



**Sant'Anna**  
Scuola Universitaria Superiore Pisa



**Sant'Anna**  
School of Advanced Studies – Pisa



**INTERDISCIPLINARY  
CENTER**

**Sant'Anna**  
Scuola Universitaria Superiore Pisa

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# THE UN GLOBAL COMPACT COMMUNICATION ON ENGAGEMENT (COE)

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Scuola Superiore di Studi Universitari  
e di Perfezionamento Sant'Anna

Period covered by this COE:  
June 2022 – May 2024

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## 1. Statement of Continued Support

Pisa, 28 May 2024

I am pleased to confirm that Sant'Anna School of Advanced Studies reaffirms the support of the United Nations Global Compact and its Ten Principles in the areas of Human Rights, Labour, Environment, and Anti-Corruption. This is our Communication on Engagement with the United Nations Global Compact. We welcome feedback on its contents

In this Communication of Engagement, we describe the actions that our organization has taken to support the UN Global Compact and its Principles as suggested for an organization like ours. We also commit to sharing this information with our stakeholders using our primary channels of communication.

Our goal is to help students and researchers become interpreters of the current global challenges and future leaders through excellence in education and innovation in research, always taking into account the social, economic and environmental pillars of sustainability, and pursuing the United Nations SDGs and the Global Compact Principles.

Our adhesion to the UN Global Compact since 2010 represents a coherent choice for advancing and promoting a sustainable, innovative, and better society for our future generations.

Sincerely,



Prof. Marco Frey

*Director, Sustainability Management Laboratory of the Institute of Management  
& Interdisciplinary Research Center on Sustainability and Climate  
at Sant'Anna School of Advanced Studies*

## 2. Description of Actions

### 2.1 Introduction

Sant'Anna School of Advanced Studies (*Scuola Superiore di Studi Universitari e di Perfezionamento Sant'Anna*, hereinafter SSSA or “The School”) is a public university institute, with special autonomy, founded in 1987 and located in Pisa, Italy. It operates in the field of applied sciences: Economics and Management, Law, Political Sciences, Agricultural Sciences and Plant Biotechnology, Medicine, and Industrial and Information Engineering.

It comprises eight Institutes:

- **Institute of Biorobotics**
- **Institute of Management**
- **Institute of Law, Politics and Development (Dirpolis)**
- **Institute of Economics**
- **Institute of Telecommunication, IT and photonics (Tecip)**
- **Institute of Mechanical intelligence**
- **Institute of Plant sciences**
- **Institute of Crop sciences**

In addition to these institutes, in 2018 SSSA established two “Departments of Excellence”: **Economics and Management in the era of Data Science (EMbeDS)** that uses the opportunities offered by Data Science in the disciplines of Economics and Management in collaboration with the Dirpolis Institute; and the **Robotics and Artificial Intelligence (Robotics & AI)** born from the collaboration of SSSA’s engineering institutes with the aim of creating a new generation of robots capable of autonomously and effectively impacting society.

More recently, the University has also developed **two interdisciplinary centers**, aimed at planning and managing research activities with an interdisciplinary vocation. They involve competences from more than one Institute and are developed in areas considered strategic for the research lines of Sant'Anna School: **Health Science** and **Sustainability and Climate**.

SSSA offers graduate programs (both Masters and PhD) that combine rigorous traditional courses with research, service learning, internships and entrepreneurship in both national and international contexts, whereas undergraduate programmes are run in conjunction with the University of Pisa.

Within SSSA, the **Institute of Management** has the broad mission of contributing to the advancement of knowledge in the field of managerial studies, educating managers for private and public organizations and generating a positive impact on the business environment and on society as a whole. It is active in three main research areas:

- **Innovation (MAIN)**
- **Sustainability (SuM)**
- **Healthcare (MeS)**



The **Sustainability Management Research Laboratory (SuM Lab)** combines knowledge of business management and policy making with the principles of sustainability, through scientific research and empirical investigation in the areas of *Environmental Management and Industrial Symbiosis; Energy and Resource Efficiency; Circular Economy and Natural Capital; Sustainable Products, Life-Cycle*

*Thinking and Green Marketing; CSR and Accountability; Climate Change and Disaster management.* It works and collaborates with different actors in Italy and at the European level: businesses, policy makers, public and private institutions, local communities, offering its high-level expertise on technical analysis, socio-economic analysis, policy and regulation, management and training, with the aim of advancing the principles of sustainability and responsible management.

The SuM Lab has a high level of skills on technical analysis, socio-economic analysis, policy and regulation, management and training for the promotion of sustainability in both private and public organizations. In particular, its areas of expertise includes: Corporate Environmental Management, Life-Cycle Management (LCA, LCCS-LCA) and the Product Environmental Footprint (PEF and OEF), Economics and Management of Voluntary Certification Schemes, Environmental Innovation and Competitiveness, Sustainable marketing, Environmental reporting, Stakeholder engagement, Environmental Innovation and green technologies assessment, Green Public Procurement, CSR, Health & Safety Management, Environmental economics, Public policies for Sustainable Local Development. The SuM Lab develops and implements innovative tools, guidelines and methodologies to contribute to the **Green Deal**, the European Commission's strategy to implement the United Nations' 2030 Agenda and achieve the Sustainable Development Goals. The SuM Lab has been managing European projects on **sustainability & energy management** since 2006.



The Interdisciplinary Research Center on Sustainability and Climate (CISC) is a transdisciplinary research area that operates in the fields of Social and Experimental sciences and promotes an interdisciplinary research strategy to effectively address global sustainability challenges.

The Centre fosters research, teaching, and the development of innovative solutions to issues related to sustainability and the pressing challenge of climate change.

The CISC uses the integrated framework of the Sustainable Development Goals of the 2030 Agenda of the United Nations to advance the causes of people, of the planet, of the shared prosperity, of peace and partnerships for current and future generations and to ensure the institutionalization of sustainability issues.

The CISC has the following objectives:

- The establishment of a multidisciplinary and potentially interdisciplinary research area, where the different skills of the various Institutes and research groups of Sant'Anna School of Advanced Studies dialogue together on sustainability, both internally and externally, by developing common research projects and training activities;
- The experimentation of new approaches and methodologies of interdisciplinary research and teaching;
- The increase of knowledge and awareness of sustainability in the national and international academic community, contributing to the 2030 Global Agenda for Sustainable Development, building networks of academic, institutional and civil society stakeholders.

The CISC comprises the following thematic areas:

1. Decarbonisation and adaptation to climate change
2. Innovation in energy transition
3. Circular economy and new materials
4. Provision of (agro)ecosystem services related to biodiversity
5. Sustainable Communities - Human Rights, Democratic Institutions and Peacebuilding
6. Africa and developing countries
7. The EU plan for sustainability and climate neutrality: structures, logic and dynamics of the Green Deal

**NOTE:** This report focuses on the work carried out by [the SuM Lab \(Sustainability Management Laboratory\)](#) of the Institute of Management and by the [CISC \(Interdisciplinary Research Center on Sustainability and Climate\)](#).

## 2.2 Incorporation of the UN Global Compact Principles into Internal Operations

The School embraces the UN Global Compact principles and promotes, in its various components, the elaboration and transmission of critical knowledge, aimed at social and personal development, inspired by the values of social and environmental sustainability, inclusion, social mobility and responsibility.

Sant'Anna School is committed to fight all forms of gender, cultural, linguistic, religious, sexual orientation, disability and socio-economic inequalities.

Sant'Anna School of Advanced Studies' [Strategic Plan 2020-2025](#) intends to enhance all the themes of sustainability as represented in the 2030 Agenda, as well as the values of inclusion and social mobility, with a particular focus on the theme of gender policies. In fact, cultural and structural obstacles to gender equality still persist in our societies, which determine, even in universities, a strong horizontal and vertical segregation.

To promote a culture of gender equality and sustainability, the School has drawn up three official documents:

### 1. The Gender Report

The School's [Gender Report](#) represents an important tool to address gender inequality with an integrated strategic approach that goes by the name of gender mainstreaming, through the specific lever constituted by a gender-sensitive assessment and review of the institution's policies. This means analyzing in depth the current context in order to identify every possible action to counter gender inequality.

### 2. The Sustainability Report

The Sustainability Report is the tool that aims to disseminate to the community the activities and challenges undertaken, in the period 2018-2020, by the School, highlighting the mission, values and principles that the institution has given itself and intends to pursue. The data collection and rationalization activities were coordinated by Prof. Marco Frey with the support of different Working Groups divided by thematic areas. The activities involved all the staff of the School.

- The 2022-2023 Sustainability Report of the School is available [here: Bilancio di Sostenibilità 2022-2023](#) (Italian language only).

### 3. The Gender Equality Plan

The adoption of the [Gender Equality Plan](#) is part of the European Strategy 2020-2025 for gender equality and was introduced by the Commission to promote gender equality in research and innovation. Precisely in order to strengthen the strategic commitment and at the same time reiterate the need for continuous integration of the gender dimension in all policies and programs of the European Union, this measure is a requirement for access to funding from the Horizon Europe Program (2021-2027) for all research organizations and Higher Education Institutions.

In addition, the [Code of Ethics](#) of Sant'Anna School of Advanced Studies emphasizes the centrality of the existence of a supportive community, the promotion of merit as the primary constitutional value and fundamental instrument of social mobility and the valorisation of differences. The code also highlights the pursuit of transparency, impartiality and integrity, and the central role and freedom of students as well as academic freedom and freedom of research. Special emphasis is given to the norms on "favoritism and nepotism" and on the "conflict of interest", providing concrete measures to fight them.

