

D6.4

Social impact monitoring methodology and assessment



skillbill

SKILL TO BOOST INNOVATION & PROFESSIONAL
FULFILLMENT IN A SUSTAINABLE ECONOMY

Q-PLAN INTERNATIONAL ADVISORS PC

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ABBREVIATIONS

ESP	European Specialisation Programme
FAIR	Findable, Accessible, Interoperable, and Reusable
GA	Grant Agreement
GDPR	General Data Protection Regulation
GP	Green Portal
LHE	Lighthouse Expert
O	Objectives
RES	Renewable Energy Systems
SIA	Social Impact Assessment
SIMA	Social Impact Monitoring Assessment Framework
STEM	Science, Technology, Mathematics and Engineering
T X.X	Task X.X
VET	Vocational Education Training
XR/AR	Extended/Augmented Reality
WG	Working Group
WP X	Working Package X

Executive Summary

SKILLBILL was a three-year-long Horizon Europe Programme, which aimed at developing a large and strong foundation for the growth and acceleration of renewable energy deployment, diffusing the knowledge at several levels. Towards this scope, SKILLBILL (i) brought together stakeholders across the value chain of renewable energy, in order to gain insight into the skill gaps and translate them into training schemes addressing these gaps in the real world, (ii) created a central point of reference to induce targeted groups in RES with an online platform named Green Portal, summarising material, in a single platform, (iii) designed a higher education pan-European educational programme to create the next generation of talents in renewable energy sector, empowered with advanced skills, and (iv) offered skilling, reskilling and upskilling in multi levels workers with Vocational Educational Programme, via knowledge sharing, using innovative methods.

SKILLBILL was actively engaged in a concise approach to assessing the social impact of its activities in the educational sector of renewable energy systems, through a multi-layered approach. Through stakeholder engagement and transparent networks, SKILLBILL aimed to create a collaborative community. The online platform prioritised user-friendly features and diverse content, promoting knowledge sharing and acceptance of renewable energy solutions. Additionally, educational programmes targeted skill enhancement, utilising innovative technologies for an enriched learning experience. The emphasis was on talent maximisation, equal access to education, and flexibility in programme structures. By addressing the global learning needs and skill gaps, and by facilitating collaboration between higher education organisations and industry, SKILLBILL aimed to create a positive impact on renewable energy education and workforce development, empowering gender equality in STEM (Science, Technology, Engineering, and Mathematics) and raising awareness on renewable energy utilisation.

The current document is part of Task 6.4 “Social impact monitoring,” led by Q-PLAN. Two reports were prepared within this task. The initial version of this report, submitted in February 2024, set the framework for the social impact assessment of SKILLBILL’s intervention, either positive or negative. The social impact assessment was more specifically focused on the four main pillars of the project: (i) the four Working Groups of the SKILLBILL Joint Stakeholder Initiative, (ii) the Green Portal, (iii) the European Specialisation Programme (WP4) and (iv) the Vocational Educational Programmes (WP5). The initial report, apart from the objectives, included a set of indicators for monitoring and assessing such impacts. Specifically, the SKILLBILL social impact monitoring and assessment framework included more than forty sub-objectives and more than 100 indicators. Hence, the model allowed the exploration of the project impacts on its beneficiaries, more specifically, on Higher Education students, technicians or professionals enrolled in VET programmes, the diverse users of the Green Portal, and last but not least on the experts formulating the Working Groups of the Joint Stakeholder Initiative. By the combination of indicators with objectives, the impact framework identified how the project diffused impacts on the four pillar areas and its implemented actions.

In the context of Task 6.4 and more specifically in the current report (which is the updated version due in August 2025), the selected indicators were closely monitored through tailored questionnaires addressed to Working Groups members, expert stakeholders of the Joint Stakeholder Initiative, to students of the educational programmes (meaning the European Specialisation Programme and the Vocational Educational Training), and the users of the Green Portal, combining quantitative and qualitative information. Additional data were collected towards the assessment of gender aspects in science, technology, engineering and mathematics, along with the awareness of renewable energy systems, through all the above-mentioned activities of SKILLBILL. All the data were collected directly from the responsible partners of each respective SKILLBILL activity. Provisions for making data FAIR (Findable, Accessible, Interoperable, and Reusable) and compliant with the General Data Protection Regulation - GDPR were followed. After the collection of data, the values of the indicators were (i)

compared with the targets set on the Grant Agreement (GA); and (ii) compared with the respective values of other similar activities within the project.

