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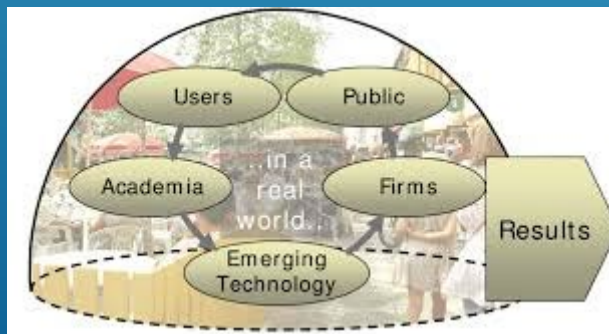


## CORPORATE SUSTAINABILITY BENCHMARKING IN ACADEMIA: GREEN CAMPUS, LIVING LABS, SOCIOECONOMIC AND SOCIOENVIRONMENTAL INITIATIVES IN BRAZIL

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# The goals of this article

- ✓ Creating a benchmarking scheme for the evaluation of Brazilian Higher Education Institutions towards environmental sustainability
- ✓ The focus is on Brazilian southern state of Santa Catarina
- ✓ The main aspects of the study are climate change, green campuses, living labs and sustainability initiatives





### The State of Santa Catarina:

- Territorial area = 0.1% of Brazil's 8,511 million-km<sup>2</sup>
- Human Development Index (HDI) = 0.840
- Brazil HDI = 0.699
- 26 High Level Institutions
- Host to two of the 13 Brazilian best universities





Unisul' campus in  
Pedra Branca,  
Palhoça, great  
Florianópolis, SC



477,798  
inhabitants in  
2016

# THE CAPITAL OF SANTA CATARINA: FLORIANÓPOLIS

- ⌘ The **main themes** are **litter and waste, energy, water conservation, travel and transport** and **biodiversity**
- ⌘ The **indicators** were created based on a set of survey questions about Green Campus, Living Labs and sustainability
- ⌘ The **information** was obtained in universities' websites and in follow-up consultation

# METHODOLOGY





The University  
of Liverpool,  
England, UK

The American  
University,  
Washington,  
DC, USA



✚ **European and North American Campuses (EACs): One European and one North American universities** were selected for comparison purposes. Both were founded in the late 1800s and are based in or near large cities

✚ **Santa Catarina campuses (SCCs): Five universities in Santa Catarina** were selected: one for each region plus a second from the capital Florianópolis. Typically, they are between 40 to 60 years old, with 10.000 to 30.000 students and staff

# UNIVERSITIES



The Federal University of Santa Catarina, Florianópolis, SC (UFSC) – one of the universities approached in Santa Catarina





- ❖ EACs have well-established **waste management** processes, but there are opportunities to improve waste handling.
- ❖ SCCs are making efforts to separate and recycle waste, but there is less emphasis on engagement with their staff and less success on recycling.
- ❖ SCCs need to improve or enlarge measurements and targets for avoiding litter and waste. EACs provide a good model for this.