The School adheres to the "**Manifesto of the Inclusive University**" promoted by the United Nations Refugee Agency (UNHCR), to facilitate the access of refugees to university education and to promote social integration and active participation in academic life. The School is also a partner of **Scholar at Risk Italy**, an international network of universities founded in 1999 at the University of Chicago to promote academic freedom and protect scholars whose lives are in danger or whose work is severely compromised.



## 2.3 Educational Programmes on Topics Related to Sustainability and to the Global Compact Ten Principles

The School has consolidated and improved its **educational programmes for students at the under-graduate and post-graduate levels**. We provide here below a brief description of some of the programmes offered by our University that address topics related to sustainability and to the Global Compact Ten principles

**Under-graduate classes** on topics such as Energy Resource Management; Circular Economy: implications and opportunities for business and policy making; Business contribution to Agenda 2030; Business strategies and sustainability. One of SSSA key values is the pursuit of merit as a means for ensuring substantive equality and transparency. Undergraduate degrees are awarded in partnership with the University of Pisa. Students at the University of Pisa sit rigorous entrance exams for studying at SSSA, and they are required to achieve top marks and demonstrate proficiency in two foreign languages. In return, they benefit from free scholarships.

The **Master of Science in Innovation Management (MAIN)**, jointly offered by the Institute of Management of SSSA and the Department of Economics and Management of the University of Trento, is a two-year full-time program ("Laurea Magistrale") that equips national and international students with advanced knowledge and practical experience on innovation management.



It provides sound knowledge of the innovation processes across industries, based on solid foundations in economics and management, a quantitative approach and the exposure to a mix of cultures. The programme includes a Sustainability Management course that aims to provide students with knowledge of corporate sustainability, its background, its objectives and operating modalities. It refers to the current trends in the way organizations respond to the increasing environmental, social and technological challenges, in the perspective of the UN Agenda 2030. A specific focus is dedicated to the analysis of the connections between corporate strategy and corporate sustainability and to the impact of corporate sustainability on business functional organizational structures and on business performances. The course deals with key concepts such as how organizations impact on the environment and socio-technical systems, the relationship between social and environmental performance and competitiveness, the approaches and methods (e.g. organizational, managerial and operational tools) that can be adopted to effectively manage these issues.



The II level **Master's Programme in "Environmental Management and Control: circular economy and efficient management of resources" (GECA)**, offered by the SuM Lab

of the Institute of Management, is designed to provide outstanding training to those who want to work in sectors in which the circular approach to economics and the efficient management of resources in an integrated cycle perspective are key aspects. The Master is based on a multidisciplinary approach aimed at creating systemic skills in the management of environmental issues, with particular reference to waste, water, energy, ecosystem services. It trains professionals that can support companies and organizations in the creation of a circular economy, also taking into consideration the 2030 Agenda for Sustainable Development. The program is divided into two different phases:

- 1) Classroom lectures; field-visits to companies operating in relevant areas; Laboratories (action learning activities through case studies in collaboration with companies);
- 2) Internship with final project work.

The II level [Master in Human Rights & Conflict Management](#) offered by the Institute of Law, Politics and Development is designed to provide students from different cultures and backgrounds with a deep understanding of the linkages between human rights and conflict management theory and practice. The curriculum, strongly field oriented, prepares participants to work with NGOs, governments, aid agencies, the UN system and regional organisations, also operating in the context of complex emergencies and joint operations. The postgraduate programme is under the patronage of the United Nations Regional

Information Centre (UNRIC) and is organised in collaboration with the International Research Laboratory on Conflict, Development and Global Politics and with the International Training Programme for Conflict Management – ITPCM – of SSSA.

The international [Ph.D. in Management – Innovation, Sustainability and Healthcare](#) is a three-year training programme that deals with the main topics in management with a strong interdisciplinary approach. Its areas of study characterise the current research activities of the Institute of Management, in particular:

- the **management of innovation** includes topics such as Open Innovation, technology transfer, cost accounting, finance for innovation, purpose driven organisations, tourism management, neuro-marketing, technological innovation in healthcare;



**Master in Human Rights and Conflict Management**

**DESCRIPTION**

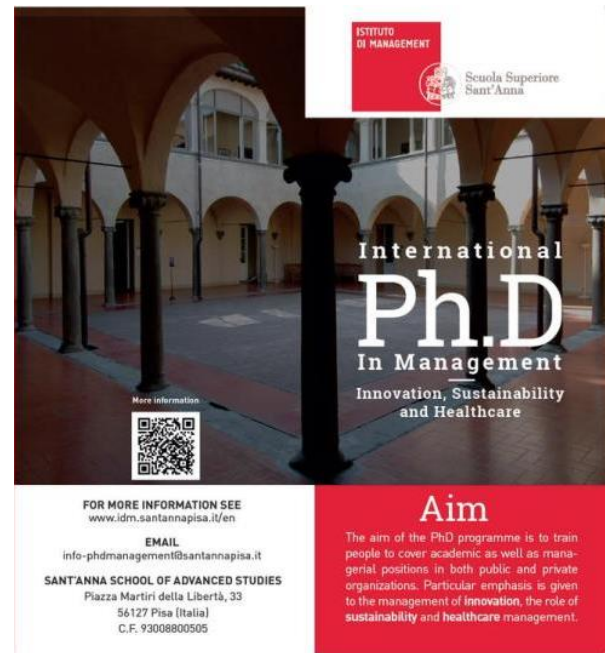
The Master in Human Rights and Conflict Management is designed to provide students from different cultures and backgrounds with a deep understanding of the linkages between human rights and conflict management theory and practice. The curriculum, strongly field oriented, prepares participants to work with NGOs, governments, aid agencies, the UN system and regional organisations, as well as to operate in the context of complex emergencies.

**STRUCTURE**


The Master is a one-year post-graduate programme. It starts on January 14, 2020 and runs until Spring 2021. The Programme encompasses about 400 hours of classroom lectures and 480 hours of internship, in addition to individual studying and to the preparation of a written thesis. Classroom lectures are usually from Monday to Friday and run from January 2020 to the end of July 2020. The internship lasts three or more months, starting from August/September 2020.

[humanrights@santannapisa.it](mailto:humanrights@santannapisa.it)

- the **management of sustainability** combines the knowledge of business management and policy making with the principles of sustainability, through scientific research and empirical investigation;
- the **management of healthcare** covers a wide range of topics from health policies, performance measurement, innovative models of healthcare delivery and organisation, to the study of decision-making processes that guide the choices of health professionals and users.



International  
**Ph.D**  
In Management  
Innovation, Sustainability  
and Healthcare

More information  


FOR MORE INFORMATION SEE  
[www.idm.santannapisa.it/en](http://www.idm.santannapisa.it/en)

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**Aim**  
The aim of the PhD programme is to train people to cover academic as well as managerial positions, in both public and private organizations. Particular emphasis is given to the management of innovation, the role of sustainability and healthcare management.



The international [Ph.D. in Human Rights and Global Politics: Legal, Philosophical and Economic Challenges](#) offered by the Institute of Law, Politics and Development, is a three-year programme that provides an educational

path that enables participants not only to carry out sound academic research, but also to undertake professional careers within a wide range of international, national and regional entities, in both the private and the public sectors. The Programme addresses the issue of Human Rights (Legal Dimensions of Sustainability and Human Rights Protection) and Global Politics, and is characterized by a strongly interdisciplinary approach, which implies the intersection among the research areas of: Agricultural, food and agri-environmental Law; Public International Law; Political Economy; Political Philosophy.

The new [Ph.D. Course in Health Science, Technology and Management](#), introduced in 2020, involves the 6 Institutes of Scuola Superiore Sant'Anna (Life Sciences, Biorobotics, TeCIP, Management, Dirpolis, Economics). It adopts of a multi- and interdisciplinary approach and focuses on the topics of health and equity of the health systems (HS): characterized by complexity, interdisciplinarity and dynamism, they require innovation and management skills to be sustainable and ensure adequate levels of care for their clients. This course aims to train researchers and professionals with an interdisciplinary background in order to face the most current challenges:



- the development of tailored strategies for health management in internal areas, ensuring both the proximity of patient services and the excellence of the healthcare offer;
- the improvement of relations between different HS both at national interregional level and between States;
- reducing the gap between the advancement of knowledge and technological advancements and their implementation within the processes of diagnosis and treatment
- the resilience of the HS in emergency health situations, such as the Covid-19 pandemic; the defense of the most fragile categories among the population by age, sex, comorbid condition, wealth, fragility, health coverage;
- the analysis of the values of family, work, social, intergenerational relationships in the evolution of the categories of pathology;
- improving relations between different HS both at national interregional, and international level between States;
- the assessment of the impact of ethical-legal aspects of health processes, in particular in matters relating to the citizens' privacy and health.

The School also participates, in an associated form, in ten Doctorate programs. In particular, the following PhD programs embrace the Global Compact Principles and the SDGs:

- The [PhD programme in Sustainable Development and Climate Change](#), coordinated by IUS Pavia, aims to create a new generation of researchers and experts who contribute to designing a fairer and more sustainable society, addressing technological, economic, social and environmental problems through a multidisciplinary approach, with particular focus on immigration, health, justice, pollution, access to water and food.
- The [PhD programme in Scientific, Technological and Social Methods enabling Circular Economy](#), in collaboration with the **University of Padova**, aims to train researchers in providing innovative solutions to facilitate the transition from the linear economy model to the circular economy model.
- [National PhD in Gender Studies](#), in association with the University of Bari Aldo Moro and the University of Macerata, promotes research on the ways in which power relations, based on multiple and overlapping forms, produce discrimination and generate conflicts and violence.

