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Member of  
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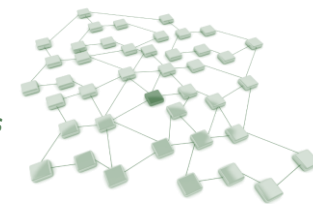


## “The Sustainable 21st Century University: More than just wishful thinking?”



## International Sustainable Campus Network (ISCN)

*“ The ISCN is a global forum  
for leading universities  
to exchange ideas and best practices  
for integrating sustainability into  
campus operations,  
research and teaching.”*



- Founded in 2007
- Partners with WEF Global University Leader Forum
- Over **80 top-tiers colleges and universities**, representing 20 countries across the Americas, Europe, Asia, Africa, and Australia



<http://www.international-sustainable-campus-network.org>



## Educating for Sustainability

2017 SUSTAINABLE CAMPUS BEST PRACTICES FROM ISCN AND GULF UNIVERSITIES

THE INTERNATIONAL SUSTAINABLE CAMPUS NETWORK (ISCN) IN COLLABORATION WITH THE GLOBAL UNIVERSITY LEADERS FORUM (GULF) ON THE WORLD ECONOMIC FORUM



## ISCN-GULF Report 2017 Case studies from 30 universities

### Foreword

René Schwarzenbach, President of the Board of the International Sustainable Campus Network (ISCN), and **Guido Schmidt-Traub**, Executive Director of the UN Sustainable Development Solutions Network (SDSN)

“In our opinion, it is time for the academic community to seriously rethink and redefine its role in society and in sustainable development efforts. This may require changes in how universities conduct operations, teaching, and research with a stronger emphasis on contributing to the aims of the SDGs.”



## ETH Zurich as Illustrative Example



about 19'000 students from more than 80 nations

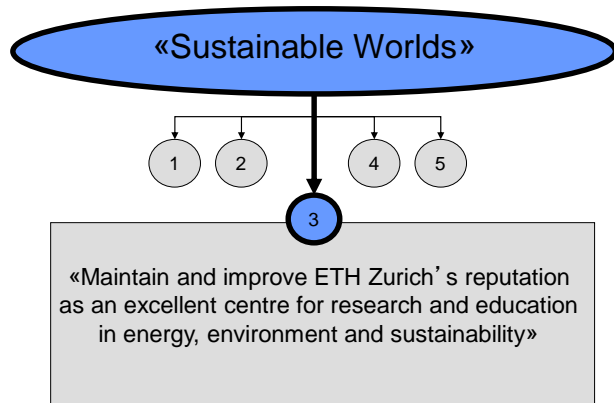
About 10'000 staff members  
(7'500 FTE)

503 professorships of which only about 30% are swiss!

(Engineering, Mathematics and Natural Sciences, Systemoriented Natural Sciences, Architecture, Social Sciences, Humanities)

Annual budget (2016): CHF 1512 Mio!

Sustainability has been one of ETH's five focus themes in the strategy 2012-2016



All of these themes are interconnected !



future cities



climate change



world food systems



energy systems



natural resources



Lino Guzella  
President of ETH

Two main principles when embedding sustainability within the university (in this case ETH)

1. Sustainability is „**matter for the boss**“
2. Sustainability needs to be integrated into **all relevant activities** within the University

## “ETH Sustainability”, The central “Hub” for Sustainability at ETH

Central Office



Tine Bratrich  
**Managing Director**  
(Member of the Presidents Staff)



Steering Board



Reto Knutti (Prof. Climate Modelling)  
**Delegate for Sustainability**



(6 additional Professors)

## History of Sustainability Reporting at ETH



2002 / 2003:  
**Energy Report**



2004-2008:  
**Environmental Report**



2010-2015:  
**Sustainability Report**



GRI/ISC Standard

65 Goals for improvement of sustainability at ETH

Campus initiatives

International alliances  
 (e.g. ISCN, IARU)

List of scientific publications dealing with sustainability issues

Does this require a fundamental  
cultural change within Universities?  
Sustainability needs to be integrated into  
all relevant domains within the University



What needs to be done?

we scientists  
shape science

Congress held in January 2017 in  
Bern, Switzerland



About 250, mostly younger scientists, got together and exchanged their “dreams” of how the academic community should “develop” in the future. The main issues discussed in 6 workshops were:

- lack of time
- creativity versus productivity
  - career issues
- scientific practice
  - open science
- science in society

this means  
among other things ....

research



- .... provide more time to think rather than just producing “forseeable” science
- .... foster creativity
- .... reward inter- and transdisciplinary research (don’t punish it !)

“The skill to tackle problems with the impartiality of a beginner, to **drop preconceived opinions and not to be afraid of failures**, is the key to creativity”

“To liberate creativity, there is almost nothing more important than the **time we devote to fields that are outside of our professional expertise**”



Jonah Lehrer





research



this means  
among other things ....

