ISCN 2018
SUSTAINABLE DEVELOPMENT: ACTING WITH PURPOSE
JUNE 11 – 13, 2018
STOCKHOLM, SWEDEN
Day 2 ISCN 2018

- **Global Priorities, Educated Solutions**
- Lunch + Posters
- Sustainability and Traveling – walking the talk
- Breakout sessions:
  - Building, Culture, Wellbeing
  - Developing Strategic City
  - Educating for Sustainability
  - Networks for Innovation
  - Living Lab
  - Students for Sustainability
- City Hall
Global Priorities, Educated Solutions

Melissa Goodall, Associate Director, Yale Office of Sustainability.
GLOBAL PRIORITIES, EDUCATED SOLUTIONS: the role of academia in advancing the Sustainable Development Goals
SCHOLARSHIP FOR SOLUTIONS: teaching and research in the context of the SDGs.
NEXT GENERATION INNOVATION:
the role of students in advancing world-changing ideas.
WALKING THE TALK:
how campuses can lead by example in terms of operational excellence and using the campus as a test bed for innovation.
SERVICE FOR SOCIETY: universities as thought-leaders and collaborative partners in addressing global challenges.
Harro von Blottnitz
University of Cape Town

Connecting Research to the SDGs:
an overview of the University of Cape Town 2015 Research Report

XUE Ling
Peking University

Teaching Sustainability with Tea:
a case study from the Yunnan Province of China

Khatharya Um
University of California Berkeley

Global Refugees:
Critical Issues and Relevance to Sustainable Development Goals
GLOBAL PRIORITIES, EDUCATED SOLUTIONS: the role of academia in advancing the Sustainable Development Goals
**SCHOLARSHIP FOR SOLUTIONS:**
teaching and research in the context of the SDGs.

Room U21

**SERVICE FOR SOCIETY:**
universities as thought-leaders and collaborative partners in addressing global challenges.

Room U51

**NEXT GENERATION INNOVATION:**
the role of students in advancing world-changing ideas.

Room U41

**WALKING THE TALK:**
how campuses can lead by example in terms of operational excellence and using the campus as a test bed for innovation.

Room U31
“Connecting Research to the SDGs: an overview of the University of Cape Town 2015 Research Report”

Harro Von Blottnitz, professor, University of Cape Town.
Connecting Research to the SDGs: Insights from the University of Cape Town 2015 Research Report

Harro von Blottnitz

GLOBAL PRIORITIES, EDUCATED SOLUTIONS:
the role of academia in advancing the Sustainable Development Goals
12 June 2018, Stockholm
Keynote dedicated to Prof Dee Bradshaw, who was passionate about the role of academia in advancing the SDGs
Africa’s leading research-intensive university: IARU’s 11th member

2015-16 WORLD UNIVERSITY RANKINGS

1st in Africa

UCT is ranked 112th globally and 1st in Africa in the 2017 Best Global Universities rankings

120 Times Higher Education

171 Quacquarelli Symonds

4th in BRICS

Times Higher Education

UNIVERSITY OF CAPE TOWN
Focus on the Sustainable Development Goals (SDGs)

Themes of the 2015 research report

- 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

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

Signature Themes
- African Centre for Cities,
- Drug Discovery and Development Centre (H3D)
- Minerals to Metals Research Centre
- Brain and Behaviour Initiative
- Marine Research Institute (MaRe)

Vice-Chancellor’s Initiatives
- African Climate and Development Initiative (ACDI)
- Poverty and Inequality Initiative (PII)
- Safety and Violence Initiative (SAVI)
- Schools Improvement Initiative (SII)
2. Internationalisation

Joint doctorates

The African Research Universities Alliance (ARUA)

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

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

“human progress is silent”

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

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
In summary

Enkosi kakuhle
Baie dankie
Thank you
Teaching Sustainability with Tea: a case study from the Yunnan Province of China

XUE Ling, Professor, Peking University
“Global Refugees: Critical Issues and Relevance to Sustainable Development Goal”

Khatharya Um, Associate Professor, University of California Berkeley
Global Refugees

Critical Issues, Relevance to Sustainable Development Goals, and the Role of Universities

