

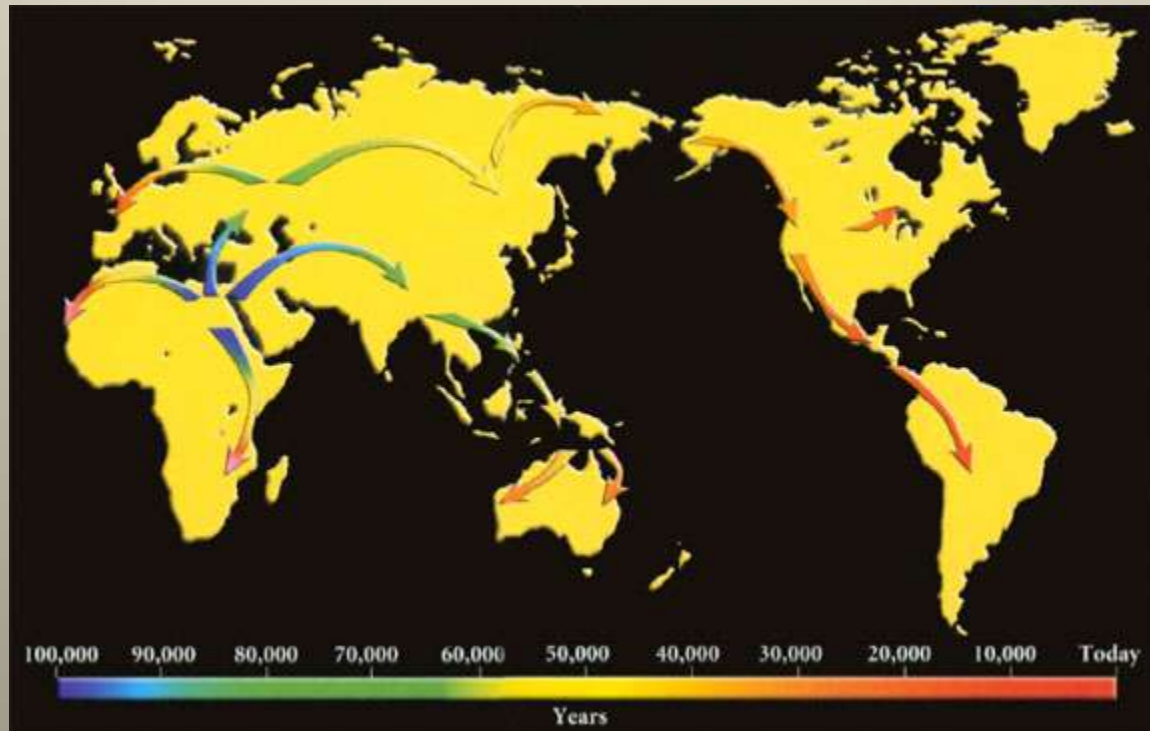
# A CONTINENT AT RISK

## BRAIN DRAIN

WHAT ARE WE UP AGAINST?



# Brain Drain: Out of Africa



# **Brain Drain : Pull factors:**

- **1) Better economic prospects;**
- **2) Higher salary and income;**
- **3) Better level of living and way of life;**
- **4) Better research facilities;**
- **5) Modern educational system and better chance of advancement**
- **6) Prestige of foreign training;**
- **7) Intellectual freedom.**
- **8) Better working condition and better employment opportunities;**
- **9) Relative political stability;**
- **10) Presence of a rich, scientific and cultural tradition;**
- **11) Attraction of urban centres;**
- **12) Availability of experience/supporting staff;**
- **13) Frequent chances of a lucky break in life;**
- **14) Technological gap;**
- **15) Allocation of substantial funds for research;**
- **16) Greater employment possibilities**

# **Brain Drain: Push factors:**

- **1) Under employment,**
- **2) Economic under development;**
- **3) Low wage/salary,**
- **4) political instability;**
- **5) Over production and under utilization or HQM;**
- **6) Lack of research and other facilities;**
- **7) Lack of freedom;**
- **8) Discrimination in appointment and promotion;**
- **9) Poor working facilities;**
- **10) Lack of scientific tradition and culture;**
- **11) Unsuitable institution;**
- **12) Desire for a better urban life;**
- **13) Desire for higher qualification and recognition;**
- **14) Better career expectation;**
- **15) Lack of satisfactory working conditions.**
- **16) Low rate of economic growth;**
- **17) Technologically poor and importer of technology.**

# DUALISM: PUSH - PULL



# South Africa's Brain Drain

## A NATION AT RISK



South Africa has been experiencing a brain drain for decades, undermining the regional economy.

