseline**

**1. What was the situation with respect to scientific/ research related human resources capacity (research active staff, post-grads) within your relevant field of activity in your African partner institutions at baseline (September 2009)?**

##### **Narrative report:**

During 2004 TUT proud itself with the announcement of 15 NRF (National Research Foundation) rated researchers; today, at the beginning of 2010, the total number of rated researchers counts 34. TUT is proud of the growth.

The main objective of the NRF rating process is to benchmark performance in human resource development for knowledge production. The rating of researchers therefore provides an indication of the standing of the researchers and the quality of South African science in the international arena. Growth at TUT symbolise the progress in establishing a research culture. The major challenges facing TUT in becoming a recognised institution for research and innovation are summarised below:

- Becoming a fully functional university of technology, including the full chain of R&I activities, while maintaining career education
- Addressing human capital development, including the improvement of staff qualifications and skills development
- Increasing full-time postgraduate students and post-doctoral fellows  
Increasing income generation through R&I
- Building a holistic, coherent R&I culture
- Managing R&I on a multi-campus setting
- Increasing R&I output.
- Enhancing TUT's contribution to its internal and external communities through knowledge transfer and commercialization of research.

##### **Any additional supporting quantitative data:**

**2. What relevant training courses/ programmes (for post-graduate teaching in particular, but also professional development) were available within the partner institutions at baseline (September 2009)? Please distinguish between courses/ programmes available in Northern**

**institutions and African institutions if possible.**

**Narrative report:**

Masters in Technology (MTech) and Doctorates in Technology courses are offered in various disciplines including Environmental Health, Water and Earth Sciences, Civil Engineering, Chemistry Mostly by full research projects and dissertation/. Thesis. However there are courses that are usually given by Research and Innovation on the issues related to research. i.e. Writing articles for publication, Report writing and proposal writing. However there is a limitation on the number of people to attend such courses and courses are made for the staff and not for the students. ICT also provide the staff with information on the Microsoft 2007 excel, word and powerpoint tactics and dissertation writing as well as using end note. Students are usually not covered in those training hence the number of staff to attend those courses are usually limited.

**Any additional supporting quantitative data:**

**3. What was the situation with respect to research management, governance and administration structures within your relevant field of activity in your African partner institutions at baseline (September 2009)?**

**Narrative report:**

TUT's vision is to be a quality-driven university of technology at the cutting edge of innovation. One of the strategic goals in achieving this vision is to enhance the development of capacity, knowledge, the economy and society, through focused engagement, research and innovation (R&I).

As a new university of technology the focus is on the development of R&I capacity in strategically selected areas of strength (niche areas) that are relevant to national and regional needs, priorities and opportunities. Staff development, increasing the number of postgraduate students and postdoctoral fellows, strengthening leadership and platforms for R&I, building an enabling environment and institutional culture for R&I, facilitating knowledge transfer and commercialization and increasing R&I funding and output are some of the priorities. TUT is continuously seeking to improve the systems and incentives to support these priorities. All our R&I endeavors are supported and sustained through collaborative networks and partnerships.

R&I is regarded as an integral part of the activities of all academic staff. Not only does it ensure authoritative instruction with a career focus, but it also enhances the quality of teaching, contributes to the development of technology and makes the University's expertise available to the broader community. By its very nature, R&I need to comply with international standards to be able to make a credible contribution to South African society. In exploring new avenues of R&I excellence, TUT is committed to the highest quality. For this purpose, we benchmark our efforts against those of other leading institutions, both locally and internationally.

As many of the higher education institutions in the country TUT also faced many challenges over the past five years due to the changes in the higher education landscape. Yet, we managed to embrace these challenges and over this period managed to, name a few, attract excellent R&I expertise, substantially increase the number of postgraduate graduations, almost double the production of subsidized research output units, receive recognition for R&I and technology transfer in various ways and to engage in a number of strategic partnerships that enhanced our internal research efforts. (Attach policy on post graduate students)

**Any additional supporting quantitative data:**

**4. What was the situation with respect to physical and ICT infrastructure within your relevant field of activity in your African partner institutions at baseline (September 2009)? Where any additional facilities based within Northern partner institutions regularly used by African partner institutions at baseline?**

ICT facilities are classified into two categories. The first category is ICT provision for ICT based teaching for learning programmes, such as engineering, information technology and office

management technology. The second is ICT provision for student support and enhancement of learning, allowing students to access the Internet and Microsoft Office.