The results are presented in Section 7, while a brief summary is reported in Conclusions (Section 9).

Overall, the initial report set the framework to be followed during assessing the impact of different SKILLBILL activities, serving as a guide for the data collection and paving the foundation for the deployment of the relevant activities. This updated version of the Social Impact Monitoring methodology and Assessment presents the results and interprets the insights based on the collected data.

NOTE: The initial deliverable and this updated version have been prepared by Q-PLAN, and not by WR, as wrongly stated in the Grant Agreement due to a typo error when preparing the GA.

1. Introduction

Aim, Scope and previous work

SKILLBILL aimed to create several paths towards increased skills through innovative learning methods, with the ultimate goal of accelerating renewable energy development. The SKILLBILL project, a three-year initiative under the Horizon Europe Programme, was dedicated to boosting renewable energy deployment. SKILLBILL employed a strategy, focusing on stakeholder collaboration, skills development, and educational programmes to drive social acceleration in the renewable energy sector. This document was a part of Task 6.4, titled "Social Impact Monitoring," led by Q-PLAN, which established the framework for assessing the social impact of SKILLBILL's interventions across various pillars, collected relevant data and analysed the insights towards concrete results

SKILLBILL's commitment to enhancing social impact in the educational sector of renewable energy systems was evident in its approach. Through stakeholder engagement and transparent networks, the initiative sought to foster a collaborative community. The online platform, Green Portal, was designed with user-friendly features and diverse content to facilitate knowledge sharing and acceptance of renewable energy solutions. Furthermore, the educational programmes prioritised skill enhancement using innovative technologies, emphasising talent maximisation, equal access to education, and programme flexibility.

This initial report, submitted in August 2024, outlined the framework for social impact assessment, covering Joint Stakeholder Initiative, Green Portal engagement, and the activities of higher education and vocational programmes. To this end, Q-PLAN designed a tailored Social Impact Monitoring and Assessment (SIMA) model. To be focus-specific, this framework has been developed around each of the four main SKILLBILL pillars and included objectives, sub-objectives, and a series of indicators, crafted specifically for capturing the project's effects on its beneficiaries as well as on a broader social level. In order to effectively collect the needed data, tailored questionnaires were developed, and a specific timeframe was set, along with the responsibilities held by SKILLBILL partners. In alignment with this framework, it was important to revisit the overarching objectives of the project, set out in the SKILLBILL Grant Agreement, as they form the foundation upon which the Social Impact Monitoring and Assessment (SIMA) model has been built, and against which, the final assessment was conducted.

According to the **SKILLBILL GA**, the **Objectives of the project** were.

- O1 Steer the development of a greener, more effective, and pervasive next generation of sustainable technology.
- O2 Launch the point of reference for qualitative information on RES and promote and accelerate the development of sustainable solutions (Green Portal).
- O3 Develop an advanced permanent education programme on RES at the European level.
- O4 Develop a technical practical permanent Vocational Education Training programme on RES.
- O5 Reduce gender gap in STEM.
- O6 Increase awareness of RES.

The aim of the initial version was to describe the approach for the development of SKILLBILL's SIMA model and establish a common protocol that guided the whole process of collection, aggregation, and interpretation of relevant results regarding the social outcomes of the performance of the SKILLBILL activities. The purpose of the SIMA framework was:

- To analyse the SKILLBILL social profile and break down the main activities, to tailor the SIMA framework.
- To elaborate the objectives, sub-objectives, and set of indicators, towards the thorough analysis of the social intervention to be performed via SKILLBILL main activities.
- To set the targeted audience of each SKILLBILL main activity.
- To elaborate guidelines for SKILLBILL partners, who are responsible for collecting feedback, utilising the available material and questionnaires.
- To set the way for the interpretation of results and the methods to be used, in order to analyse the outcomes.

