

# The SDGs: What can research-intensive universities contribute?

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The SDGs Seminar Series & Round Table

#2 : “Science, Technology and Innovation (STI) Interface for the SDGs”

November 2, 2018 at 8.30 – 16.30 Hrs.

At Narathip Auditorium, Ministry of Foreign Affairs, Bangkok, Thailand

# My contribution

- **Preamble:** International networks and partnerships
  - Bringing me here, inviting you to learn and share
- **Positioning:**
  - Science, Technology & Innovation vs. Research-Intensive Universities
  - Their role in sustainable development
- **Topic 1:** Home base
  - SDGs in research at UCT
- **Topic 2:** Major league
  - IARU talk, thinking and actions on SDGs engagement
- **Concluding thoughts**



Preamble:

# International networks & partnerships

- International Sustainable Campus Network - ISCN
  - <https://www.international-sustainable-campus-network.org/conferences/stockholm-2018/2018-conference-summary>
  - 2019 conference at the University of São Paulo (USP), Brazil
- International Association of Research Universities – IARU
  - <http://www.iaruni.org/>
  - I represent UCT on its sustainable campus initiative
- Education for Sustainable Development in Africa (ESDA) consortium
  - Just held its 10 year anniversary consortium meeting at UNU, Tokyo



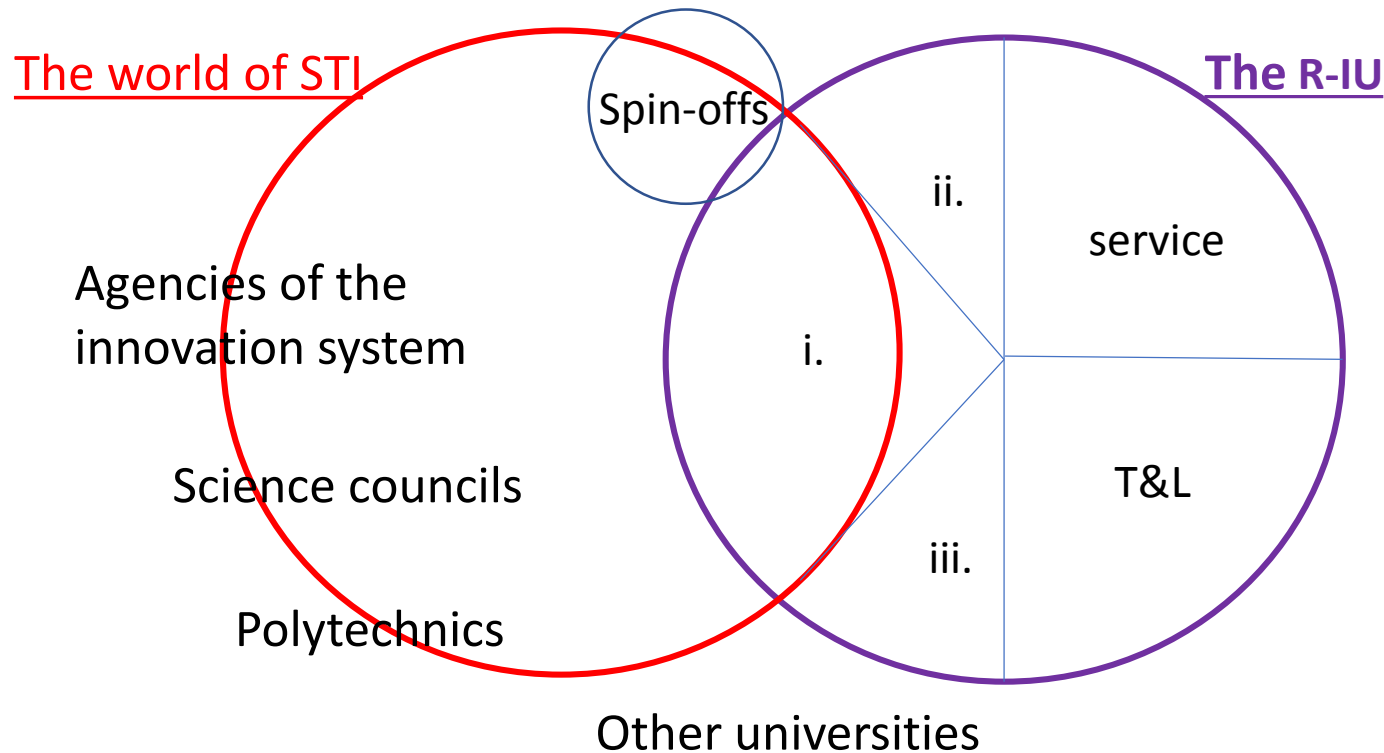
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Positioning:

# STI & research-intensive universities

Sketch by Harro von Blottnitz, University of Cape Town



Scholarships of:

- i. discovery
  - ii. synthesis & integration
  - iii. teaching & learning
- all involve research

## Notes

1. Proportions of research, T&L and service may differ and are only illustrative.
2. Some definitions of service, e.g. “engaged scholarship” don’t define this as an additional activity, but as purposive forms of research, and T&L, with external non-academic partners.