In 2020 SSSA launched the [Seasonal Schools](#), short training programmes “of excellence”, which are strongly interdisciplinary, and focused on the School’s frontier research topics. They are open to University students enrolled in Bachelor Degree, Masters’ Degree and PhD courses, who have the same advancement



**Sant'Anna**  
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**Seasonal  
Schools**



characteristics as the School's students. The Seasonal Schools are also opportunities for meetings and exchanges with other high-performing students from all over Italy as well as from abroad, to be experienced "inside" our facilities and laboratories. The following courses were established for the academic year 2023-2024 that address issues related to the Global Compact principles:

- CESM - Circular Economy and Sustainability Management: managing the transition towards a circular economy;
- Food, Sustainability and Rights;
- WAT-CHANGE: water-related ecosystem services for adapting societies to climate change;
- BRI – Biodiversity and business: from Research to Impact;
- ECLIRE - The Ethics of Climate Change: Reshaping Responsibilities for Present and Future Generations;
- AgriDev - Climate resilient, biodiversity-based agriculture for sustainable development;
- PLANETHEALTH - A multidisciplinary approach to preventing and treating the effects of planetary health disruption on human health;
- PROREMOTE - PROximity care in REMOTE areas: A multidisciplinary approach to proximity care in remote areas;
- AFRICONNECTIONS - Transdisciplinary approaches to Development, Security and Innovation;
- Gender Studies and Feminist Theory - A Multidisciplinary Perspective.

The 2023-2024 Seasonal Schools full programme is available [here](#).

In addition to the educational offer for national and international students, the University offers **Higher Education training courses for public and private entities**. Among these, the Sum Lab has developed executive courses on the *Circular Economy for business*. The aim of the courses is to train managers who will take care of the transition from a linear economy to a circular economy.





## 2.4 Research and Thought Leadership to Advance Sustainability Best Practices, the Global Compact Principles and the SDGs

### 2.4.1 Publications

In terms of research achievements, below we list the **main publications of the researchers of the SuM Lab and the CISC** of the past two years:

- Alosi, A.; Annunziata, E.; Rizzi, F.; Frey, M. (2023), Conceptualising active management of paradoxical tensions in corporate sustainability: A systematic literature review; *BUSINESS STRATEGY AND THE ENVIRONMENT*.
- Annesi, Nora (2023); *Agenda 2030: la transizione pubblica e privata verso la sostenibilità globale*; FrancoAngeli srl.
- Annesi, N.; Battaglia, M.; Frey, M. (2023); *Sustainability in Sport-Related Studies: A Non-Systematic Review to Increase the Sports Contribution to the 2030 Agenda*; *PHYSICAL CULTURE AND SPORT STUDIES AND RESEARCH*.
- Annesi, N.; Battaglia, M.; Sganzzetta, L. (2023), Mutual benefits of sustainability integration in the value chain: Responsible innovation by public utilities ; *UTILITIES POLICY*.
- Annesi, N; Cucino, V. (2023), *La collaborazione locale come driver all'innovazione sostenibile: uno studio esplorativo sugli attori chiave nel settore agroalimentare*; Fondazione CUEIM.
- Annunziata, E.; Pucci, T.; Cammeo, J.; Zanni, L.; Frey, M. (2023), The mediating role of exogenous shocks in green purchase intention: evidence from italian fashion industry in the Covid-19 era; *ITALIAN JOURNAL OF MARKETING*.
- Barontini, R; Miroshnychenko, I; Tagliatalata, J; Testa, F. (2023); *Do effective corporate boards prevent greenwashing?*
- Barontini, R; Miroshnychenko, I; Tagliatalata, J; Testa, F (2023), *Board characteristics and the alignment between environmental communication and practices.*
- Barontini, R; Miroshnychenko, I; Tagliatalata, J; Testa, F. (2023); *Do board policies matter for the (mis)alignment between green operational and communication practices?*
- Battaglia, M; Annesi, N (2022), *Barriers to organizational learning and sustainability: The case of a consumer cooperative*; *JOURNAL OF CO-OPERATIVE ORGANIZATION AND MANAGEMENT*.
- Bianchi, G.; Testa, F.; Tessitore, S.; Iraldo, F. (2022), *How to embed environmental sustainability: The role of dynamic capabilities and managerial approaches in a life cycle management perspective*; *BUSINESS STRATEGY AND THE ENVIRONMENT*.
- Bianchi, G.; Testa, F.; Boiral, O.; Iraldo, F. (2022) *Organizational Learning for Environmental Sustainability: Internalizing Lifecycle Management*; *ORGANIZATION & ENVIRONMENT*.
- Ceglia, I; Battaglia, M; Annesi, N. (2022), *Sinergie-SIMA 2022 Management Conference Boosting knowledge & trust for a sustainable business*; *SINERGIE SIMA*.
- Collevocchio, F.; Gionfriddo, G.; Todaro, N.M. (2023), *Come il network aziendale influenza la performance finanziaria? Il ruolo di mediazione della sostenibilità aziendale*; Fondazione CUEIM.
- Corsini, F.; Gusmerotti, N.M.; Frey, M. (2023), *Fostering the Circular Economy with Blockchain Technology: Insights from a Bibliometric Approach*; *CIRCULAR ECONOMY AND SUSTAINABILITY*.



- Corsini, F; Gusmerotti, N.M.; Testa, F.; Borghini, A. (2022); The role of cognitive frames towards circular economy practices in SMEs; SINERGIE.
- Corsini, F.; Frey, M. (2023), Crowdfunding sustainable products with the product search matrix: niche markets vs. mass markets; ELECTRONIC COMMERCE RESEARCH.
- Corsini, F.; De Bernardi, C.; Frey, M. (2023), Industrial symbiosis as a business strategy for the circular economy: identifying regional firms' profiles and barriers to their adoption; JOURNAL OF ENVIRONMENTAL PLANNING AND MANAGEMENT.
- Corsini, F; Frey, M. (2023), Extended Producer Responsibility as a Driver of Firms' Ecodesign: A Systematic Literature Review and Critical Assessment; INTERNATIONAL REVIEW OF ENVIRONMENTAL AND RESOURCE ECONOMICS.
- Corsini, F; Annesi, N; Annunziata, E; Frey, M. (2023); Exploring success factors in food waste prevention initiatives of retailers: the critical role of digital technologies; BRITISH FOOD JOURNAL.
- Cucino, V.; Marullo, C.; Annunziata, E.; Piccaluga, A. (2023); The human side of entrepreneurship: an empirical investigation of relationally embedded ties with stakeholders 2023; MANAGEMENT RESEARCH REVIEW.
- Daddi, T.; Todaro, N. M.; Marrucci, L.; Iraldo, F (2022), Determinants and relevance of internalisation of environmental management systems; JOURNAL OF CLEANER PRODUCTION.
- De Giacomo M.R., Frey M. (2022), How does eco-innovation affect sustainable business model change? Case studies on green energy projects; SINERGIE.
- De Giacomo, Maria Rosa (2022), The environmental performance of UK-based B Corp companies: An analysis based on the triple bottom line approach; BUSINESS STRATEGY AND THE ENVIRONMENT.
- De Giacomo, Maria Rosa (2023), Circular Economy as an emergent form of economic and social exchange: A new theoretical framework to study the circular economy diffusion; IMPRESA PROGETTO.
- De Giacomo, Maria Rosa (2023), L'organizzazione dell'innovazione eco-sostenibile. Il ruolo delle piattaforme digitali di tipo corporate; Franco Angeli srl.
- Di Iorio, V.; Testa, F.; Korschun, D.; Iraldo, F.; Iovino, R. (2023); Curious about the circular economy? Internal and external influences on information search about the product lifecycle.
- Di Minin, Alberto; Testa, Francesco; Cucino, Valentina; Tosi, Duccio; Ontano, Gianmaria; Tartari, Valentina; Dahlmann, Frederik; Unter, Kerrigan Marie Machado; Walls, Judith Louise; Holland, Claire; McCarthy, Adam; De Oliveira, Priscila Ferri; Shapira, Philip; Figge, Frank; Thorpe, Andrea Stevenson; Darnall, Nicole; Russo, Michael V.; Banerjee, Bobby; (2023); The Biodiversity Moonshot. System Thinking to Co-Create a Biodiversity Embedded Future for Companies; Academy of Management Annual Meeting Proceedings.
- Ellsworth-Krebs, K.; Niero, M.; Jack, T. (2023); Feminist LCAs: Finding leverage points for wellbeing within planetary boundaries; SUSTAINABLE PRODUCTION AND CONSUMPTION.
- Frey, M. (2022), L'evoluzione dell'impresa: dall'autoipotesi, al valore condiviso, al purpose; Egea.
- Frey, M. (2022), Un'evoluzione strategica all'insegna della sostenibilità, HARVARD BUSINESS REVIEW ITALIA
- Frey, M. (2022), Qualità e autocontrollo negli enti del terzo settore; Pisa University Press.
- Frey, M. (2022) La sostenibilità delle catene di fornitura; Egea.
- Frey, M. (2023), La sfida della sostenibilità nella prospettiva delle imprese; TELOS
- Frey, M. (2023), La misurazione d'impatto: aspetti metodologici; Quaderni del Salone della CSR.
- Frey, M. (2023); Politiche internazionali; Fondazione Symbola, Unioncamere
- Frey, M. (2023); Principi metodologici e nuovi paradigmi - L'ecologia industriale; DOSSIER AMBIENTE.
- Frey, M. (2023); Il ritardo nel management della diversità in Italia e alcune rilevanti azioni in atto; IMPRESA PROGETTO.
- Frey, M (2023); La misurazione dell'economia circolare. Dalle prime esperienze agli standard; GNOSIS.