The overall aim of the current version is to analyse the collection and aggregation of the data collected during the course of the project, and also to interpret the results.

Report Outline

This report is organised into 9 distinct chapters:

- **Chapter 1** serves as an introductory chapter, providing useful information about the SKILLBILL project and the context in which this report on the social impact assessment framework has been elaborated.
- **Chapter 2** provides a social impact theoretical approach and the reason for conducting such an analysis within the SKILLBILL.
- **Chapter 3** provides details on the methodological approach, tailored to the SKILLBILL project.
- **Chapter 4** describes the sub-objectives of the SKILLBILL social impact monitoring and assessment framework that correspond to the four main pillars of the project.
- **Chapter 5** provides the sets of indicators for each sub-objective addressed to each of the SKILLBILL activities under assessment.
- **Chapter 6** serves as a guide on the collection of the data via questionnaires, along with provisions for data management.
- **Chapter 7** provides details on the interpretation of the data after the collection and the presentation of the results.
- **Chapter 8** presents challenges and risks identified during the elaboration of the framework, along with mitigation measures.
- **Chapter 9** concludes with the next steps and the forthcoming activities, under the social impact monitoring and assessment of the SKILLBILL activities.

Last but not least, the Annexes of this report include the Questionnaires for all targeted audiences. More specifically, the questionnaire for Working Group members and the Lighthouse experts (technical facilitators of the Working Groups) can be found in Annex I. A compact survey for the users of the Green Portal and its Manager is given in Annex II, while a template questionnaire for the students and the managers/trainers of the European Specialisation Programme and Vocational Educational Training can be found in Annex III. Annex IV hosts the template questionnaire for the assessment of the gender gap in STEM and the final Annex (Annex V) includes the template questionnaire for assessing the awareness of RES.

2. Social Impact Assessment approach

A definition

Social Impact Assessment (SIA) is a vital process involving the analysis, monitoring, and management of both intended and unintended social consequences arising from planned interventions, such as policies, programmes, plans, and projects¹, a methodology that can also be utilised within the renewable energy sector. It goes beyond simple identification of impacts, aiming to bring about a more sustainable and equitable environment, encompassing ecological, socio-cultural, and economic dimensions.

But first, what is social impact? Social impact definition refers to the effects or changes that an individual, organisation, or initiative has on society and its constituents. Social impact encompasses the broader outcomes and consequences of actions, policies, programmes, or projects beyond purely economic considerations, focusing on the improvement of social well-being and the resolution of social challenges.² There is no standardised definition of social impact across fields since it highly depends on the sector under study or category of activities.

Social Impact Assessment at a glance

Apart from analysing and monitoring the social consequences, Social Impact Assessment also monitors any social change processes invoked by specific interventions. Its primary purpose is to bring about a more sustainable and equitable environment. According to Frank Vanclay (2003)³, the important features of SIA are the following:

1. The goal of impact assessment is to bring about a more ecologically, socio-culturally, and economically sustainable and equitable environment. Impact assessment, therefore, promotes community development and empowerment, builds capacity, and develops social capital (social networks and trust).
2. The focus of concern of SIA is a proactive stance to development and better development outcomes, not just the identification or amelioration of negative or unintended outcomes. Assisting communities and other stakeholders to identify development goals and ensuring that positive outcomes are maximised can be more important than minimising harm from negative impacts.
3. The methodology of SIA can be applied to a wide range of planned interventions and can be undertaken on behalf of a wide range of actors, and not just within a regulatory framework.
4. SIA contributes to the process of adaptive management of policies, programmes, plans, and projects, and therefore needs to inform the design and operation of planned interventions.
5. SIA builds on local knowledge and utilises participatory processes to analyse the concerns of interested and affected parties. It involves stakeholders in the assessment of social impacts, the analysis of alternatives, and the monitoring of the planned intervention.