Positioning:

## STI, R-IUs & SDGs

- Noting as I prepare this talk that the Minister of Science & Technology is scheduled to speak before me on 'The Balance of SDGs & STI for Thailand', I will not prepare my own position on this topic.
- Based on the minister's analysis, I may add some impromptu notes on the dimension of research-intensive universities, if appropriate



## Topic 1: Home base

# *Connecting Research to the SDGs:*

## *Insights from the University of Cape Town 2015 Research Report*

A talk by Prof Harro von Blottnitz

*Modified from slides of UCT's research office,  
and first given in the IARU SDG event at the  
ISCN 2018 conference*

## GLOBAL PRIORITIES, EDUCATED SOLUTIONS:

## the role of academia in advancing the Sustainable Development Goals

12 June 2018, Stockholm



The



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No. 1 ranked university on the African continent

We are here: 35000 students & staff

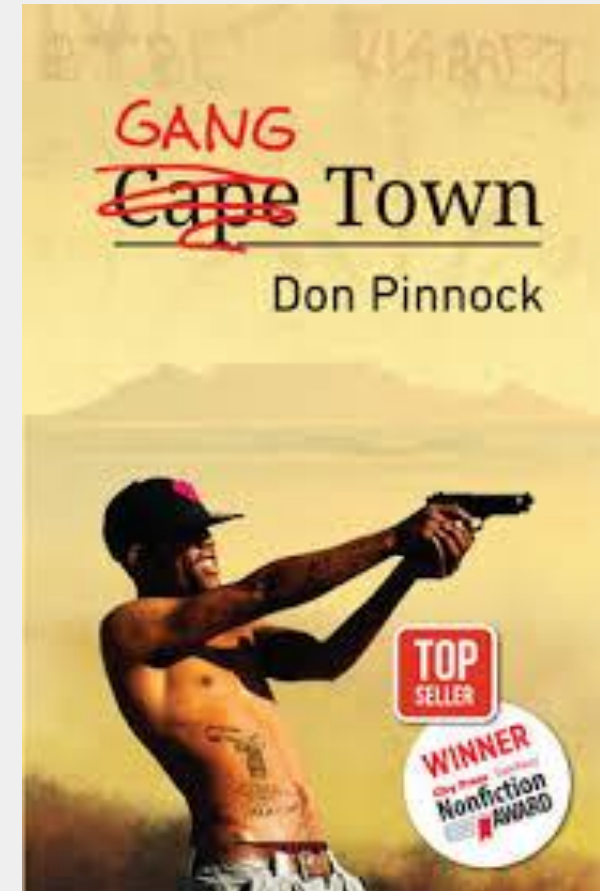


Cape of Good Hope

4 of 58 million South Africans live here

50 km

# Africa's leading research-intensive university: bio-physical & social environment





## Focus on the Sustainable Development Goals (SDGs)

### Themes of the 2015 research report

No poverty, economic  
growth and reduced  
inequalities



Peace, justice and  
strong institutions



Zero hunger,  
sustainable cities and  
responsible  
consumption



Good health and  
well-being



Quality education



Gender equality



Clean water and  
sanitation



Affordable, clean  
energy and climate  
action



Industry, innovation  
and infrastructure

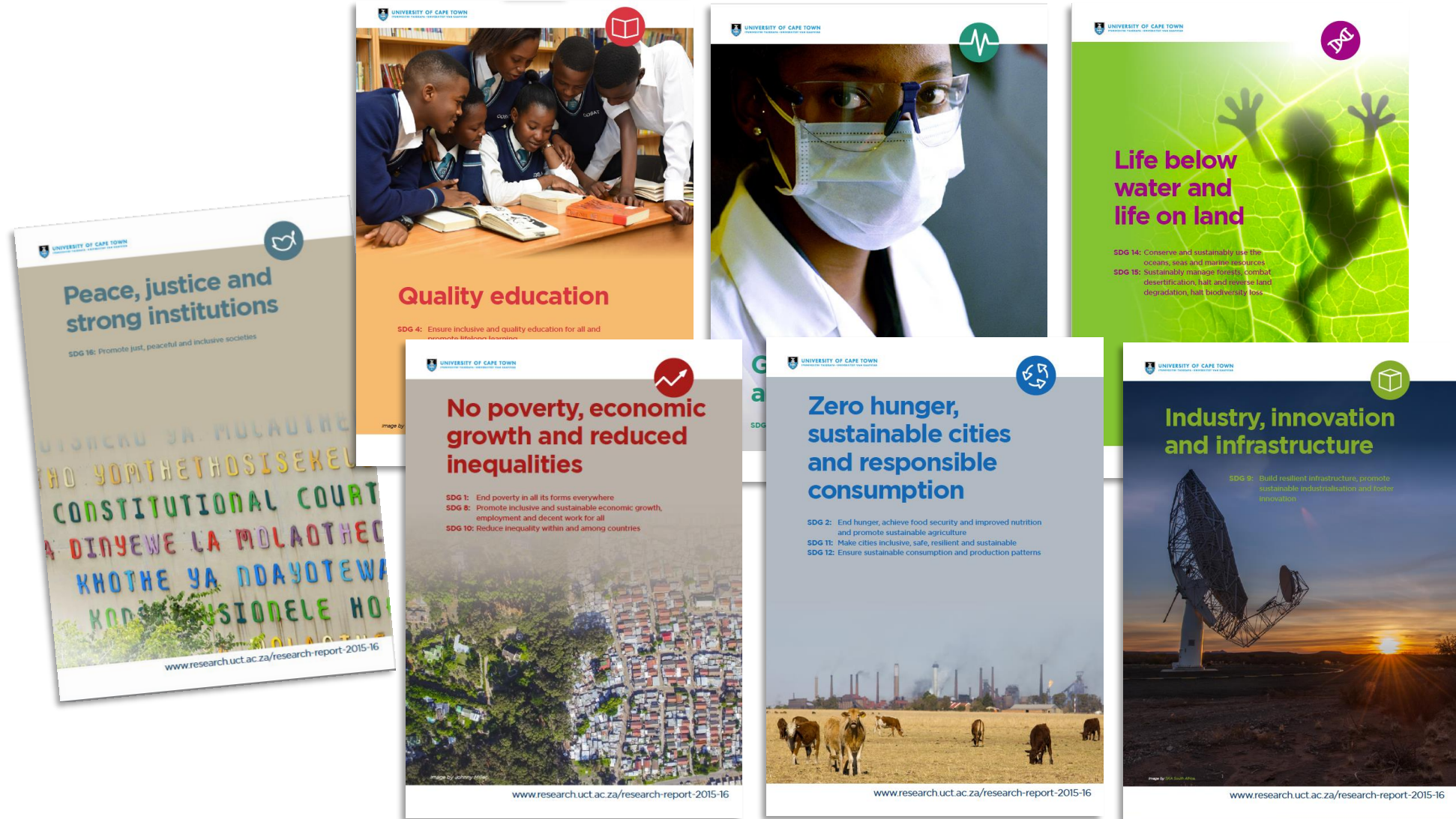


Life below water  
and life on land



Partnerships for the  
goals