# South Africa's Brain Drain

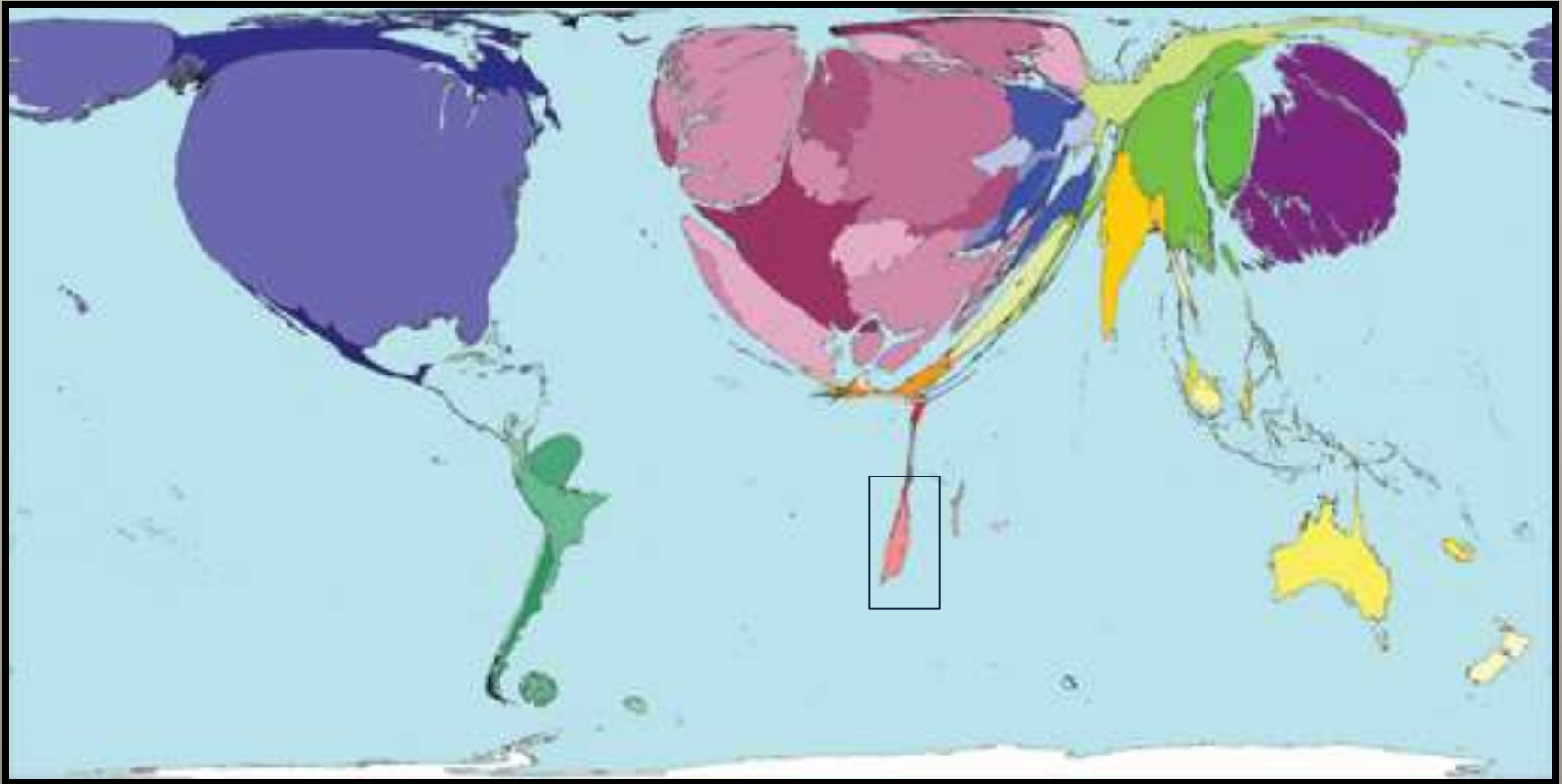
- The **medical brain drain** that has stripped South Africa of efficiency in running its public hospitals is continuing at a huge annual cost to South Africa. Including all health personnel, the **losses for South Africa** (lost investment in education/training) reach **US\$37 million annually**.
- Studies have also shown that **25% of medical graduates** have been **lost to the US alone**. In the four years **since 2005**, nearly **1,000 new doctors did not register** to work. And it is not only doctors who move to greener pastures.
- The **vast majority** of these graduates come from **historically white Universities**