Professor Khatharya Um
Chair, IARU Global Transformation Strategic Working Group
Asian American and Asian Diaspora Studies
University of California, Berkeley
umk@berkeley.edu

Presentation at the International Sustainable Campus Network, Stockholm, June 11-14, 2018
The Globally Displaced
Casualties of War and Peace

CONFLICT

DROUGHT

FAMINE

LAND GRABBING

ENVIRONMENTAL DEGRADATION

CLIMATE CHANGE
Camps keep refugees alive, but they prevent them from living.
Consequences of Forced Displacement
Disrupted Education
Role of Universities In Meeting Global Challenges

Universities as thought-leaders, influence wielders, and sites for

- Production of knowledge
- Production of skilled human resources and engaged citizens
- Production of the public good
Why is university leadership on refugee issues important?

- Mission of public institutions
- Location of UC Berkeley
- Demographics
Models of Engagement

Critical Refugee Studies Collective
- Commitment to ethical and socially responsible research and other forms of knowledge production, and accountability to the communities that we engage
- Promotion of connection and collaboration between scholars and advocates, and between universities and communities to forge new and humane paradigms, dialogues, visuals and technologies that replace and reverse the dehumanization of refugees

The Alliance of Research Universities (IARU)
- Partnership among leading research institutions for critical engagement of the 21st century challenges and change making
Challenges

Misalignment between principles and structures

Areas for improvement:

Faculty
Students
Campus
We are defined not by what we do in times of plenty but by what we do in times of crisis.
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- Global Priorities, Educated Solutions
  - Breakout Sessions
    - Scholarship for solutions (Room U21)
    - Walking the talk (Room U31)
    - Next generation innovation (Room U41)
    - Service for society (Room U51)
- Lunch + Posters
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Sustainability and Traveling: Are we walking the talk?

Moderator: David Nilsson, KTH
Keynote: Kevin Anderson, Zennström visiting professor in Climate Change Leadership at CEMUS, Uppsala University
Panelists:
Re-to Knutti, ETH
Aleksandra Mandic and Joachim Ciers, EPFL
Eddi Omrcen, The University of Gothenburg
KEYNOTE

Kevin Anderson, Zennström visiting professor in Climate Change Leadership at CEMUS, Uppsala University
Mobility platform

Reto Knutti, professor for climate physics ETH Zurich
Reducing CO$_2$ emissions from air travel
Virtual conference

Prof. Reto Knutti, Associate VP Sustainability ETH Zurich
60% of the CO₂ emissions at ETH are from business travel, increasing
Of these, 96% are from flights, and >80% are long haul flights
Nearly constant emissions per FTE since 2006
Data partly inferred from cost of travel
Jährlich 5000-mal um die Welt fliegen ist der ETH zu viel

Die ETH Zürich steht in einer Diskussion. Für die Mitarbeiter sind Konferenzen im Ausland wichtig, Fliegen schadet aber dem Klima.

Heute Paris, morgen Boston: Wie viel Fliegen für die Forschung darf es sein?

Die Hochschulen tun sich schwer mit einer Reduzierung ihrer CO2-Emissionen
Possible measures

Regulatory measures
- Carbon budgets
- Restrictions
- Carbon tax

Non-regulatory measures
- Awareness campaigns
- Increasing attractiveness
- Reward mechanisms
- Transparency

Compensation

Changes in enabling conditions

from C. Robledo, adapted by M. Mazzotti und N. Gruber
Methods and tools

- Tons of CO$_2$eq (including indirect effects)
- Next six years, relative to baseline 2016-2018 (annual values fluctuate too much)
- Per FTE
- System boundary: financial accounting system
- Separate reduction and offsetting
- Provide travel tracker
- Improve monitoring
Lessons: difficult, but here’s what we’ve learned so far

- Reducing travel appears to conflict with freedom and excellence in science.
- Top down support is essential. Bottom up commitment is also essential, since individuals decide where they travel. Hard to prescribe, we do science differently.
- Bottom up self declaration with measures like UNFCCC. Pledges go from 0% to 20% reduction plus full offsetting. Some want taxes; no caps.
- Provide numbers. Details don’t really matter, but people think they do.
- Transparency is a first step. Discussion of emissions, goals and measures helps.
- Framing matters: Role of champions and influencers.
- Need for a culture change, within institutions, and together with other institutions
- It’s all about behavior, values and choices.