- Giacomelli, G; Annesi, N; Barbieri, M. (2023), Telework and job satisfaction in knowledge-intensive public organizations: a quali-quantitative analysis from an environmental protection agency in Italy; *JOURNAL OF PUBLIC BUDGETING, ACCOUNTING AND FINANCIAL MANAGEMENT*.
- Gionfriddo, G; Rizzi, F; Daddi, T; Iraldo, F (2023), The impact of green marketing on collective behaviour: Experimental evidence from the sports industry; *BUSINESS STRATEGY AND THE ENVIRONMENT*.
- Gionfriddo, G.; Licari, D; Testa, F.(2022); Overcoming Reductionist CSR: Empirical Evidence on the Formative Movement from CSR Talk to CSR Walk; *Academy of Management Proceedings*.
- Gionfriddo, G; Licari, D; Testa, F; Piccaluga, A.M. (2022); On the gap between CSR Talk and CSR Walk: Linguistic-based evidences of a formative and iterative process; *Fondazione CUEIM*.
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### 2.4.2 International Research Projects

Our University coordinates and participates in national and international research projects that focus on environmental sustainability and advance the Global Compact Principles and the SDGs.

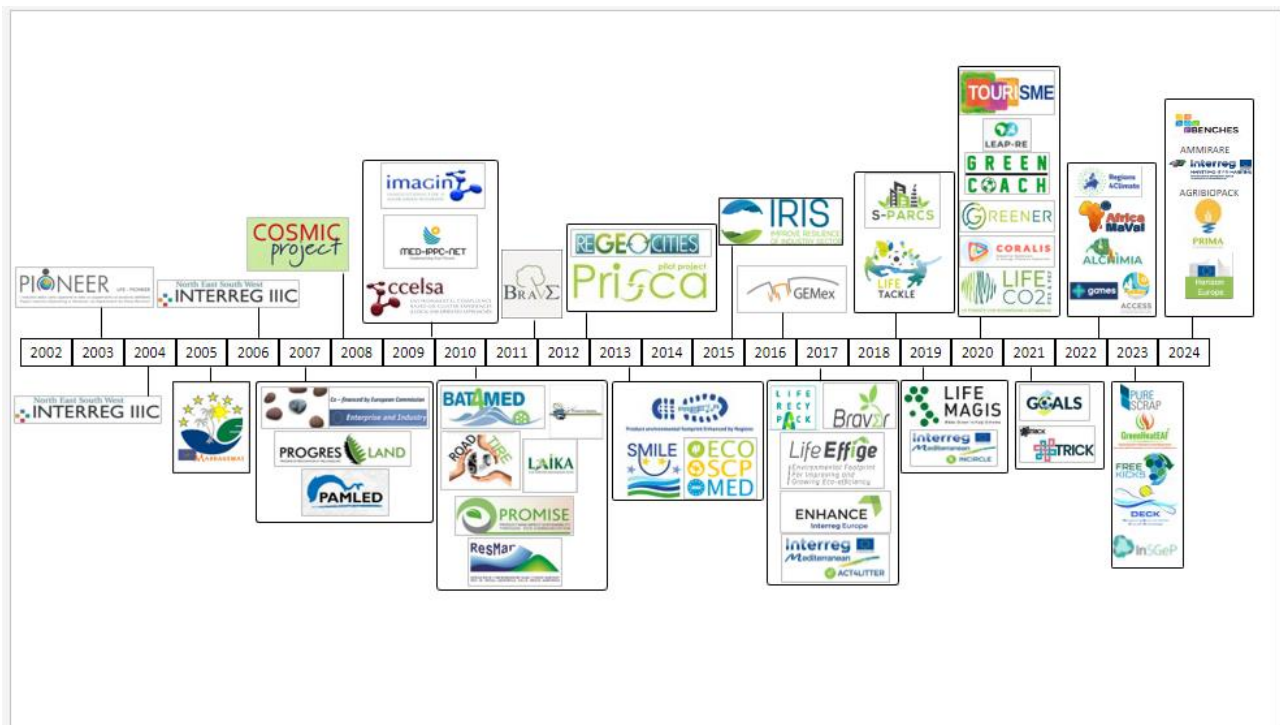



Figure 1: Sant'Anna environmental sustainability projects timeline

The table below lists the international research projects funded by the European Union and developed by the Sustainability Management (SuM Lab) of the Institute of Management and by the Interdisciplinary Center on Sustainability and Climate (CISC) of SSSA, that have been

active during this reporting period. These projects are carried out in partnership with public and private institutions and the School is either Project Coordinator or Partner.

	<p style="text-align: center;"><b>INTERNATIONAL RESEARCH PROJECTS</b></p> 
<p><b>Horizon Europe MED-IREN: Mediterranean critical Infrastructure Resilience Engineering with Nature based solutions</b></p> 	<p>The Med-IREN project aims to provide actionable demonstration on how to climate proof the Mediterranean critical infrastructures, across critical sectors, by introducing NBS both in terms of improving climate risk management and sustaining their business continuity to extreme climate change. The project will be showcased in five lighthouse regions across the mediterranean, each corresponding to a present day challenge, that are aligned with regional policies and can constitute the EU as a global leader in the field. Med-IREN will cover different and diverse types of CI (energy, transport, water, ICT, social), priority climate hazards within the Mediterranean, which is a climate hot-spot, and NBS interventions. In parallel, the interventions and solutions will be replicated into four more regions across the EU, covering the Mediterranean, Black Sea and Boreal regions. Med-IREN will also provide evidence how key enabling conditions, such as participatory governance and citizen engagement, novel forms of financing, innovative urban/landscape planning and capacity building will support regional systemic transformation and provide the upscaling and replication mechanism within Mediterranean regions and beyond.</p> <p>Project period: 01.10.2024 – 30.09.2028 (Partner) Total budget: € 10 353 273; Budget Sant'Anna: € 191 250</p>
<p><b>PRIMA AGRIBIOPACK: Valorizing Agrifood Residues for Bio-based Packaging Solutions</b></p> 	<p>The AgriBioPack project seeks to revolutionize packaging in the Mediterranean food supply chain by developing innovative bio-based active packaging solutions. These solutions, including films, mats, and coatings, are designed to modulate the microbiome in Mediterranean products, effectively extending their shelf life and reducing food waste. The project's specific objectives are:</p> <ol style="list-style-type: none"> <li>1. Identify and select promising agrifood residues for biopolymer and bioactive compound extraction, creating a comprehensive database for sustainable resource utilization.</li> <li>2. Extract and characterize biopolymers, functional compounds, and microbiomes from selected residues for use in packaging solutions.</li> <li>3. Explore alternative production routes, including fermentation processes, to harness microbiome-based approaches for food preservation.</li> <li>4. Optimize biopolymer-based films and coatings, incorporating recovered constituents from agrifood residues, to maximize shelf-life extension.</li> <li>5. Evaluate the developed packaging solutions for barrier properties, mechanical strength, and their ability to reduce food waste, while ensuring safety and consumer satisfaction.</li> <li>6. Integrate ICT-based solutions, including in-pack sensors and smartphone applications, to enable real-time monitoring of food products, thereby enhancing food safety and reducing waste.</li> <li>7. Assess the environmental impact and cost-effectiveness of bio-based packaging solutions, promoting eco-friendly practices in the food supply chain.</li> </ol> <p>Project period: 01.06.2024 – 31.05.2027 (Partner) Budget Sant'Anna: € 128 665</p>
<p><b>Interreg Italia-Francia Marittimo AMMIRARE: Azioni e Metodologie per il Miglioramento della</b></p>	<p>The objective of the project is to increase the inherent resilience of the beach system by improving the process of adaptation to CC. The partnership, representative of the crossborder scenario, implements pilot actions based on the concept of natural-based solutions (NbS)</p>