# Age: The Other Brain Loss Challenge

- Based on a survey of recently published research papers, **South Africa** accounts for **64%** of all **research** undertaken in **Africa**
- **Another study** conducted by the Academy of Science of South Africa on the national research outputs from all disciplines and fields of intellectual endeavour, **showed a significantly ageing cohort of actively publishing scientists in our science system**
- In fact the **average age of scientists in South Africa is over 50**, and Ramphele Mamphela pointed out that the country would be sitting with a significant skills problem when these scientist retire in about ten-years time



# Science Research



- Scientific papers cover physics, biology, chemistry, mathematics, clinical medicine, biomedical research, engineering, technology, and earth and space sciences.
- The number of scientific papers published by researchers in the United States was more than three times as many as were published by the second highest-publishing population, Japan.
- There is more scientific research, or publication of results, in richer territories. This locational bias is such that roughly three times more scientific papers per person living there are published in Western Europe, North America, and Japan, than in any other region.

# South Africa

10%



## DUALISM IN SOUTH AFRICAN UNIVERSITIES

90%



# SA Higher Education Concern

- The South African Higher Education system enjoyed **substantial growth between 1990 and 2005**.
- **Enrolments** nearly **doubled** (with an increase from 385 700 to 715 800) whilst the **number of graduates** more than **doubled** (with an increase from 56 744 to 120 385).
- However, the **proportion of PG students** of the overall number of graduates **declined** rather significantly from **31.3% to 26.9%** over this period, even though the number of Masters and Doctoral enrolments increased during the same period.
- Proportionately the country was producing fewer **PGs** in **2005** than in **1990**.

