WOMEN STEM UP

ENVIRONMENT AND SUSTAINABILITY PLAN

ERASMUS + KA220-HED - Cooperation partnerships in higher education

2022-1-SE01-KA220-HED-000086239

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Executive Summary

This report will define the environmental and sustainability strategy and plan and describe the activities that the partners will pursue to guarantee the exploitation and up-take of WOMEN STEM-UP results. Input from all tasks will inject into this document.

1 INTRODUCTION

Women STEM UP aims at tackling a key challenge related to the persistent gender gap in STEM higher education i.e., Science, Technology, Engineering and Mathematics; and consequently, in the labour market. STEM graduates are in high demand in the labour market and STEM jobs are among the most highly paid.

The contribution of women in STEM has been recognized and considered as an important issue for innovation and renewal. However, the under-representation of women in STEM educational programmes is a significant problem that has long term effects. Educational institutions are generally interested in attracting women but there are few concrete examples of successful programmes and policies that can be generalized and used to support the participation of females in STEM. Women STEM UP, will build upon the gender expertise of participating partners to develop a more effective, bottom-up approach for encouraging women to consider STEM and particularly information and communications technology (ICT) studies and careers as a viable option for their future.

Therefore, it is crucial not only to increase the number of women in STEM but also to prevent them from dropping out from their STEM studies and support them to continue with STEM careers. Women STEM UP aims at eliminating the factors and circumstances such as gender stereotypes and prejudices that impede women to successfully complete their STEM studies and develop academic or business careers.

The main goal of the project is to promote equal opportunities, inclusion and fairness among females pursuing STEM studies. This makes the project aligned with the goals to develop and offer higher education, and in particular women training tools, learning experiences and inspiration that promote the participation of women in STEM fields.

More specifically, the project aims at offering female undergraduate students and lecturers, tools, resources and an open community and quality ensured platform to empower them and to involve them in the decision-making process of both the project activities and the advancement from studies to a career in STEM. The tools and the platform will include gender sensitive education and training practices specifically customized for STEM educational academic programmes.

The project's results such as, a training virtual program for lecturers, the Women STEM UP Leadership, and the Inspiration Academy platform, will promote the participation of women in STEM fields by offering them training tools, learning experiences and inspiration that underline the potential of their studies in the academia and in the job market. The proposed activities promote the participation of women in STEM fields by offering tools and activities adapted to individual behaviours and needs that underline the potential of their studies in the job market and offer needs-based assistance rather than a generic approach.

In what concerns the exploitation, major outputs of the project that will have the most value for exploitation include the Training Programme, the Leadership and Inspirational Academy, the Mentorship programme. To ensure exploitation, Women STEM-UP will provide open access to project results through scientific publications, digital tools, and repositories and its communication plan. Tutorials for digital tools will be included, and policy recommendations will be formulated at various levels.

2 ENVIRONMENTAL AND SUSTAINABILITY STRATEGY

In line with the European Green Deal, the Erasmus+ programme has the environment at its heart and has defined environmental sustainability as one of its priorities for the 2021-2027 period. In this context, Women STEM-UP strives to improve the environmental sustainability of the Erasmus+ Programme and raise awareness across the European Higher Education sectorabout the importance of sustainable internationalisation.

The aim of the environmental and sustainability plan is to vary out continuous activities to integrate environmental considerations. Our policies and objectives are:

1. All our activities will be conducted with environmental considerations.
2. Active work to reduce own environmental impact providing opportunities to acquire effective interaction between the partners to contribute to sustainable development
3. Systematic Efforts to Reduce Environmental Impact through
    - Turning off lights when not in use during our meetings
    - Consider a printing policy to reduce the number of paper printed documents
    - Ordering/ inviting ecologic and/or vegan food
    - Choose the least polluting mode of transportation when traveling
    - Travel by train instead of flying when the whole trip takes less than six hours.
    - Staying at hotels that are environmental certified
    - Use drive to diminish the number of emails
    - Virtual meetings are prioritized
    - Ask travelers to identify which airlines use newer planes on their long-haul routes
    - Establish a list of preferred airlines based on the extent they engage with sustainable business practices like these.
    - Encourage project participants to use public transport and opt for a hybrid or electric vehicle when hiring a car or taking a taxi