**LITTER AND WASTE**



❖ EACs have on-site energy management systems and strive for carbon neutrality

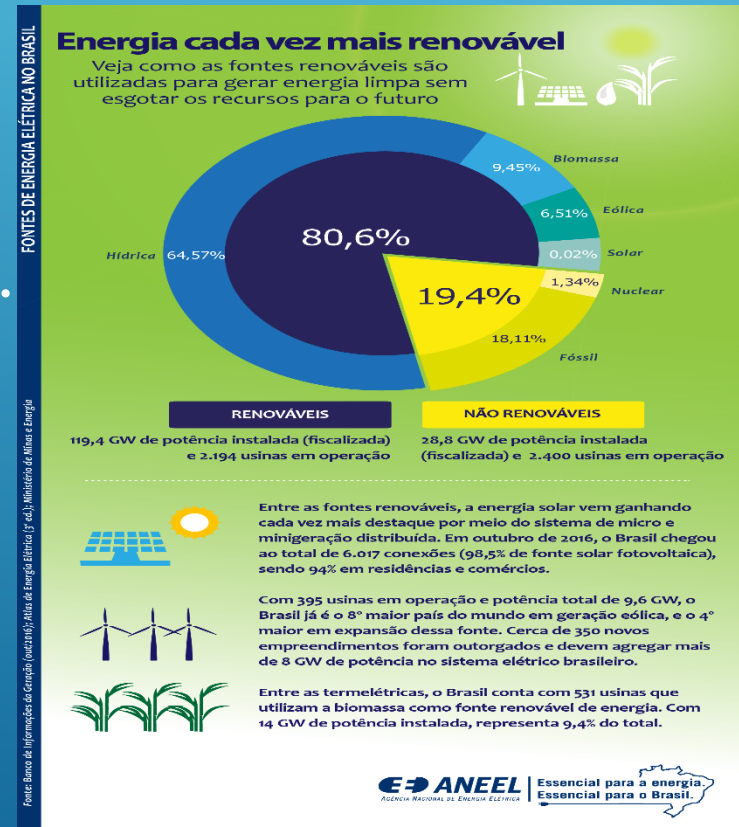
❖ SCCs use public energy suppliers, with no campus energy management systems. They benefit from Brazil's large use of renewable sources

❖ Efforts toward energy management in SCCs are blocked mainly by costs.



# ENERGY

According to the Brazilian National Electric Energy Agency, Brazilian electric matrix counts with a 80.6% from renewables



- ✦ EACs are significant consumers of water for general toileting and hygiene. Other significant consumers are sports facilities, swimming pools, showers and restaurants
- ✦ SCCs have reported initiatives for avoiding water wastage – but there is no clear rigorous management systems in place
- ✦ Concerns about water usage are common, but SCCs need to create better ways of measuring water consumption

# WATER CONSERVATION



- ❖ EACs are located by large cities and have several measures in place to actively.
- ❖ EACs encourage the use of public and sustainable transportation
- ❖ SCCs rely heavily on public transportation, but there are no obvious efforts to encourage environmental-friendly transport habits
- ❖ SSCs appear not to have addressed this issue in partnerships with local authorities or private transport services

# TRAVEL & TRANSPORT



- ✿ EACs apply pesticide and herbicide controls in their estates following national regulations
- ✿ SCCs appeared to be more active in this area, with management methods and initiatives to protect natural systems with direct interventions
- ✿ SCCs efforts appear to exceed those of EACs in this issue

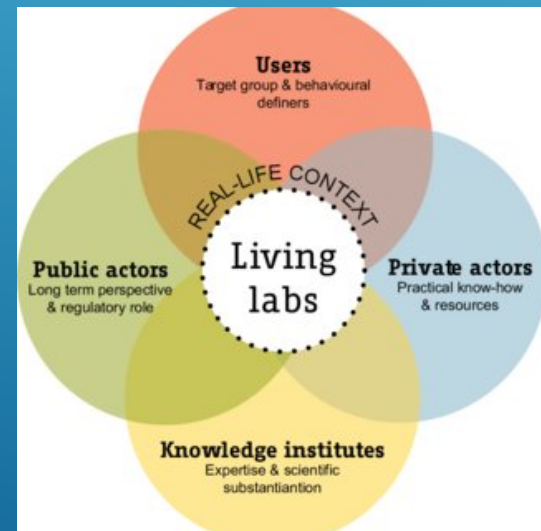
# BIODIVERSITY





- ❖ All institutions have living lab -style learning applied
- ❖ Typically, these living labs focus on software development, behavioral research, solar photovoltaic panel tests and technological incubation
- ❖ SCCs are highly active in promoting a culture of innovation and entrepreneurship