# Post Graduates 2007

**South Africa's Demographic Profile by race:**

**Black - 89%**

**White - 11%**

**Honours - 214,738**

**Masters & Doctorates grouped together - 190,859**

**Racial Split:**

**Honours -**

**Black - 96,578**

**White - 118,159**

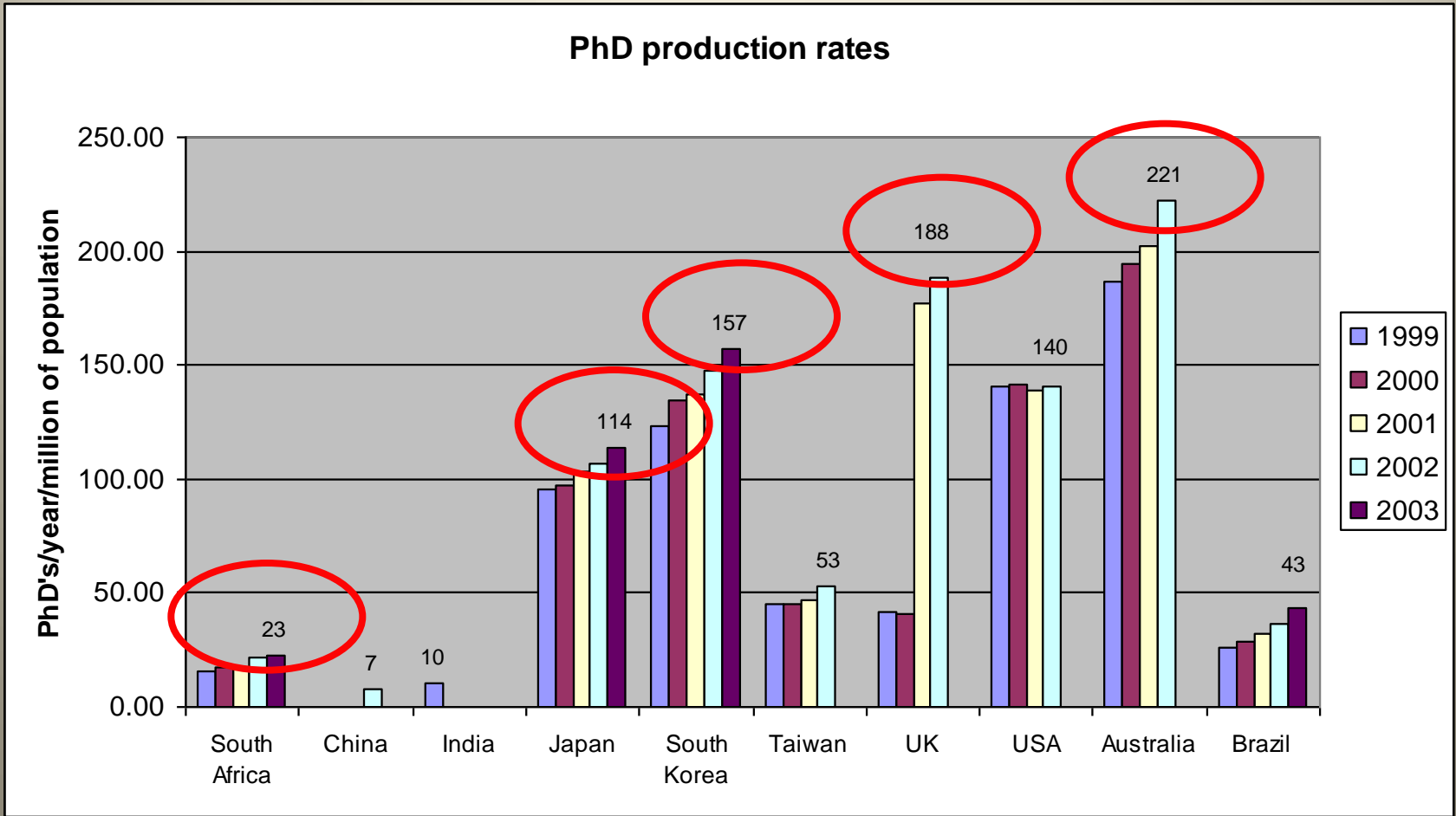
**Masters & Doctorates grouped together**

**Black - 74,051**

**White - 116,808**

**Number of PhDs per year: 1100**

# Evidence of Danger: PhDs per 1 Million



# **South Africa's Response**

- **New Higher Education Ministry**
- **Additional funds for infrastructure**
- **Department of Science and Technology: More support for research and innovation**
- **Additional funds for post grad programmes**
- **Hugely inadequate given scale of problem**

# WHAT ARE UWC's OPTIONS?

- Governments of countries that have benefited most from the “brain drain” cease such policies and examine ways to compensate Africa for the damage their recruitment policies have done.  
(**POLITICS/POLICY/CONSCIOUSNESS**)

# WHAT ARE UWC's OPTIONS?

- The exodus from Africa is halted by a powerful African (national) consciousness and/or large financial inducements, which result in a sense of ownership and commitment to African development.  
(**CONSCIOUSNESS/FUNDS**)