2.1 Stakeholders

All partners are committed throughout the project to mobilise the appropriate stakeholders to multiply the effects of dissemination and exploitation activities. Considering the inter-relation between the diverse activities to maximise the project's impact, it is important to identify the potential targeted audiences of Women STEM-UP along with their specific interest in the project early on. Women STEM-UP aims to reflect on a broad and inclusive range of stakeholders and aims to actively engage them in the project activities. Consequently, the project's communication activities need to find ways to address each of these stakeholders explicitly, based on their respective needs, characteristics, and possible motivation, in order to involve and engage them in the project, specifically in the project use cases. To maximise the probability of sustained engagement in Women STEM-UP activities, each of the stakeholder groups and actors requires:

- Personalised, multichannel communication
- Empowerment

- Development of long relationship of trust

Table 3 introduces the stakeholders identified for Women STEM-UP. It ought to be noticed that at this stage of the project a stakeholder analysis was conducted to steer the activities of dissemination and communication in parallel with the activities conducted by other Work Packages on the definition of user requirements. However, the two activities have a different duration with the definition of user requirements lasting longer than the stakeholder analysis. This is highlighted here due to the impact of the latter type of activity on the former. In a project like Women STEM-UP, that targets a multitude of actors along (and beyond) the supply chain of an industry, the definition of user requirements and the demonstrators heavily impacts the definition of sub-groups of potential users. Therefore, it is foreseeable that a better definition of certain aspects related to the profiles of said actors will be further clarified on an operational level and reported in the updates of this document.

Table 1 - Stakeholder groups and their interests in Women STEM-UP

ID	Members	Description	Interest in WOMEN STEM-UP
A	Education sector	Universities and private companies in the education sector including University professors, lecturers, and other staff categories and female students of STEM faculties	Gather inspiration for new ideas, services, and applications Develop new value adding services
B	Associations representing education related actors	Associations of teachers, schools/universities, educators, and other actors	Contribute with barriers/ framework conditions Participate in project events Utilisation of project's results in everyday operations Enhance assets' recognisability Use/Building of shared or interoperable infrastructures and applications
C	Women STEM professionals, scientists, innovators and entrepreneurs	From public and private	Contribute with barriers/ framework conditions Participate in project events Inspiration for new ideas, research, and applications Develop new value adding projects Study the project's insights and results
D	Pertinent initiatives	Parallel ERASMUS+ and Horizon Europe projects, other research and innovation projects and/or networks in the field of education and STEM	Identify opportunities for synergies and collaborations for dissemination Enhance innovation through projects' complementarity and results combination Definition of future research and innovation directions based on project's acquired knowledge Inputs for standardisation activities
E	Policy makers	Policymakers, officers, advisors and others at European, National, Regional and Local levels, Education Authorities, including national educational authorities responsible to evaluate the quality of the educational	End-users of the several WOMEN STEM-UP tools, Including them in their control operation Evaluation of the project's Social-Technological-Economic-Environmental-Political (STEEP) aspects

		programs offered by universities	
G	Associations representing women	Women and gender protection associations	Contribute with barriers/ framework conditions Understand implications for women and act to safeguard their wellbeing and safety accordingly Participate in project events Contribute by setting standards on women's interests
H	General public	General public and anyone interested in the project	Utilise the project's results in their daily lives Understand the benefits offered by WOMEN STEM-UP solutions Take part in the activities of the project

3 SUSTAINABLE DEVELOPMENT IMPACT ASSESSMENT

A broad assessment establishing the project's alignment with the SDGs is a priority for Women STEM-UP. This assessment positions Women STEM-UP as a responsible player, fostering a future grounded in sustainability, which emphasises that sustainable activities should significantly contribute to environmental objectives without causing harm.

3.1 Introduction to the Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) are 17 global targets presented and adopted by United Nations member states in September 2015 as part of the 2030 Agenda. They are a guide and a call for the international community to commit, in general terms, to themes such as eradicating poverty, fighting hunger, access to education, sustainable development, promoting gender equality, ensuring clean drinking water, promoting affordable energy sources, sustainable consumption and production, decent work, innovations in the industrial sector and infrastructure, reducing inequality, peace and building partnerships. Each goal has specific targets that must be achieved to promote sustainable development on a global scale.