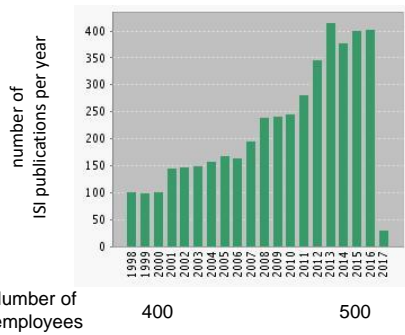
.... use more “intelligent criteria” for  
evaluating individual scientists as well as  
for ranking whole institutions  
(a.o. get rid of meaningless bibliometric criteria)

2012!

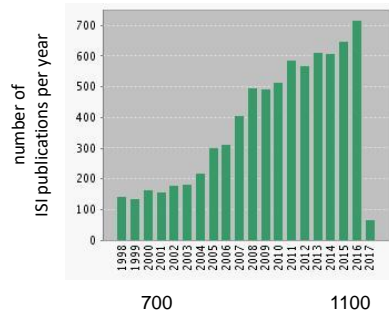


## Publish or perish?

**eawag**  
aquatic research <sup>000</sup>



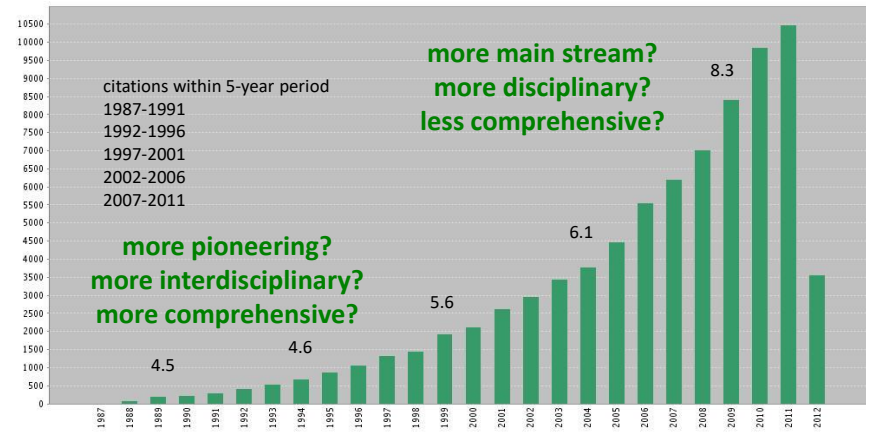
**HELMHOLTZ**  
CENTRE FOR  
ENVIRONMENTAL  
RESEARCH - UFZ



total number  
of citations

**eawag**  
aquatic research <sup>000</sup>

# WOW?



Have we become victims of our  
bibliometric hysteria  
and of our  
“mad ranking disease”?



“And as an ultimate plea, the personal wish of the author remains to send all bibliometrics and its diligent servants to the darkest omnivoric black hole that is known in the entire universe, in order to liberate academia forever from this pestilence. – And there is indeed an alternative: Very simply, start reading papers again instead of merely rating them by counting citations!”

Richard R. Ernst,  
Prof. emeritus ETH  
Zürich, Nobel Prize  
winner in Chemistry in  
1991



The Follies of Citation Indices and Academic Ranking Lists - A Brief  
Commentary to 'Bibliometrics as Weapons of Mass Citation?'

*Chimia* 84, 2010

this means  
among other things ....



education



.... make sure that **all** students are trained in  
system-oriented, critical (creative) **thinking**  
(e.g., using sustainability topics)



## ETH Critical Thinking Initiative

### *ETH Week*

“ETH Week is a new, innovative course designed to foster critical thinking and creativity. During ETH Week, you and other students from all ETH departments have the chance to address an important global challenge. Professors, CEOs, journalists, policy makers and NGO leaders help you to develop and verify your ideas.”

2015: “*The Story of Food*”

(130 students from 15 departments  
and 27 countries)



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2016: “*Challenging Water*”  
(180 students)



this means  
among other things ....

campus life



.... make better use of the campus as a “sustainability living laboratory” for students, staff, and faculty

Example ETH: Development of more sustainable menus at the student and faculty canteens



dialogue with society



this means  
among other things ....

.... rethink and redefine the role of scientists in society,  
particularly with respect to the science-policy interface

.... find more effective ways of conducting  
the dialogue with society. Communication of complex scientific  
issues of societal relevance should become a more integral part  
of the research process, and should therefore be primarily the  
task of academics and should not be delegated to journalists!

«Focus of the Year» events



dialogue with society



- public event  
(400-1000 participants)
- selected guests are  
invited by the president
- key note speakers:  
Swiss minister or CEO
- 2009: climate change  
2011: energy  
2012: water  
2013: urbanization  
2014: health 2020



**ETH**  
Eidgenössische Technische Hochschule Zürich  
Swiss Federal Institute of Technology Zurich

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However, there is still a (very) long way to go!



ISCN-GULF Report 2017  
Foreword

“To date universities’ support for sustainable development has primarily focused on campus design and campus operations. Less attention has been given to solution-oriented research, addressing related policy challenges, or practice-focused education of students.”

**“More than ever, holistic and cross-disciplinary initiatives are needed that link academic and operational excellence into a truly sustainable learning environment and experience.”**

## 21<sup>st</sup> century Universities quo vadis?

**Quality versus quantity?  
Creativity versus sheer productivity?  
Enough courage for cultural change?**