[http://www.uct.ac.za/sites/default/files/image\\_tool/images/328/research/publications/reports/UCTR0072\\_Research\\_Office\\_Annual\\_Report\\_2015-2016\\_LOW\\_Res.pdf](http://www.uct.ac.za/sites/default/files/image_tool/images/328/research/publications/reports/UCTR0072_Research_Office_Annual_Report_2015-2016_LOW_Res.pdf)



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# Leadership

Vice-Chancellor Max Price had this to say when launching the report:

*“When we decided to focus this year’s research and innovation report on the United Nations sustainable development goals, we knew that it would give us a good opportunity to showcase the leading role our researchers play in solving the world’s ‘wicked’ problems from an African perspective. These, after all, were challenges identified after an extensive, thorough, global consultation process – and it turns out that they match our own strategic priorities in a striking way.*

*UCT’s research community will now have a key role to play in the implementation of the goals, and many of our researchers are already advising policymakers, and providing an independent and critical voice to ensure that the goals are met as closely as possible and that their complexity is not lost in translation.”*





# Contents

Many accounts of research grounded in Africa,  
connected to policy (locally, nationally,  
globally)

## Insights?





# 1. Interdisciplinarity

2005

## Signature Themes

- African Urbanism
- Drug Discovery and Development
- Minerals to Metals
- Brain and Behaviour
- Marine Research

2010

## Vice-Chancellor's Initiatives

- African Climate and Development Initiative (ACDI)
- Poverty and Inequality Initiative (PII)
- Safety and Violence Initiative (SAVI)
- Schools Improvement Initiative (SII)