Regarding the first category, the computer laboratories in the various departments are effectively supported by the Computer Support Services. There are service level agreements and operational level agreements between the Computer Services Support unit and departments. However, the numbers of students are sometimes higher than the facilities available. Therefore, a system that will ensure delivery and monitoring of equitable student access to computers across the campus need to be developed.

Regarding the second category, the physical infrastructure usually budgeted for and there is commitment from the leadership of the institution to improve technological support for the core functions of TUT. However, the IT support across the institution is sometimes inadequate and uneven in relation to the equipment available. Given the critical importance of IT in teaching and learning, there is usually a challenge to access journals on line due to the limitation within the institution.

Any additional supporting quantitative data:

## PART B: Publication and grants situation

Please provide the following as additional annexes to this report:

- A list of co-applicants' publications (for the last 10 years). Data should relate to both African and Northern institutions.

### Articles

- Majuru B; Hunter PR and Jagals P. 2010. *Health impact of small-community water supply reliability*. International Journal of Hygiene and Environmental Health. Accepted for publication Ref. No.: IJHEH-12434
- Geere JL, Hunter PR and Jagals P. 2010. *Domestic water carrying and its implications for health: a review and mixed methods pilot study in Limpopo Province, South Africa*. Environmental Health, 9:52 doi:10.1186/1476-069X-9-52.
- Geere JL, Mokoena MM, Jagals P, Poland F and Hartley S. 2010. *How do children perceive health to be affected by domestic water carrying? Qualitative findings from a mixed methods study in rural South Africa*. Child: care, health and development. doi:10.1111/j.1365-2214.2010.01098.x.

### Conferences/ congresses

#### International

- Jagals P, Mokoena MM and Barnard TG. 2009. *Improved access to small drinking water supply systems and its effect on the probability of bacterial infection posed by water in household drinking water containers*. 15<sup>th</sup> International Symposium on Health-Related Water Microbiology, May 31 - June 5, Naxos, Greece;
- Jagals P and Hunter PR. 2009. *Reducing diarrhoeal disease in small rural developing country communities: The value of water supply interventions*. 15<sup>th</sup> International Symposium on Health-Related Water Microbiology, May 31 - June 5, Naxos, Greece;
- Pond K and Jagals P. 2008. *Economic assessment of small community drinking water supply interventions*. 5<sup>th</sup> meeting of the International Network for Small Community Water Supply Management (presented by the WHO) - 15-21 November, Kampala, Uganda;

#### National

- Geere J, Hunter PR, **Jagals P**. 2010. *Domestic water carrying and its implications for health in Limpopo Province, South Africa; a mixed methods pilot study*. Water Institute of Southern Africa, Biennial Conference and Exhibition. April. ICC Durban.
- Majuru B and **Jagals P**. 2010. *The effect of new small community water supply services on health*. Water Institute of Southern Africa, Biennial Conference and Exhibition. April. ICC Durban.
- Mokoena MM and **Jagals P**. 2010. *The effect of water-supply service delivery on the risk of infection posed by water in household containers*. Water Institute of Southern Africa, Biennial Conference and Exhibition. April. ICC Durban.
- Van Wyk R and **Jagals P**. 2010. *Latrine-sanitation in small-community rural households*. Water Institute of Southern Africa, Biennial Conference and Exhibition. April. ICC Durban.
- **Jagals P**. 2009. *Health and Social Impacts of water at community level*. Round Table panellist for Water, A Looming Crisis? Presented by the Centre for Development and Enterprise. November 2. Johannesburg.
- **Jagals P**. 2009. *The livelihood use of the treated effluents and its potential impacts on human health*. Small Wastewater Treatment Systems Conference, Water Institute of Southern Africa. February 19-20. Umhlanga Rocks Durban.
- **Mudau LS**. 2010 *Analysis of free basic water implementation strategy in South Africa: Review studies done in Three African countries*. Public Health Association of South Africa Conference. East London Convention Centre.

- A list of co-applicants' grants (if possible for the last 10 years, minimum requirement is 5 years). Data should relate to both African and Northern institutions.

Details of grants will be provided as part of the mapping report.