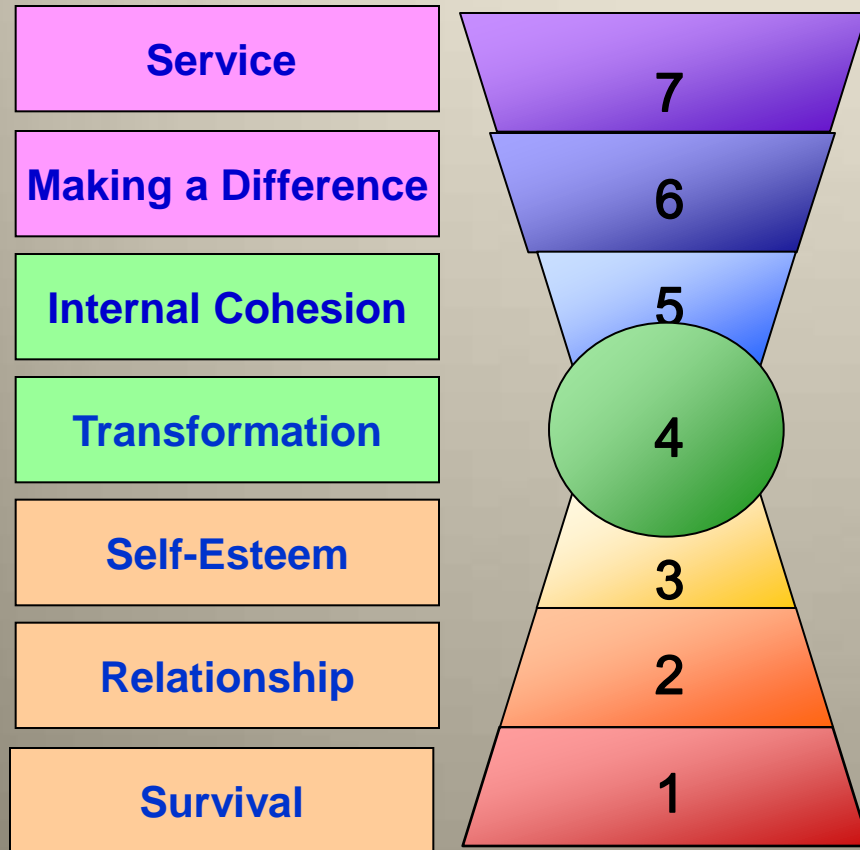


# WHAT ARE UWC's OPTIONS?

- A powerful African (national) consciousness and/or large financial inducements results in very large numbers of professionals returning to settle, or stay for shorter periods, or engage via electronic means.  
(**CONSCIOUSNESS/ FUNDS**)

# LEVELS OF CONSCIOUSNESS

## Seven levels of Consciousness Development



Barrett

# **WHAT ARE UWC's OPTIONS?**

- **Develop and use strong partnerships (TRUST/COMPETENCE)**
- **With the help of all international partners and government create a high level human resources surplus in Africa (POLICY/WILL/MONEY/CONSCIOUSNESS)**
- **Develop ONE sister partner (COUNCIL to COUNCIL/MONEY)**

# WHAT ARE UWC's OPTIONS?

- Honours and Masters bursaries critical  
(**MONEY/DONOR**)
- Employ on contract large numbers of supervisors and mentors (**MONEY/DONOR/TRUST**)
- Increase numbers of taught PhD programmes  
(**CURRICULUM/LECTURING STAFF**)

# WHAT ARE UWC's OPTIONS?

- Develop staff post-graduate competences
  1. Improve qualifications of staff : Post Graduate Throughput (**PET**)
  2. Buy time off for: Proposal writing and completion – Ambitious target 125 new PhDs by 2015 (**MONEY/AVAILABILTY OF REPLACEMENTS**)

# WHAT ARE UWC's OPTIONS?

- Develop a number of niche areas and with the help of partners grow these to national and international standards. (**LEADERSHIP/MONEY/ CONSCIOUSNESS**)
- Create at least one landmark, iconic facility on campus (**MONEY/DONORS**)

# WHAT ARE UWC's OPTIONS?

Connect luminaries to your institution: e.g.

Prof. Kurt Hostettman, University of Geneva:

1. Appointed **Extraordinary Professor at UWC** in the SA Herbal Science and Medicine Institute from January 2010.
2. 17 books translated into 20 languages.
3. 84 PhD's graduated.
4. 200 postdoctoral fellows trained.
5. 550 high impact papers published.
6. 8000 herbal pharmaceutical compounds identified in his laboratories.

# UWC's Achievements

- **Historically Black institution: Largest producer of Black graduates in SA history**
- **94 % of student black – HSRC research places students amongst poorest in South Africa**
- **Endowment of \$3.5 million: 1994 carried R140 m debt into post-apartheid South Africa**
- **Lowest paying University in South Africa: runs on passion**



# UWC's Achievements

- **Rank 4<sup>th</sup> in SA** with respect to numbers of **post doctoral science fellows**
- **Of South Africa's 23 universities, a recent National Research Foundation (NRF) survey:**
  - **places UWC 5<sup>th</sup> in South Africa : proportion of rated researchers** on the full-time academic staff
  - **7<sup>th</sup> in South Africa : proportion of PhDs** on staff and
  - **in the top 3 in South Africa: the research areas of Bioinformatics, History and Development Studies**

LIFE SCIENCES BUILDING COMPLETED BY  
MARCH 2010



# CITADEL

The Fault Line: Across the Globe