<p><b>Resilienza degli AREnili</b></p>   <p>Co-finanziata dall'Unione europea Cofinancé par l'Union européenne</p> <p>Marittimo-IT FR-Maritime</p>	<p>combined with innovative monitoring systems and tools for contrasting and predicting the effects of CC on the beach system. AMMIRARE is based on an approach of sharing and cooperation between partners and between local actors in the territories involved. Its innovative approach combines applied research activities with co-ordinated governance tools that combine ecological, morphological and socio-economic aspects of coastal management. The project envisages the realisation of four main outputs including the AMMIRARE Platform, a technological tool that supports regions in their decision-making processes on solutions to be implemented in a CC scenario. The target groups benefiting from the outputs, the numerous deliverables and the many communication and training initiatives are: local, regional and national public authorities, SMEs, citizens and tourists as well as research institutes.</p> <p>Project period: 01.03.2024 – 30.08.2027 (Coordinator) Total budget: € 5 337 402; Budget Sant'Anna: € 789 340</p>
<p><b>ERASMUS+ SPORT</b> <b>BENCHES: Biodiversity, Ecosystems and Nature Conservation Helped and Enhanced by Sports</b></p> 	<p>The BENCHES project focuses on this interaction between Sport and Nature: it aims to increase the understanding of the pressures created by the sports industry on its surrounding ecosystems and to support sport organizations in their adoption of biodiversity management practices and of good environmental governance. It also supports the inclusion of actions and commitments aimed at biodiversity preservation and enhancement in sport organizations' sustainability strategies. BENCHES indeed involves three international federations (World Athletics, the International Biathlon Union and World Sailing), one national federation (the Italian Federation of Canoeing and Kayaking) and a national football team (SL Benfica).</p> <p>Project period: 01.02.2024 – 31.01.2027 (Coordinator) Total budget: € 400 000; Budget Sant'Anna: € 106 500</p>
<p><b>Support for the Evaluation of the Environmental Impact of the EU Eco-Management and Audit Scheme (EMAS) - Framework contract</b></p> 	<p>This study, commissioned by the European Commission's DG Environment, will provide an assessment of the EMAS scheme over the past five years (2018-2023), particularly in terms of effectiveness and efficiency, and identify lessons learned. In particular, the study will focus on the most recent changes to the legislation and their effects. The Consortium will identify a sample of other environmental management schemes (EMS), in agreement with the European Commission, and compare EMAS with these schemes in relation to both their environmental, economic and social benefits. The assessment will be conducted in line with the European Commission's Better Regulation Guidelines (BRGs).</p> <p>Framework period: 01.10.2023 – 01.04.2024</p>
<p><b>InSGeP: Investigations of Slags from Next Generation Steel Making Processes</b></p> 	<p>The InSGeP project aims to understand the potential impact of next-generation steel production on the resulting by-products, such as slag. The project investigates the production of steel using Direct Reduced Iron (DRI), Hot Briquetted Iron (HBI) and their combination with scrap in Electric Arc Furnace (EAF), Metal Recycling Furnace or Hydrogen Plasma Smelting Reduction (HPSR), as well as the quality of the resulting slag and the possible recycling or utilization routes the slag may have.</p> <p>Project period: 01.07.2023 – 30.06.2027 (Partner) Total budget: € 4 458 061; Budget Sant'Anna: € 101 000</p>



<p><b>Promotion of Circular Economy Tools and Policies - Framework Contract</b></p> 	<p>The service, commissioned by the European Commission's Environment Directorate-General, aims to promote and adopt sustainable consumption and production practices in line with Action Plan 2 on the circular economy. Although the principles, tools and good practices of the circular economy are now well known by many stakeholders, the successful transition to a circular economy model requires increased awareness and adoption of these principles and practices by a wider variety of actors, (producers, consumers, policy makers, sector specialists, etc.). It also requires that the efforts made so far continue over time to ensure the sustainability of the changes in the long term. To this end, the project aims to build and increase stakeholder involvement through effective outreach and promotion of the tools managed by DG Environnement, with an emphasis on sustainable consumption and production (SCP). Scuola Superiore Sant'Anna is part of a partnership of 16 companies led by IBF International Consulting S.A.</p> <p>Framework period: 01.05.2023 – 30.04.2027</p>
<p><b>ERASMUS+ SPORT FREEKICKS: Football Relies on EMAS and ECOLABEL to Keep Innovating on Circularity as a Key for Sustainability</b></p> 	<p>FREE KICKS triggers the transition of the football scene towards the goals of the Green Deal at collective and individual levels, by supporting 1) the uptake of leading-edge environmental management practices and sustainable organizational models among national football associations and professional clubs, and 2) climate-conscious and environment-friendly behavioural patterns among football organizations. FREE KICKS tests transformational governance through the diffusion and the adoption of EU management tools such as EMAS, EU Ecolabel, PEF/OEF to trigger football organizations systemic change in line with Green Deal. FREE KICKS, with the support of UEFA and ECA, targets 5 professional football organizations in 4 partner countries and 1 associated country to devise governance and operational solutions that are suitable to a large audience of sport organizations. By engaging a club outside Europe, FREE KICKS aims at understanding similarities and differences in terms of environmental impact.</p> <p>Website: <a href="https://www.free-kicks.eu/">https://www.free-kicks.eu/</a></p> <p>Project period: 01.01.2023 – 30.06.2026 (Coordinator)</p> <p>Total budget: € 450 000; Budget Sant'Anna: € 105 000</p>
<p><b>ERASMUS+ SPORT DECK: Developing environmental and circular knowledge</b></p> 	<p>The main objective of DECK is to increase the awareness and to foster the adoption of environmental management and circular economy practices by sport key actors in order to improve sustainability during canoe and kayak competitions. DECK leverages the role of national canoe and kayak federations (NFs) to foster the transition of the canoe and kayak sector towards circular economy, by supporting the adoption of innovative environmental governance tools among participating NFs – federations of Italy, Croatia, Slovenia and Greece – and the integration of leading-edge environmental practices in canoe and kayak competitions' operations. DECK addresses the lack of environmental governance capabilities and sustainability management competences among sport organizations in Europe, by tailoring environmental governance tools and deliverables to the needs of participating organizations, with the aim to improve the environmental performance of sport events, along all events' life-cycle phases (from planning to closure and post-event).</p> <p>Website: <a href="https://www.deckproject.eu/">https://www.deckproject.eu/</a></p> <p>Project period: 01.01.2023 – 30.06.2026 (Partner)</p> <p>Total budget: € 450 000; Budget Sant'Anna: € 103 200</p>

<p><b>HORIZON EUROPE:</b> <b>GreenHeatEAF - Gradual integration of REnewable non-fossil ENergy sources and modular HEATing technologies in EAF for progressive CO2 decrease</b></p>  <p>Gradual integration of REnewable non-fossil ENergy sources and modular HEATing technologies in EAF for progressive CO2 decrease</p>	<p>EAF steelmaking is the key technology for decarbonised steelmaking, either in scrap-based plant by modification of existing processes for further decarbonisation, or as new EAF installations in decarbonised integrated steel works to (partly) replace the classical BF-BOF production. The project develops and demonstrates the most important decarbonisation approaches at EAFs including the use of hydrogen to replace natural gas combustion in existing or re-vamped burners or innovative technologies like CoJet. The project includes the Life Cycle Assessment (LCA) of the proposed scrap management and the assessment of economic viability by a Life Cycle Costing (LCC) analysis.</p> <p>Project period: 01.01.2023-31.06.2026 Total budget: Total budget: € 3.564.248; Budget Sant'Anna: € 458.000 (Coord)</p>
<p><b>HORIZON EUROPE:</b> <b>PURESCRAP - Purity improvement of scrap metal</b></p> 	<p>The objective of the project PURESCRAP is to increase the use of low-quality scrap grades (post-consumer scrap) by deploying and applying best available technologies to reduce impurities. This is achieved through novel sensor combinations and analysis supported by artificial intelligence. A key part is the connection between scrap sorter and the steel industry which are the consumers of the scrap. The project includes a Life Cycle Assessment (LCA) of the proposed scrap management and the assessment of economic viability by a Life Cycle Costing (LCC) analysis. The proposed innovation of PURESCRAP has the ambition to go far beyond industrial state-of-the-art to achieve a higher recycling rate of post-consumer scrap compared to the usual practice for a specific steel quality.</p> <p>Project period: 01.01.2023-31.03.2026 Total budget: Total budget: € 4.997.062; Budget Sant'Anna: € 455.334 (partner)</p>
<p><b>HORIZON EUROPE:</b> <b>Regions4Climate</b></p> 	<p>Regions4Climate partners commit to address current and forecasted climate change-related challenges and build more resilient European communities within an innovative socially engaged, citizen-driven paradigm. The project aims to develop smarter, more inclusive, more resilient regional ecosystems through crosssectoral innovation jointly created with stakeholders, by and for people. New scientific insights, along with a framework of interoperable tools, methodologies and demonstrated solutions will enable European regions to develop their own resilience plans and transformative adaptation pathways.</p> <p>Website: <a href="https://regions4climate.eu/">https://regions4climate.eu/</a> Project period: 2022 -2027 Total budget: € 24 522 103; Budget Sant'Anna: € 96 250</p>
<p><b>Horizon Europe</b> <b>ALCHIMIA - DATA AND DECENTRALISED ARTIFICIAL INTELLIGENCE FOR A COMPETITIVE AND GREEN EUROPEAN METALLURGY INDUSTRY</b></p> 	<p>The project aims at building a platform based on Federated Learning and Continual Learning to help big European metallurgy industries unlock the full potential of Artificial Intelligence to support the needed transformations to create high-quality, competitive, efficient and green production processes. ALCHIMIA will find an optimal mix to reduce energy consumption, emissions and waste generation of the steelmaking process, while also guaranteeing to obtain high-quality products.</p> <p>Project period: 01/09/2022 - 31/08/2025 Total budget: € 3 554 971; Budget Sant'Anna: € 205 000 (Partner)</p>