¹ [Social Impact Assessment](#), International Association for Impact Assessment

² <https://www.ocmsolution.com/social-impact-measurement/>

³ Frank Vanclay (2003) International Principles for Social Impact Assessment, Impact Assessment and Project Appraisal, 21:1, 5-12, DOI: 10.3152/147154603781766491

6. The good practice of SIA accepts that social, economic, and biophysical impacts are inherently and inextricably interconnected. Change in any of these domains leads to changes in the other domains. SIA should, therefore, develop an understanding of the impact pathways that are created when a change in one domain triggers impacts across other domains, as well as the iterative or flow-on consequences within each domain. In other words, there must be consideration of the second and higher-order impacts and cumulative impacts.

7. For the discipline of SIA to learn and grow, there should be an analysis of the impacts that occurred as a result of implemented activities. SIA must be reflexive and evaluative of its theoretical bases and its practice.

8. While SIA is typically applied to planned interventions, the techniques of SIA can also be used to consider the social impacts that derive from external events (e.g. demographic change, climate factors, outbursts of epidemics).

SIA is best understood as an overarching framework that embodies the evaluation of all impacts on humans and on how people and communities interact with their socio-cultural, economic, and biophysical surroundings. SIA thus has strong links with a wide range of specialist sub-fields involved in the assessment of areas.

Benefits

The SIA aims to ensure that the development of certain activities or interventions maximises their benefits and minimises their costs. It is worth mentioning that costs and benefits are not always measurable in a quantitative manner and thus are often not adequately taken into consideration. The benefit of identifying impacts in advance is crucial, as:

- (1) Better decisions can be made about which interventions should proceed and in what way.
- (2) Risk mitigation measures can be implemented to minimise costs or harm and maximise benefits from a specific planned activity.
- (3) More effective stakeholder engagement can be achieved by communicating the stakeholders' expectations, gaining support, and addressing concerns proactively.
- (4) Clearer benchmarks for success can be set when understanding the expected impacts, thus establishing accountability mechanisms and a basis for evaluating the effectiveness of an intervention over time; and
- (5) Early adjustments can be made to the intervention strategy before implementation, securing adaptive management, a responsive intervention process, and improvement of future interventions.

The role of SIA goes far beyond the ex-ante (in advance) prediction of adverse impacts and the determination of who wins and who loses. SIA also encompasses empowerment of local people; enhancement of the position of women, minority groups, and other disadvantaged members of society; development of capacity building; alleviation of all forms of dependency; increase in equity; and a focus on poverty reduction⁴.

⁴ Frank Vanclay (2003) International Principles for Social Impact Assessment, Impact Assessment and Project Appraisal, 21:1, 5-12, DOI: 10.3152/147154603781766491

Types of Social Impact

Two types of Social Impact can be identified: Negative impact describes any change that detrimentally impacts a community or the environment. An example of a negative environmental impact is an increase in pollution.

On the contrary, by positive impact, any beneficial improvement of an initiative is meant. Positive impacts include improving gender equality in STEM, for example.

Why a Social Impact framework is needed.

A social impact framework helps organisations and projects evaluate and improve the positive social results of their activities or initiatives. It provides a systematic way to identify, measure, and communicate the social value created by a project.

This framework typically involves setting clear objectives, defining relevant social metrics/indicators, and employing data collection and analysis methods. The main goal is to ensure that a project's actions are beneficial for communities, the environment, or organisations. Objectives are clearly defined in the first stage of a social impact framework. This involves understanding the specific social issues the project aims to address and setting quantifiable and measurable targets. The goal of the framework is to connect to improving education, well-being, and the environment.

The framework identifies KPIs and metrics to measure the effectiveness of social interventions. The metrics are chosen according to which ones are important to the initially identified goals. These metrics should be easily measurable to accurately reflect the project's impact.

The final stage of the framework is the implementation of data collection, analysis, and reporting mechanisms. Collecting data from different sources, like interviews, feedback, surveys, and other data, is needed to evaluate the impact based on set metrics. Analysing this data helps towards understanding goal achievement or areas for improvement.

Reporting on social impact is important for transparency, accountability, and engaging stakeholders. By communicating the outcomes effectively, projects can showcase their achievements and inspire others to contribute towards social good. This approach ensures that the social impact is tangible and quantifiable, leading to societal changes.

