PhD School on Agriculture, Environment and Bioenergy

(http://sites.unimi.it/dottorato_aab/)

(XL cycle, 2024-27)

Project draft

1.Field of interest

AGR/10 – Rural Buildings and Agro-Forest Land Planning

2.Project title

Green and well-being in the workplace. Design and assessment of Nature-Based solutions (NBS) for reaching the E-Environment and S-Social components of the European Sustainability Reporting Standards (ESRS).

3. Tutor (membro del Collegio dei Docenti)

Giulio Senes

Co-tutor

Natalia Fumagalli

4. Relevance of the topic and state of the art

The relationship between worker's wellbeing and exposure to green spaces and nature in the workplace has gained significant attention in recent years. This interest is further reinforced by the European Union's new Corporate Sustainability Reporting Directive (CSRD), which emphasizes the importance of environmental, social, as well as governance, (ESG) factors in corporate reporting (Directive 2022/2464 of the European Parliament and of the Council of 14 December 2022).

Numerous studies have demonstrated the positive effects of green spaces exposure on human beings (Harries et al., 2023; Zheng et al., 2024) in general, and on employee in particular. Exposure to elements of the natural environment has been linked to reduced stress levels and improved mood (Bringslimark et al., 2007), enhanced cognitive function and executive attention (McDonnell and Strayer, 2024), higher job satisfaction (Bringslimark et al., 2007), and a general mental health improvement with a reduction of anxiety and depression symptoms (Gascon et al., 2015). The beneficial impact of green spaces can be attributed to several mechanisms, referred to the Attention Restoration Theory (Kaplan and Kaplan, 1989), the Stress Recovery Theory (Ulrich, 1984), and the Biophilia Hypothesis (Wilson, 1984), as demonstrated by recent studies (Gaekwad et al., 2023; Barbiero et al., 2023; Jiricka-Pürrer et al., 2019).

The CSRD, which came into effect in January 2023, mandates that companies (initially only the large ones, but, in the next years, all companies) provide detailed reports on sustainability practices, including their impact on employee wellbeing. This directive encourages organizations to integrate green spaces into their workplace design as part of their sustainability and social responsibility strategies. By doing so, companies not only comply with regulatory requirements but also foster a healthier, more productive workforce.

Moreover, the new CSRD push companies to implement a standardized reporting framework that ensures that people (consumers and investors) can have the data they need,

in a format that is easy to reference and compare with other companies, in order to close the "accountability gap". In fact, CSRD makes it mandatory for companies to audit the sustainability data they report in order to ensure the transparency, fairness and reliability of the reported data.

In this context, the goal of the project is to develop and validate a framework for the design of green areas in the workplaces and for the evaluation of the environmental and social benefits in relation to the Corporate Sustainability Reporting.

5. Layout of the project (draft)

5.1. Materials & Methods

The project goal will be achieved through a series of research activities, organized in the following Work packages (WPs).

WP1 – Literature review. The relevant literature will be analyzed, with particular regards to the design criteria and the methods for measuring the environmental and social performances, and the possible indicators to be used in the framework of an Evidence Based Design approach.

WP2 – Definition of Design Guidelines for healthy outdoor and indoor workspaces.

WP3 – Definition of the most suitable indicators for the evaluation of the environmental and social benefits of the designed green areas.

WP4 – Design and realization of prototypical green areas.

WP5 – Measurement of the adopted indicators.

WP6 - Writing the Ph.D. thesis.

5.2. Schedule and major steps (3 years)

The research activities will be carried out in the 3 years of the project, according to the following general schedule.

- **First year**: literature review; identification of the cultural ESs of GIs and greenways; definition of the most suitable indicators for their assessment.
- **Second year**: analysis of the ESs offered by the study areas; analysis of the demand of ecosystem services by the local population, tourists and businesses.
- **Third year**: assessment of the ESs offered by the study areas; their integration in the rural land planning and design practices of the study areas; writing the thesis.

Activities	**1st year**				**2nd year**				**3rd year**			
WP1 – Literature review												
WP2 – Definition of Design Guidelines												
WP3 – Definition of the indicators												
WP4 – Design and realization of green areas												
WP5 – Measurement of the adopted indicators												
WP6 - Writing the Ph.D. thesis												

6. Available funds (to support research)

29960 - COLL_PR19GSENE_01: Euro 21.500

7. Co-Financing (to support the bourse)

Erica S.r.l.

8. Literature

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