The 17 SDGs are:

1) No poverty: focusing on the eradication of extreme poverty, ensuring equal rights to the poor and vulnerable, and building resilience of the poor.
2) Zero hunger: the scope is ending hunger and malnutrition and ensuring sustainable food production.
3) Good health and well-being: ensuring healthy lives, eradication of AIDS, tuberculosis, malaria and other diseases, reduction of maternal mortality, reduction of premature death.
4) Quality education: ensuring that all boys and girls receive primary and secondary education, increasing the number of young adults with relevant skills.
5) Gender equality: improving women conditions, ending all forms of discrimination and ending all forms of violence against women.
6) Clean water and sanitation: ensuring access to water and sanitation to all.
7) Affordable and clean energy: ensuring universal access to clean, affordable and sustainable energy to all.
8) Decent work and economic growth: sustaining per capita growth, promoting a global strategy to combat youth unemployment, promoting development-oriented policies.
9) Industry, innovation and infrastructure: it promotes innovation, the development of resilient infrastructures and sustainable industries.
10) Reduced inequalities: promoting social and political inclusion and reducing the inequalities between countries.
11) Sustainable cities and communities: ensuring access for all to adequate and affordable housing, promoting sustainable cities urbanisation.
12) Responsible consumption and production: achieving sustainable management of natural resources, reducing waste generation.
13) Climate action: including climate change measures in national policies, enhancing education and awareness-raising on climate change issues.
14) Life below water: ensuring a sustainable use of oceans, seas and marine resources.

15) Life on land: halting biodiversity loss, halting desertification, halting land degradation and managing forests in a sustainable way.

16) Peace, justice and strong institutions: developing transparent institutions, developing inclusive societies and communities reducing all forms of violence, ending abuses.

17) Partnership for the goals: reinforcing the global partnership for sustainable development.

Figure 1: The 17 The Sustainable Development Goals (SDGs)[1]

In addition to the 17 SDGs, it is important to note that each goal is supported by a set of targets. Overall, there are 169 targets that stimulate international action in critical areas. Each target has between 1 and 3 indicators used to measure progress toward reaching the targets. In total, there are 231 approved unique indicators that will measure compliance.[2]

3.2 Women STEM and SDGs

Women STEM-UP is part of the challenging landscape of education, playing a fundamental role in the sector through transformative solutions integrated with sustainable development initiatives. Women STEM-UP is part of the contemporary trend of understanding development based on integrated goals and solutions, in which technological progress is linked to advances in social issues and environmental protection. In this way, Women STEM-UP aligns with the benchmarks for this integration: the Sustainable Development Goals.

As a project that cooperates with the SDGs, Women STEM-UP advances the development of sustainable STEM education for empowering women, impacting diverse and interdependent sectors such as education, technology, and governance. Women STEM-UP proposes an integrated approach that goes beyond educational challenges and also seeks to contribute to building a more sustainable world concerned with protecting the environment.

[1] United Nations. (n.d.). Communications Materials - United Nations Sustainable Development. Retrieved from https://www.un.org/sustainabledevelopment/news/communications-material/

[2] United Nations. (n.d.). Sustainable Development Goals Indicators: Indicators List. United Nations Statistics Division. Retrieved from https://unstats.un.org/sdgs/indicators/indicators-list/