So we hired someone from behavioral psychology to do a PhD on this project!
Virtual conference on university air miles reduction

- 80 participants, 8 institutions, individuals/small rooms/big rooms
- Mix of remote and local sessions
Lessons learned (I)

- Technical solutions and support matter. They help mostly those on the other side.
- Solutions cost, but time in an airplane also costs.
- Different forms require different solutions (skype, webinars, multi-hub conferences).
- People have to learn.
Lessons learned (II)

Why do we travel? Science, networking opportunity, career enhancement, visit nice places. Some are easier to replace than others.

Actions on four levels:
- Cultural change (awareness, support, awards)
- Institutional change (monitoring, strategy, regulations)
- Technical challenges
- International level (cultural changes, subsidies, road-maps, rankings)
Reducing the CO2 footprint of business air travel at EPFL

Aleksandra Mandic PhD and Joachim Ciers PhD, École Polytechnique Fédérale de Lausanne (EPFL)
Reducing of the CO₂ footprint of business air travel at EPFL

Aleksandra Mandic, Joachim Ciers, Leonardo Belloccchi, Laszlo Daniel Toth, Giel Op’t Veld
Business air travel produces 1/3 of EPFL’s CO₂ emissions

Aim: Addressing the environmental impact of business travel in the EPFL community

Dataset (2014-2017) → 80% of total EPFL air travels

No financial barriers to travel

Neglected environmental impact
Travelling and CO₂ impact increase with seniority

The difference between air travellers at EPFL is larger than for the worldwide income ~60% of total CO₂

1 Professor = 10 PhDs = 5 Postdocs

The 10% biggest travellers emit ~60% of total CO₂

Biggest consumer

Smallest consumer

ShARE
ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE
GLOBAL STUDENT THINK TANK

Présentation EPFL - Public | 2018
17% CO$_2$ reduction if all higher class flights replaced by economy

Higher classes emit 2 to 3 times more CO$_2$ than economy class

Reduction potential

- Economy class
- Continental higher classes
- Intercontinental higher classes

Reduction of 800 ton CO$_2$/year (17%) and CHF 850 000/year (22%)
Up to **15 % CO₂ reduction** if all short flights replaced by train

- **Lisbon**: 4h by train
- **New York**: 5h by train
- **Beijing**: 7h by train
- **LA**: 7h by train

15 % of CO₂ emissions on continental trips,
78 % on intercontinental
**Up to 15 % CO₂ reduction if all short flights replaced by train**

- **Up to 7 h by train (<800 km)**

  - Flights in indirect trips
  - All trips (direct & indirect)

- **Replacing all flights up to 600-800 km (5-7h train ride)** ➔ -9 to -15 % CO₂
8.6% reduction if we would replace all indirect trips by direct.

Indirect flight: more kilometers + extra takeoff ➔ more CO₂.
Overall CO₂ emissions could be reduced by 20 - 30 %

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<thead>
<tr>
<th></th>
<th>Full potential</th>
<th>50% potential</th>
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<tbody>
<tr>
<td>Avoided flights (videoconference)</td>
<td>?</td>
<td>?</td>
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<tr>
<td>Business and first class ➔ economy</td>
<td>-17 %</td>
<td>-8.5%</td>
</tr>
<tr>
<td>Short trips ➔ Train</td>
<td>-15 %</td>
<td>-7.5%</td>
</tr>
<tr>
<td>Indirect ➔ Direct</td>
<td>-8.6 %</td>
<td>-4.3%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>-36 %</strong></td>
<td><strong>-19 %</strong></td>
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Towards new travel policy

Correlation between academic performance and business travel

Understanding cultural aspects and habits in business travel

New EPFL business travel policy

CO₂ compensation (ticket price)
Incentives
Videoconference possibilities

... make people aware of their impact.
Internal Climate Fund

Eddi Omrcen, Environmental Manager, University of Gothenburg
PANEL DISCUSSION

Kevin Anderson, David Nilsson, Reto Knutti, Aleksandra Mandic, Joakim Ciers, Eddi Omcren
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  - Students for Sustainability (room U61)
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