## Interdisciplinary institutes

2016



## 2. Internationalisation



IAPO

20 YEARS OF INTERNATIONALISATION



**The African Research  
Universities Alliance  
(ARUA)**

**Joint doctorates**



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In May, UCT hosted one of the IARU  
working groups, on Global Transformation



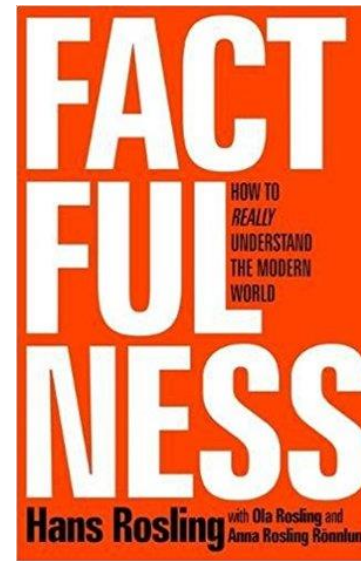
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### 3. Innovation



#### d-school

Africa's first d-school trains postgrads to solve complex real-world challenges.



“human progress is silent”

Achieving the SDGs  
*“is the moonshot for our generation”*  
(Jeffrey Sachs)

# 6

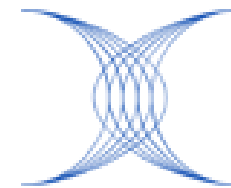
of the seed projects funded through the **Technology Innovation Agency (TIA) Seed Fund** have already reached a ‘technology readiness level’ that we are preparing follow-up funding applications.

Another **8**  
projects received  
funding in 2015



# IARU talk, thinking and actions on SDGs engagement

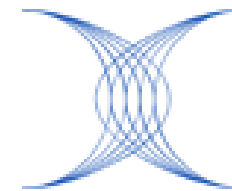
- Talk
  - The special IARU session at ISCN in Stockholm
- Thinking
  - Write-up of that session
  - Thinking which funding this session precipitated amongst leadership of partnership institutions
  - Discussions of whether to join SDSN initiatives (within member institutions)
- Actions
  - Setting up new structures
  - For stimulation, (reward?) & reporting





# IARU thoughts on universities & SDGs

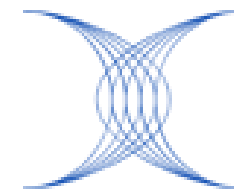
- Scholarship for solutions
  - In research, but also in teaching & learning
  - “responsible leaders for tomorrow”
- Service for society
  - which needs strong leadership, incentives, encouragement, to work with external, non-academic partners (even in research → ‘co-production!; and in teaching & learning)
- Next-generation innovation
  - IPCC calls for change at ‘unprecedented scale’ (though not pace)
  - → so many more educated young people are called on to innovate
- Walk the talk
  - Green campuses for sure
    - (this agenda has been around for some time, are we getting it?)
  - But are our institutions models for societies that have met all the other goals, too?



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# Action at IARU universities

- Inventory & mapping
  - Self-declaration (e.g. University of Tokyo) or
  - Mapping, by staff & student workers (e.g. Yale)
- Gap analysis
  - ETH: what science is missing?
- Creation
  - New coordinating & communication structures
  - New campus events
- Link to walking the talk
  - Several ISCN universities 'tax' GHG emissions, e.g. air travel
    - Create funds for sustainability investments
    - Staff or student projects
  - Living labs allow for green campus investments which allow for relevant research



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# Concluding remarks

1. Universities have an important role to help achieve the SDGs
  - a) And will need incentives & leadership to do so
2. Science, Technology and Innovation has a key role, too
3. Research-intensive universities
  - a) Can make a special contribution to the STI effort but not a sufficient one
  - b) Bring knowledge and skills to the SDGs also beyond STI
4. For UCT, given its natural & social environments, many SDG matches came easily. Since doing the 1<sup>st</sup> matching, we've hesitated for almost 3 years on whether to attempt centralisation of direction.
5. Some IARU universities have done deep analysis to spot gaps where they can contribute.
  - a) Example of ETH Zurich (a tech institution) may provide inspiration for STI agenda?



An aerial photograph of a coastal region. In the foreground, there's a dark blue bay with a white sandy beach. To the left, a rugged, rocky coastline with green vegetation meets the water. In the background, a large, hilly area with a mix of green and brown patches, possibly a city or a natural landscape, is visible under a bright, slightly hazy sky.

*Enkosi kakuhle*  
*Baie dankie*  
*Thank you*



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