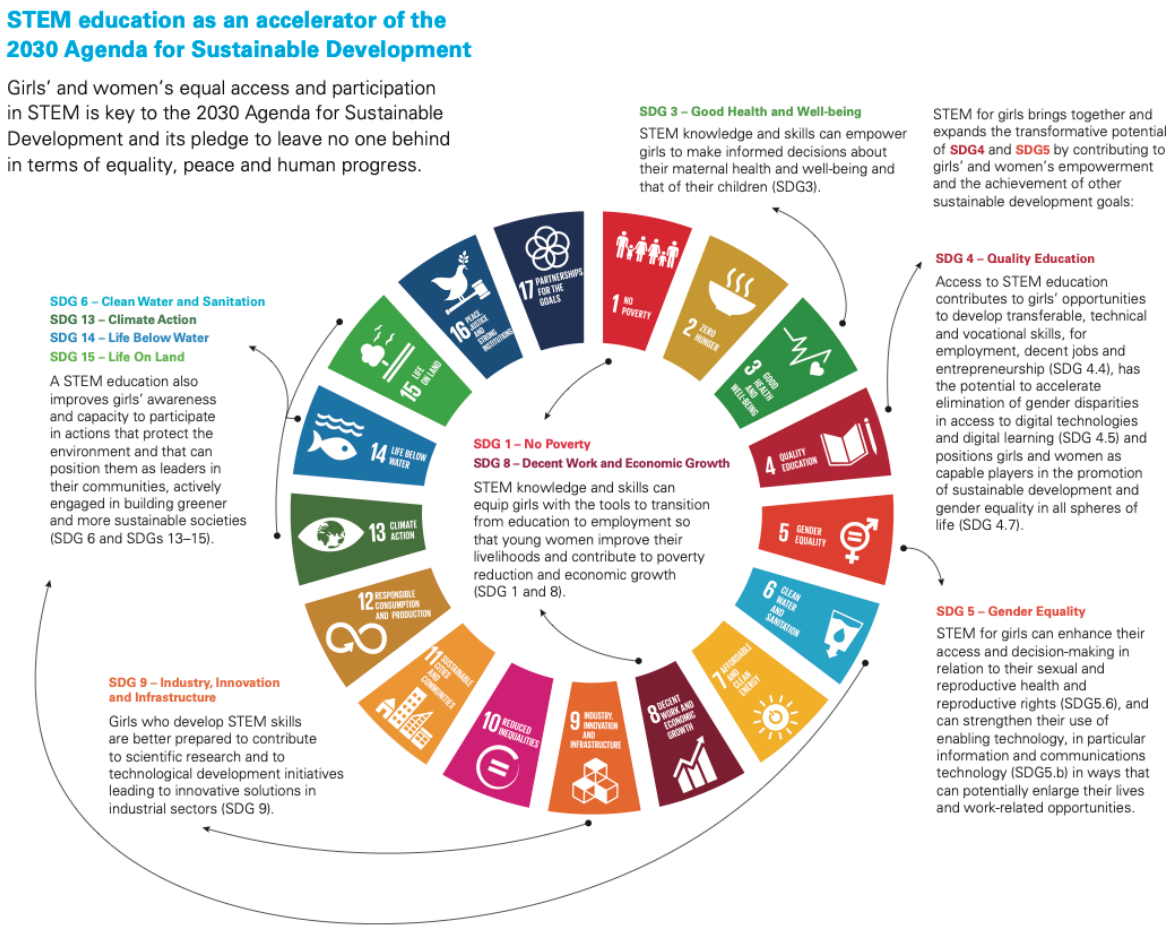
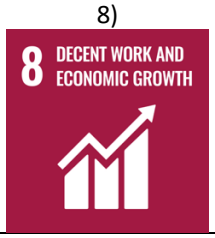


Figure 2: STEM education as an accelerator of the 2030 Agenda for SGDs (Unicef, Towards an equal future: Reimaging girls' education through STEM)

In the following table, the relation of Women STEM-UP and the specific SDGs is presented:

SDG	Relation
Gender Equality (SDG 5): 	Promoting women's participation in STEM fields is essential for achieving gender equality. This involves removing barriers, providing equal opportunities, and encouraging girls to pursue careers in science and technology.
Quality Education (SDG 4) 	Access to quality education in STEM subjects is critical. Encouraging girls to engage in STEM from a young age, through educational programs and mentorship, helps to build a pipeline of future women leaders in these fields.

Decent Work and Economic Growth (SDG 8) 	Increasing women's representation in STEM can contribute to economic growth. Diverse teams bring different perspectives, leading to innovation and better problem-solving, which are essential in today's economy.
Industry, Innovation, and Infrastructure (SDG 9) 	Women in STEM are key to fostering innovation. Their involvement in research and development can lead to breakthroughs that address global challenges, from climate change to healthcare
Reduced Inequalities (SDG 10) 	Supporting women in STEM helps to reduce inequalities in the workforce. By promoting diversity in these fields, we can create more equitable opportunities and representation
Partnerships for the Goals (SDG 17) 	Collaboration between governments, educational institutions, and the private sector is essential to create an environment that supports women in STEM. This includes funding for education, research, and initiatives that promote diversity.

In conclusion, empowering women in STEM is not only a matter of gender equality but also a critical component of achieving the Sustainable Development Goals. By fostering an inclusive environment that supports women's participation in these fields, we can drive innovation and sustainable development forward. Women STEM-UP is working towards this direction.

4 CONCLUSIONS

The deliverable at hand represents a significant asset in WOMEN STEM-UP as it provides a comprehensive and effective approach to sustainability including environmental. This deliverable presented the impact creation strategy for Women STEM-UP. In conclusion, this interim report demonstrates the continuous efforts and progress made by Women STEM-UP in evaluating and optimising its impact in various dimensions.