# LIVING LABS



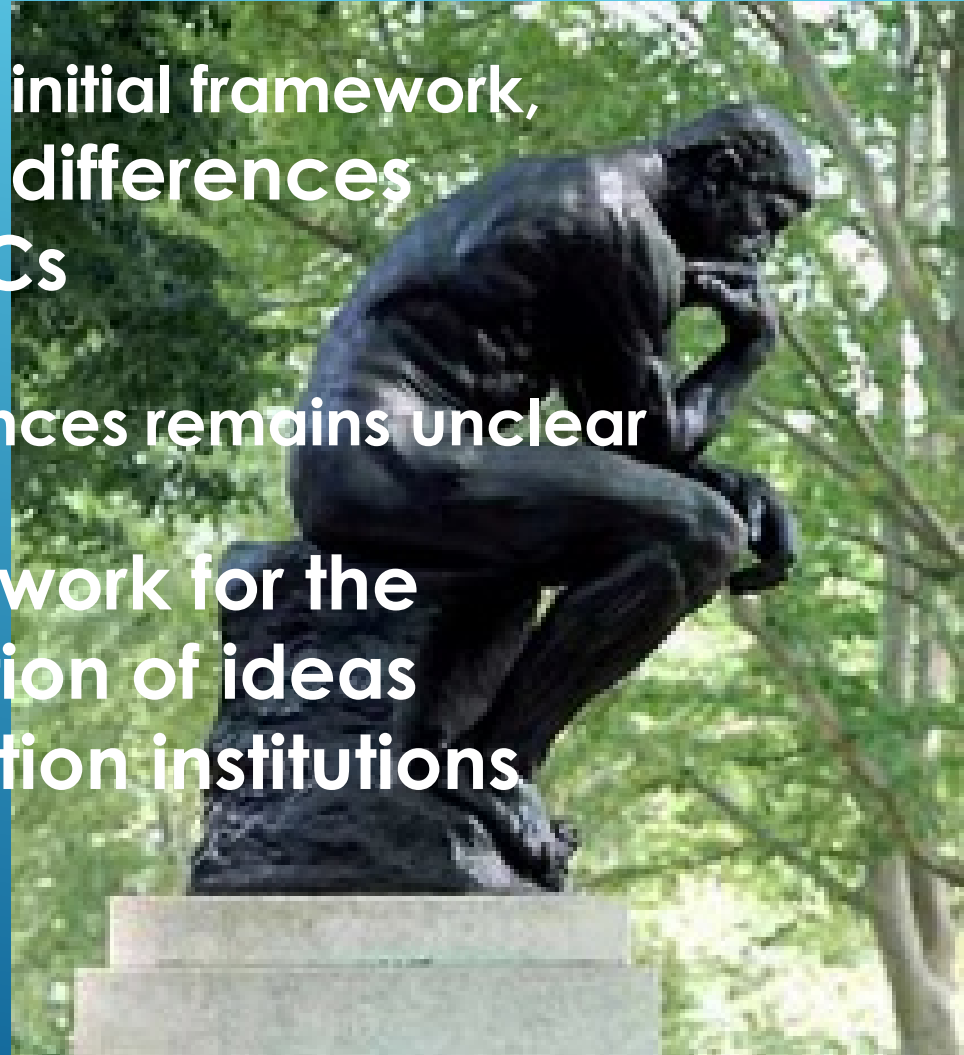
- ❖ All institutions have research groups dedicated to sustainability or community engagement services that reflect the Sustainable Development Goals
- ❖ EACs tend to bias towards innovation and sustainable development
- ❖ SCCs tend to put more emphasis on social inclusion, health and education

# SUSTAINABILITY



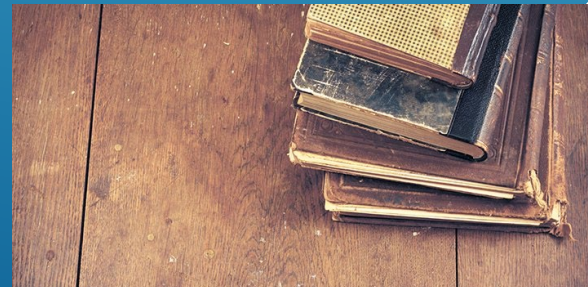
# CONCLUSIONS

- ✓ This study provides only an initial framework, but has revealed many differences between SCCs and EACs
- ✓ The reason for such differences remains unclear
- ✓ This study lays the groundwork for the exchange and evaluation of ideas between higher education institutions



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## REFERENCES





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Thank You!

