THE ROLE OF UNIVERSITIES IN THE PROCESS OF DECARBONIZATION OF URBAN AREAS

Prof. Marco Frey
Scuola Superiore Sant’Anna

December 8th 2023 | Dubai | Italy Pavilion
THE ATTENTION OF SSSA TO CLIMATE CHANGE AND DECARBONIZATION

Main Event
"Addressing Climate Change: a few contributions from Sant’Anna"
Lunedì 20 novembre, ore 9.00. Aula Magna, Scuola Superiore Sant’Anna

09.00 - Registrazione
09.15 - Welcome

09.30 - "The state of climate" di Roberto Buizza, Professore Ordinario del Centro di Ricerca Interdisciplinare sulla Sostenibilità e il Clima

09.45 - "Combining crop genomics with seasonal forecasts to enhance climate resilience of smallholder farmers in sub-Saharan Africa" di Mercy Macharia Wasiru, Ricercatrice del Centro di Ricerca in Scienze della Piante

10.00 - "Sustainable production and applications of Laser-Induced Graphene" di Francesco Greco, Professore Associato dell’Istituto di BioRobotica

10.15 – "Steel industry’s contribution to the challenges of the European Green Deal" di Valentina Colla, Ricercatrice dell’Istituto teCIP

10.30 – "Grounding and enforcing ethical competence in addressing climate change" di Alberto Pini, Professore Associato dell’Istituto DriPolis

10.45 – "Climate change, migration and protection: Challenges and opportunities" di Francesca Biondi Dal Monte, Professorezza Associato dell’Istituto DriPolis

11.00 - Coffee Break

11.30 – "Using big data to investigate the multiple economic footprints of climate hazards" di Marco Coroneo, Ricercatore dell’Istituto di Economia

11.45 – "Negative Emission Technologies and their socio-economic impacts" di Francesco Lamperti, Professore Associato dell’Istituto di Economia

12.00 – "Incentives to assess the Carbon Footprint of Scuola Superiore Sant’Anna" di Federico Rossi, Ricercatore del Centro di Ricerca Interdisciplinare sulla Sostenibilità e il Clima

12.15 – "The role of companies and local institutions in net-zero transition" di Maria Rosa De Giacomo, Ricercatrice dell’Istituto di Management

12.30 – Conclusioni di Marco Frey, Professore Ordinario del Centro di Ricerca Interdisciplinare sulla Sostenibilità e il Clima

A scuola di clima: ricerca e innovazione per un futuro sostenibile

Le iniziative della Scuola Sant’Anna per affrontare il cambiamento climatico

Le buone pratiche per combattere il cambiamento climatico. Un approccio multidisciplinare che mette in campo idee, progetti, soluzioni, sinergie per trovare risposte concrete alla crisi climatica.

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THE MAIN EVENT: “ADDRESSING CLIMATE CHANGE: A FEW CONTRIBUTIONS FROM SANT’ANNA”

Scuola Superiore Sant'Anna, in the multidisciplinary event organized on Monday, 20th November 2023, has presented ideas, projects, solutions and synergies to find concrete answers to the climate crisis.

Scholars from different Institutes and Research Centers of SSSA have presented interesting contributions at the event.
CARBON FOOTPRINT OF SCUOLA SUPERIORE SANT’ANNA

Like World Countries and Governments participating in COP conferences, Institutes for Higher Education are declaring their commitment against Climate Change by publishing Net Zero Carbon pledges.

“Since 2019, over 500 higher education institutions representing 4.6 million students, and 60 networks representing more than 17,000 colleges and universities, have committed to be Net-Zero by 2050 at the latest.”

General standards to calculate the carbon footprint of organizations exist (i.e. ISO 14064), but there is a lack of specific guidelines for Institutes for Higher Education.

What if all Universities calculate GHG emissions using their own methodology?