<p><b>Erasmus+ Sport GAMES - GREEN APPROACHES IN MANAGEMENT FOR ENHANCING SPORT</b></p> 	<p>The main objectives of GAMES are to increase the awareness and to foster the adoption of climate change practices by sports' key actors in order to improve sustainability during sports events. Grounding on the shortcomings that characterise the current governance of sport events, in order to prevent and reduce environmental impacts during these events and to fight climate change, the project focuses its activities on the whole sport event's life cycle, in particular with regard to Athletics, Floorball and Biathlon.</p> <p>GAMES will analyse the current climate change governance and management models adopted by partner sport organizations. It will support sports organisations in developing a Roadmap for the decarbonisation of their activities, through the definition of a strategic set of objectives, programs and a coherent operational framework of actions aimed at mitigating, neutralising or offsetting greenhouse gas emission. Moreover, a carbon footprint analysis will be carried out in order to support sport organisations in identifying the most suitable solutions to reduce their climate impacts. The goal of reducing GHG emissions will also be pursued through strategies and interventions at the organizational level, as well as through national and international public policies. To pursue this goal, sport organizations in particular define effective mitigation and reduction strategies in line with their role as players in the society. An important step for improving environmental governance in any organization is the spread of an environmental culture; for this reason, GAMES will develop face-to-face and on-line training modules aimed at improving environmental knowledge and awareness among sport organizations' employees and supporters. Lastly, GAMES will enhance the popularity of sports organizations by helping them to develop environmental awareness actions towards supporters and by improving their environmental communication activities.</p> <p>Website: <a href="https://erasmus-games.com/">https://erasmus-games.com/</a></p> <p>Project period: 01.06.2022 – 31.12.2024</p> <p>Total budget: € 400 000; Budget Sant'Anna: € 145 000 (Coordinator)</p>
<p><b>Erasmus+ Sport ACCESS - ACHIEVING CIRCULARITY IN CITIES THROUGH ENVIRONMENTAL SUSTAINABILITY OF SPORTS</b></p> 	<p>The project aims to narrow the gap between the current environmental performances of sports clubs and associations, their strategies and practices and the strategies and targets of the cities and regions in which they are located and where their activities take place.</p> <p>While many cities and regions in Europe are following the European-wide pattern of adopting required strategies that would enhance and deploy various European policies and frameworks locally regarding waste, water, energy, mobility and other environmental issues or the Circular Economy Action Plan and Green Deal in general, their successful implementation and uptake among sport organisations are rather limited and require additional efforts to achieve required contribution. The underlying factors for this are diverse and range from the shortage of qualified staff, lack of cooperation between sports clubs and associations and relevant academic bodies, low inclusion of existing staff in training and capacity building activities to general difficulties in cooperating with local and regional authorities.</p> <p>This project intends to address these key challenges and transform them into enabling actions that promote the application of circular economy solutions to sport. It wants to promote innovative and replicable circular economy solutions among sport organisations, as well as their cooperation and synergy with local and regional authorities, contributing to the development of circular cities.</p>

	<p>These actions would lead to seizing transversal improvement opportunities by embedding circular economy and sustainability principles in city planning, infrastructure and asset management procedures as well as in sports organisations management and governance. The key goal is to activate a collaboration between urban stakeholders and sport organisations for getting closer to circular cities.</p> <p>Website: <a href="https://access-cc.eu/">https://access-cc.eu/</a></p> <p>Project period: 01.06.2022 – 31.05.2025</p> <p>Total budget: € 400 000; Budget Sant'Anna: € 77 100 (Partner)</p>
<p><b>Horizon 2020 AFRICAMAVAL - BUILDING EU-AFRICA PARTNERSHIPS ON SUSTAINABLE RAW MATERIALS VALUE CHAIN</b></p> 	<p>Secure the access to raw materials represents a critical issue for European ambition to deliver the Green Deal and perform the energy and digital twin transition. As future demand of primary critical raw materials will continue to be largely met by importations, EU needs to diversify its supply chain and engage strategic partnerships with resources-rich third countries covering extraction, processing and refining such as African countries. In this framework, AfricaMaVal project aims to develop EU-Africa partnership ensuring a responsible sourcing of mineral resources for the European industry while granting a sustainable local co-development in the best Environmental, Social and Governance (ESG) conditions and leading to a long-terms business environment for European and African companies.</p> <p>The consortium, created with partners coming both from Africa and Europe, is based on experienced organizations and networks deeply anchored and involved in the raw material domain with a specific expertise and knowledge of the African culture, organisations, difficulties and resources.</p> <p>The mineral, financial, environmental, social, institutional and economical aspects will be studied along with all the value chains, including the ASSM activities, to the project completion to reach its operational targets:</p> <ul style="list-style-type: none"> <li>- Building an EU and Africa business networking on the whole CRM value chains.</li> <li>- Developing a strategy on the integration of identified and emerging EU and African raw materials value chains for the energy and digital transition.</li> <li>- Assessing responsible investment opportunities.</li> </ul> <p>The AfricaMaVal project will conduct ten case studies in African countries and an evaluation of 100 investment opportunities, a wide dissemination within Europe and Africa to promote responsible sourcing and will implement a sustainable organisation after the completion of the project.</p> <p>Website: <a href="https://africamaval.eu/">https://africamaval.eu/</a></p> <p>Project period: 01.05.2022 – 30.11.2025</p> <p>Total budget: € 7 851 460; Budget Sant'Anna: € 161 935 (Partner)</p>
<p><b>HORIZON 2020 TRICK - PRODUCT DATA TRACEABILITY FROM CRADLE TO CRADLE BY BLOCKCHAINS INTEROPERABILITY AND SUSTAINABILITY SERVICE MARKETPLACE</b></p> 	<p>The TRICK project aims to develop blockchain solutions to ensure traceability and information sharing and thus support the adoption of sustainable and circular approaches in the textile and food supply chain. The project will also create a dedicated market platform to allow third parties to market certified solutions and implement the principles of transparency and traceability. The demonstration project will take place in 2 highly complex and polluting areas: the textile-clothing sector as the main pilot and the food chain for replication activities.</p> <p>As part of the TRICK Project, the contribution of the Sant'Anna School will focus on two main areas:</p> <ol style="list-style-type: none"> <li>1) The analysis of consumer behavior in relation to the purchase and recycling of second-hand clothing in the textile-clothing sector (TC) which will study the consumer</li> </ol>







	<p>response to sustainability, traceability and the adoption of a circular approach to TC products.</p> <p>2) The measurement of the impact of TRICK on the overall circularity level of the supply chains in question with reference to three different levels of analysis: the entire supply chain, individual players within the supply chain and individual phases of the supply chain.</p> <p>Website: <a href="https://www.trick-project.eu/">https://www.trick-project.eu/</a></p> <p>Project period: 01.05.2021 – 01.11.2024</p> <p>Total budget: € 7 997 850; Budget Sant'Anna: € 66 696 (Partner)</p>
<p><b>Erasmus+ Sport GOALS: GOVERNANCE- ORIENTED ACTIONS LEVERING ON ENVIRONMENT FOR SUSTAINABILITY</b></p> 	<p>GOALS is a project funded by EU Commission through the ERASMUS+ Sport Programme, that aims at improving the environmental governance in football organizations. The project is aimed primarily at women and youth football teams with the aim of improving the environmental impact of clubs and football matches. GOALS aims to increase their environmental awareness and promote the adoption of more environmentally friendly behaviors. The project also intends to strengthen cooperation between institutions and sport organizations boosting the adoption and the implementation of environmental governance actions.</p> <p>To these ends, GOALS will develop organizational tools for the three National Football Associations involved - Romanian, Portuguese and Kosovar - to improve their environmental governance. The project also focuses on operational governance through the involvement of at least 9 grassroots football clubs, 3 for each of the countries involved. In addition to the calculation of the environmental footprint of the clubs participating in the project, GOALS will provide an intuitive online tool to support football organizations in the calculation of their Environmental Footprint applying the European methodology on footprint (Recommendation 2013/179 / EU).</p> <p>The project is coordinated by SSSA. The Consortium includes, in addition to the three participating Federations, Real Betis Balompié - the professional team of the Spanish Liga - and the international association ESSMA (European Stadium &amp; Safety Management Association). This network comprises over 350 members that will contribute through communication, networking and replication activities, dissemination of project outputs and stakeholders' engagement from the European world of football. Moreover, GOALS is supported by UEFA and by the Football Association of Ireland.</p> <p>Project website: <a href="https://erasmusgoals.eu/">https://erasmusgoals.eu/</a></p> <p>Project period: 01.01.2021 – 30.06.2023</p> <p>Total budget: € 398.983; Budget Sant'Anna: € 157.377 (Coordinator)</p>
<p><b>HORIZON 2020 LEAP-RE: LONG-TERM JOINT EUROPEAN UNION - AFRICAN UNION RESEARCH AND INNOVATION PARTNERSHIP ON RENEWABLE ENERGY</b></p>	<p>The LEAP-RE project aligns with and responds to the AU-EU high-level policies and specific objectives of the CCSE Roadmap. It seeks to create a long-term partnership of African and European stakeholders in a quadruple helix approach: government (programme owners and funding agencies), research and academia, private sector, and civil society. Impact will be sought by creating a framework, methodology, and cooperation model. The aim is to reduce fragmentation by aligning existing bilateral and multilateral frameworks. LEAPRE establishes and jointly implements research, innovation, and capacity-building activities that respond to the Multi-Annual Roadmaps (MARs) developed in PRE-LEAP-RE.</p> <p>The programme opted for a large-scale, inclusive consortium of 96 partners from 34 countries and 2 international organisations, to ensure a broad thematic, geographical</p>