Institutes for Higher Education should be an example of scientific and methodological rigor. Scuola Superiore Sant’Anna wants to be a pioneer in the route toward carbon footprint calculation and methodological development.
OTHER EVENTS: BETWEEN OCTOBER AND NOVEMBER 2023

14 novembre ore 16- Aula Magna Storica, Sede Centrale Scuola Superiore Sant’Anna, Pisa
‘Addressing Climate Change: Legal and Philosophical Perspectives’
A cura dell’Istituto DIRPOLIS con i seguenti interventi:
- ‘Artificial Intelligence and the Anthropocene dilemma. The cybernetic digital revolution and climate emergencies’ di Barbara Henry, Professoressa Ordinaria, e Valentina De Gregorio, Allieva PhD
- ‘Climate change litigation: An international and tort law perspective’ di Riccardo Luporini, Assegnista di Ricerca, e Paola Merli, Assegnista di Ricerca
- ‘Forced environmental migrants as victims of ecological disorganisation? di Stefano Portolo, Allievo PhD
- ‘The normative framework for Earth Observation Technologies in the EU Common Agricultural Policy’ di Antonio Manzoni, Assegnista di Ricerca

14 novembre ore 14- Aula 3, Sede Centrale Scuola Superiore Sant’Anna, Pisa
‘Who takes the land? Quantifying the use of built-up land by economic sectors to assess biodiversity-related transition risks in France’ seminario con Mathilde Salin (CIREM and Banque de France)
A cura dell’Istituto di Economia

14 novembre ore 16- ARTES, viale Rinaldo Piaggio 34, Pontedera
‘CLIMAX – la sfida della sostenibilità e le nuove tecnologie’
a cura dell’Istituto di BioRobotica

14 novembre ore 19- Caffè Letterario Volta pagina, via San Martino 71, Pisa
‘Quante ne sai sul clima? Quiz a premi con ricercatori e ricercatrici di economia e cambiamento climatico’
A cura dell’Istituto di Economia

15 novembre ore 16- ARTES, viale Rinaldo Piaggio 34, Pontedera
‘CLIMAX – la sfida della sostenibilità e le nuove tecnologie’
a cura dell’Istituto di BioRobotica

20 novembre ore 20,30- Cinema Arsenale, Vicolo Scaramucci 2, Pisa
Proiezione del film ‘Honeyland’ di Tamara Kotevska e Ljubomir Stefanov (2019)
a cura del Centro di Ricerca di Scienze delle Piante

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ONE OF THE PROJECTS OF THE INSTITUTE OF MANAGEMENT

Progetto decarbonizzazione:

Percorso di formazione e sperimentazione di azioni per migliorare le strategie delle imprese toscane

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**WHY SUPPORTING SMES IN NET-ZERO TRANSITION IS CRUCIAL?**

The relevance of SMEs' GHG emissions (EU context)

- **Average annual emissions of SMEs**: 75 tons GHG
- **Average annual emissions of large companies**: 22,345 tons GHG

- **Share of GHG annual emissions by SMEs**: 64%
- **Share of GHG annual emissions by large companies**: 36%

99.8% of firms in EU are SMEs

0.2% of firms in EU are big enterprises

SMEs are behind Large companies in terms of strategies to reduce their carbon footprint.

<table>
<thead>
<tr>
<th>Q14</th>
<th>Does your company have a concrete strategy in place to reduce your carbon footprint and become climate neutral or negative? (% SMEs and large companies, EU27)</th>
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<tbody>
<tr>
<td>SMEs</td>
<td>Large companies</td>
</tr>
<tr>
<td>20%</td>
<td>Yes</td>
</tr>
<tr>
<td>19%</td>
<td>No, but you are planning to define a strategy</td>
</tr>
<tr>
<td>53%</td>
<td>No, and you are not planning to do so</td>
</tr>
<tr>
<td>4%</td>
<td>You are already climate neutral</td>
</tr>
<tr>
<td>4%</td>
<td>Don’t know/No answer</td>
</tr>
</tbody>
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Ipsos European Public Affairs (2022) - SMEs, green markets and resource efficiency

European Commission, (2022) - Annual report on European SMEs 2021/2022
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CONCLUSIONS

The role of companies is crucial in the net-zero transition. However, the support offered to that aim by other institutions, such as Universities (and local authorities), is essential.

**Synergies among them are needed.**
THANKS FOR YOUR ATTENTION!