 <p><b>LEAP-RE</b></p>	<p>and stakeholder coverage, and to demonstrate the feasibility of the collaboration and build trust in view of a long-term partnership addressing the post-2025 period. LEAP-RE draws on the experience and partnership developed in PRE-LEAP-RE, which conceptualised and developed a framework for long-term, bi-regional cooperation in research, innovation, and capacity building in renewable energies. This partnership is further strengthened by previous collaboration between partners in other projects supporting the EU-Africa HLPD on STI, such as LEAP-Agri, ERAfrica, LEAP<sub>4</sub>FNSSA, RINEA, and CAAST-Net Plus. Furthermore, the proposal includes a number of R&amp;I partners, 8 individual projects (formalised as Work Packages), which were chosen among expressions of interest received in late 2019.</p> <p>Project website: <a href="http://www.leap-re.eu/">http://www.leap-re.eu/</a></p> <p>Project period: 01.10.2020 – 30.09.2025</p> <p>Budget Sant'Anna: € 113.048 (Partner)</p>
<p><b>HORIZON 2020 CORALIS: CREATION OF NEW VALUE CHAIN RELATIONS THROUGH NOVEL APPROACHES FACILITATING LONG-TERM INDUSTRIAL SYMBIOSIS</b></p>  <p><b>CORALIS</b> Industrial Symbiosis in Energy Intensive Industries</p>	<p>The project envisages the development of actions to favor the decarbonisation of energy-resource intensive industrial sectors through industrial symbiosis approaches that integrate technological solutions with new business and managerial strategies. The application will take place through the involvement of three industrial areas in Italy, Spain and Sweden. The implemented approaches will be shared during the project with other European industrial areas (Spain, Austria, Poland and Turkey). In addition, the economic, environmental and managerial effectiveness of the implemented solutions will be assessed and a strategy will be structured for the replicability of industrial symbiosis initiatives in other contexts.</p> <p>Website: <a href="https://www.coralis-h2020.eu/">https://www.coralis-h2020.eu/</a></p> <p>Project period: 01.10.2020 – 01.10.2024</p> <p>Total budget: € 17 987 600; Budget Sant'Anna: € 290 750 (Partner)</p>
<p><b>COSME TOURISME: IMPROVING SUSTAINABILITY OF TOURISM SMES THROUGH KNOWLEDGE TRANSFER, INTERNATIONAL COOPERATION AND MULTISTAKEHOLDER ENGAGEMENT</b></p>  <p><b>TOURISME</b></p>	<p>The project, co-funded by the COSME Programme, aims to promote the adaptation of European tourism SMEs towards more sustainable, low-carbon and resource-efficient business models by scaling-up their activities and build capacity through knowledge transfer, exchanges and collaboration with other SMEs, business accelerators, incubators, development agencies and other tourism industry stakeholders.</p> <p>In particular transversal issues addressed by the project will include:</p> <ul style="list-style-type: none"> <li>- promoting circular business models and plastics reduction in SMEs</li> <li>- facilitating access to EC initiatives promoting sustainable tourism (European Tourism Indicator System (ETIS), European Destinations of Excellence (EDEN), European Capital of Smart Tourism, EU ecolabel and EMAS)</li> <li>- addressing the growing consumer demand for an eco-friendly tourism experience (Diversification of tourism routes, Stakeholders engagement methodologies, Marketing, etc.)</li> </ul> <p>The project will address companies covering different sectors of the tourism industry, including coastal tourism, but also natural and cultural tourism and tourism linked to sport events.</p> <p>Specific project objectives are:</p> <ul style="list-style-type: none"> <li>- Design and implement trans-national and cross-sectoral support scheme including capacity building knowledge transfer and scaling-up activities to enable sustainable growth of SMEs in the tourism sector</li> <li>- Support uptake of innovative solutions for sustainable tourism</li> <li>- Support participation of SMEs in certification schemes</li> </ul>

	<p>Website: <a href="https://tourisme-project.eu/">https://tourisme-project.eu/</a>          Project period: 16.09.2020 – 16.03.2023          Total budget: € 991 535; Budget Sant'Anna: € 88 475 (Partner)</p>
<p><b>ERASMUS+ GREENER: BOOSTING INDUSTRY ENGAGEMENT IN GREEN PROCUREMENT</b></p> 	<p>Green Public Procurement is becoming increasingly important at the European level as a tool to support the Circular Economy and the European Green Deal.          The ERASMUS+ GREENER project is part of a series of more than ten-year activities of the Sustainability Management Laboratory on the theme of Green Public Procurement. The objectives of the project are as follows:</p> <ol style="list-style-type: none"> <li>1. Improve the skills/knowledge of administrative profiles dealing with purchases, within SMEs, on GPP criteria, including eco-labels, eco-design of products, extended producer responsibility, etc;</li> <li>2. Improve the adaptability of traditional profiles, such as administrative profiles working in the tender offices of SMEs, to the future demand for skills (requalification training course);</li> <li>3. Increase the employment opportunities of students of professional training institutes;</li> <li>4. Improve the training of stakeholders in the contexts involved and create awareness on the influence of green public procurement on the adoption of sustainable consumption and production models by companies;</li> <li>5. Promote the attractiveness of vocational education and training institutions by relaunching the close collaboration between VET, public administrations, government agencies and bodies supporting the development of SMEs and SMEs, transparency tools for validating skills and the capacity of trainers to apply an international approach to education.</li> </ol> <p>Website: <a href="https://greener-project.eu/">https://greener-project.eu/</a>          Project period: 01.12.2020 – 01.12.2022          Total budget: € 174 724; Budget Sant'Anna: € 32 939 (Partner)</p>
<p><b>LIFE CO<sub>2</sub> PES&amp;PEF: PROMOTION AND ENHANCEMENT OF FOREST SYSTEM THROUGH DIFFERENT ECOSYSTEM SERVICES AIMED TO INCREASE CARBON STOCK</b></p> 	<p>The first objective of the project is to conduct an analysis of the ecosystem services of three forest areas, representative of the Alpine and Apennine areas, and the operational implementation of some of them, in order to: 1) evaluate the contribution of the sustainable management of the forests, conservation and growth of carbon fixation and storage capacity and other ecosystem services; 2) Define the certification registers of ecosystem services as a result of the analysis of the scientific literature on the topic and existing experiences; 3) Provide an economic assessment of ecosystem services resulting from sustainable forest management, that can be used to create an "ecosystem credit" system; 4) Create a model for the development of a register and an ecosystem credit market, with the possibility of including them in "green bonds", in line with the latest EC plans on socially responsible investments. Ecosystem services will be those resulting from sustainable forest management practices. In action C1, a specific cognitive analysis of cultural ecosystem services will be conducted. The second objective of the project is to analyze the life cycle of the wood products of these three forest areas according to the PEF methodology and the EU Rec 2013/179, and to minimize the impacts of the industry. The specific objectives of this section of the project are: 1) To carry out a screening of the wood industry, build a PEFCR (Product Environmental Footprint Category Rules) and conduct support studies; 2) Organize an operational plan for companies involved in PEFCR studies, whose impact could be reduced by 2%; 3) Create a Toolkit for companies in the forestry and wood sector in</p>

	<p>order to make the PEF analysis replicable in other territories and guide them for obtaining certifications for Green Public Procurement activities. The third objective of the project is to provide support elements for policy makers, which can be replicated not only in other regions, but also nationally and internationally. The specific objectives are: 1) Provide information to implement Adjustment Plans; 2) Provide recommendations on good practices that increase forest ecosystem services, which can be included in the Rural Development Plan (RDP) of Regions; 3) To encourage the use of wood according to the "cascade" method.</p> <p>Project website: <a href="https://lifeco2pefandpes.eu/en/">https://lifeco2pefandpes.eu/en/</a></p> <p>Project period: 03.06.2020 – 31.12.2023</p> <p>Total budget: € 1.014.215,00; Budget Sant'Anna: € 266.909,00 (Coordinator)</p>
<p><b>ERASMUS+ SPORT GREENCOACH: INCORPORATING SUSTAINABILITY IN THE GOVERNANCE OF SPORTS</b></p> 	<p>The sports industry has a large responsibility towards global environmental pollution. Existing initiatives promoted by international sports organisations have focused mainly on large events. There are not yet reference models focusing on how to incorporate sustainability as a cross-cutting priority in sports organisations as a governance element, beyond specific actions carried out during sport events. In this framework, GREENCOACH aims to improve the environmental impact in grassroots football organizations by incorporating: 1) monitoring and benchmarking of the environmental footprint of football events and organisations, and 2) sustainability as a cross-cutting element in football organisations daily management. In addition, it also aims at enhancing environmental awareness of supporters, spectators and staff and at promoting healthy lifestyles at individual and community levels, especially among young athletes.</p> <p>As partner of the project, the SuM research group of the Institute of Management will bring in scientific expertise to carry out the assessment of the environmental footprint of grassroots football organisations, and to design and check the benchmarking tools and the education modules. In particular, 2 kinds of footprint will be calculated:</p> <ol style="list-style-type: none"> <li>1.Environmental footprint of an amateur football match (then used to calculate aggregated footprint of bigger events such as the total footprint of an amateur championship/tournament or the assessment of the total footprint of all amateur matches of a country)</li> <li>2.Organisational Environmental Footprint (OEF) of an amateur football organization (by categorizing the organisations according to their complexity – i.e. the number of structures and facilities that belong to the sport organisations that could influence their environmental footprint).</li> </ol> <p>Website: <a href="https://www.greencoacherasmus.eu/">https://www.greencoacherasmus.eu/</a></p> <p>Project period: 01.01.2020 – 31.12.2023</p> <p>Total budget: € 408.072,00; Budget Sant'Anna: € 65.000,00 (Partner)</p>
<p><b>INCIRCLE: SUPPORT INSULAR AND LOW DENSITY AREAS IN THE TRANSITION TOWARDS A MORE CIRCULAR TOURISM ECONOMY</b></p> 	<p>INCIRCLE Interreg MED aims to apply the principles of the circular economy to the tourism sector in insular and scarcely inhabited MED areas. To this end, the project aims to capitalize on the existing knowledge and tools currently available to test a new methodology on four main areas of application: mobility, energy efficiency, water resource management and waste management. The project plans to achieve stable and lasting results and at the same time easily adaptable to provide policy makers with concrete tools and opportunities for experimentation both to improve assessment and planning skills of sustainability in territories where resources are already scarce, and to discover new funding opportunities and concrete possibilities of replication, for a sustainable and circular growth within the MED area. Capitalization activities will be replicated in further territories at the regional, national and European levels.</p>



	<p>Specifically, the contribution of the SUM research group of the Institute of Management consists in the design and development of a circularity measurement model in tourism based on <i>Circular economy KPI</i>, addressing both tourism needs and individual tourism industries. The application of this model in the project partner territories will be the basis for the development of strategies to increase the circularity of these territories and their competitiveness, in addition to supporting the development of the model itself. Starting from the measurement model that SUM researchers will develop, which will have a general and transversal value, it will then be possible to develop specific <i>tools for self-assessment</i> of circularity and sustainability, that will be made available to managers of public and private organizations in an international context. The aim is to provide them not only with a snapshot of current performances, but, above all, elements of strategic support, which are fundamental for directing this strategic sector towards sustainable development and circular economy logics. The goal is to provide a snapshot of current performance, but above all, strategic support elements, which are fundamental to direct this sector towards sustainable development and circular economy. Researchers who deal with the development of the project will contribute to providing support, both in the context of INCIRCLE and in the horizontal project Sustainable Tourism Community, to the tourist territories and businesses, in order to face the current pandemic crisis, with the aim of facilitating the emergence of new, innovative, creative and increasingly circular development strategies.</p> <p>Website: <a href="https://incircle.interreg-med.eu/">https://incircle.interreg-med.eu/</a>          Project period: 01.11.2019 – 30.06.2022          Total budget: € 3.378.770,00; Budget Sant'Anna: € 260.000,00 (Partner)</p>
<p><b>LIFE MAGIS: MADE GREEN IN ITALY SCHEME</b></p> 	<p>The LIFE MAGIS project targets consumers and producers to support the launch and spread of the PEF method and of the PEF-based Made Green in Italy scheme. The project will stimulate PEF-related innovation, improve communication about green products, and incentivise consumers to purchase greener products. To do this, LIFE MAGIS will develop new Italian product category rules for the carrying out of PEF studies on specific products (PEFCRs). The PEFCRs will cover certain food products (snacks, ice cream, fruit, cheese and coffee), leather products, window fittings and cosmetics. The project will also:</p> <ul style="list-style-type: none"> <li>- help define PEFCRs at EU level through its work on new product groups;</li> <li>- demonstrate the effectiveness of the PEF method in promoting sustainable models of production and consumption;</li> <li>- encourage better-informed and conscious consumer choices and ensure the transparency and comparability of environmental information;</li> <li>- create tools and approaches to make PEF easily replicable and transferable to other Member States.</li> </ul> <p>Website: <a href="https://lifemagis.eu/">https://lifemagis.eu/</a>          Project period: 02.09.2019 - 30.12.2022          Total budget: € 2.624.168,00; Budget Sant'Anna: € 256.466,00 (Partner)</p>

The SuM Lab also manages and develops many other research projects at the local, regional and national levels, in partnership with public and private entities. The companies that collaborate with the SuM operate in different sectors - e.g. oil&gas, energy, minerals, food&beverage,





consumer goods, paper industry, fashion, telecommunications, electricity, transportation, water services, waste, environmental multi-utilities. These projects aim at promoting sustainability in private and public organizations by applying expertise in Life-Cycle Management and Product Environmental Footprint, Environmental Certification Schemes, Environmental Innovation and Green Technologies, Sustainable marketing, Environmental reporting, Stakeholder engagement, Green Public Procurement, Corporate Social Responsibility, Health & Safety Management, etc.

In addition, the School participates to the [National Recovery and Resilience Plan \(NRP\)](#), a vast programme of reforms that envisages investments to accelerate the ecological and digital transition, improve the training of workers, and achieve gender, territorial, and generational equity. The School has received funding in four investment lines: Extended partnerships with universities, research centres and companies; National Centres on Key Enabling Technologies; Innovation Ecosystems; Research and Innovation Infrastructures.

## 2.5 Collaboration with the Global Compact Network

The School participates to the Global Compact Network Italy Foundation through its Spin-off company, [Ergo S.r.l.](#) Ergo was founded in 2006 by some of the Professors of the SuM Lab of the Institute of Management, and since then it has been offering consultancy support services in the field of health and safety in the workplace, environmental management, social responsibility, energy, territorial planning and governance. It has directly supported the Foundation providing pro bono scientific support to some of its Working Groups activities.

Full Professor Marco Frey, Director of the SuM Lab of the Institute of Management and of the Interdisciplinary Center on Sustainability and Climate, is the President of the Global Compact Network Italy Foundation.

### 3. Measurement of outcomes

#### 3.1 Partnerships Formalized with the Aim of Advancing the UN Global Compact Principles

SSSA and more specifically, the SuM Lab of the Institute of Management and the CISC **work and collaborate with different actors** with the aim of advancing the principles of sustainability: businesses, policy makers, public and private institutions, citizens, local communities. Their network includes, among others, the European Union, the Ministry of the Environment, several regional and local authorities, the General Confederation of Italian Industry, the Union of Chambers of Commerce, Industry, Agriculture and Artisanry, trade associations, national organizations such as plastics and paper packaging consortiums, top Italian companies from different sectors (such as **Oil&Gas, Energy, Minerals, Food&Beverage, Consumer goods, Paper industry, Fashion, Telecommunications, Electricity, Transportation, Water services, Waste, environmental multi-utilities**) as well as many **SMEs**.

The SuM Lab also collaborates with other Institutes such as Biorobotics for the deployment of ad hoc technological solutions for sustainability, and it is member of the International networks **EERA** and **PREPARE**.

These partnerships produce an array of projects and research activities that have a positive impact for the advancement of sustainability within our local, national and global environment.



SSSA belongs to the academic system of the University of Pisa together with Scuola Normale Superiore and IUSS Pavia, and we collaborate with other Italian academic institutions such as LUISS in Rome and Bocconi University in Milan. Moreover, the School is part of the [RUS - Network of universities for sustainable](#)

[development](#), promoted by the CRUI as the first experience of coordination and sharing between all the Italian universities involved in the issues of environmental sustainability and social responsibility. The main purpose of the RUS Network is the dissemination of culture and good practices of sustainability, both inside and outside the universities (at urban, regional, national, international level), in order to increase positive impacts in environmental terms, ethical, social and economic aspects of the actions implemented by the members of the Network, so as to contribute to the achievement of the SDGs, and in order to strengthen the recognisability and value of the Italian experience at an international level.

















### 3.2 Expertise Provided to Advance the Aims and Principles of the Global Compact in Italy

Among the over 600 active projects of Sant'Anna School, the SuM Lab and the CISC currently have **65** active projects focused on environmental sustainability topics<sup>1</sup>, of which:

- **19** ongoing EU projects
- **8** ongoing institutional projects
- **38** ongoing research contracts commissioned by industry and business

The following table shows all the School's research projects that can be directly linked to one or more SDGs<sup>2</sup>:

Table 1: Research projects linked to the SDGs (2022)

Progetti di ricerca con riferimento agli SDGs (2022)			%	n°
	SDG 01	Povert� Zero	1,1	3
	SDG 02	Fame Zero	1,9	5
	SDG 03	Salute e benessere	21,6	58
	SDG 04	Istruzione di qualit�	2,6	7
	SDG 05	Uguaglianza di genere	1,1	3
	SDG 06	Acqua pulita e igiene	1,5	4
	SDG 08	Lavoro dignitoso e crescita economica	6,7	18
	SDG 09	Imprese, innovazione e infrastrutture	24,5	66
	SDG 010	Ridurre le disuguaglianze	7,8	21
	SDG 011	Citt� e comunit� sostenibili	5,6	15
	SDG 012	Consumo e produzione responsabili	9,3	25
	SDG 013	Agire per il clima	8,2	22
	SDG 014	La vita nell'acqua	1,5	7
	SDG 015	La vita sulla terra	2,6	7
	SDG 016	Pace, giustizia e istituzioni forti	3,0	8
	SDG 017	Partnership per gli obiettivi	1,1	3
<b>Totale</b>				<b>269</b>

<sup>1</sup> Last update: April 2024

<sup>2</sup> Table taken from the School's 2022-2023 Bilancio di Sostenibilit , p. 62:

<https://www.santannapisa.it/sites/default/files/2023-12/Bilancio%20Sostenibilit%C3%A0%202022-2023.pdf>



## 4. Contact Information

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