Since SIA operates on the principle of fostering community empowerment, building capacity, and nurturing social capital through networks and trust, it contributes to adaptive management, informs the design and operation of planned interventions, and is deeply rooted in local knowledge, utilising participatory processes.

In the stakeholder engagement, SIA serves as a proactive strategy for community development, ensuring that development goals are identified collaboratively and positive outcomes are maximised. In educational programmes, SIA provides a framework for skill enhancement and capacity building, incorporating local knowledge and participatory processes to analyse concerns and maximise positive impacts. Online platforms benefit from SIA by promoting inclusivity, ensuring clear communication, and facilitating the dissemination of information that fosters a more informed and engaged community. SIA, as an overarching framework, underscores the importance of considering diverse impacts on humans and communities. In that essence, SIA becomes a cornerstone in guiding development initiatives toward sustainable, equitable, and socially impactful outcomes.

3. Approach and methodology

The current chapter presents the overall approach and the particular steps followed to design and fine-tune the SKILLBILL Social Impact Monitoring and Assessment (SIMA) framework.

3.1 Overall methodology

The SKILLBILL social impact model followed a five-step process for measuring the social impact of the SKILLBILL project as presented below:

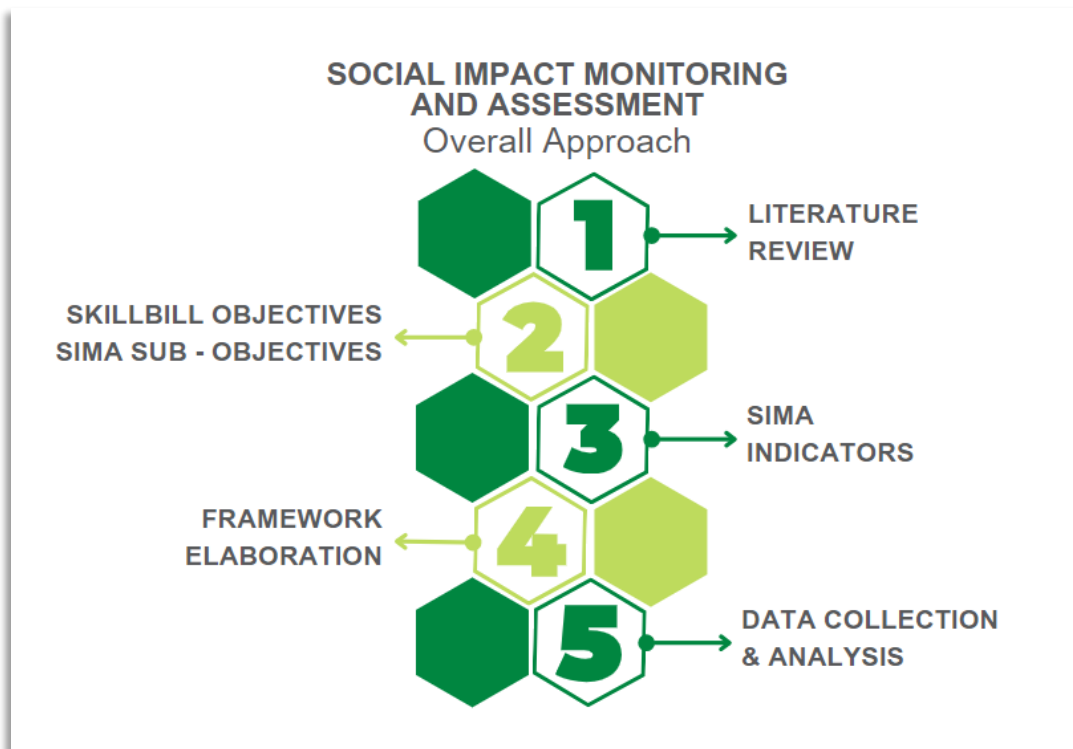


Figure 1. SIMA of SKILLBILL: a step-by-step process

Step 1 – Literature review: Desk research initiated the task, utilising available literature to delve deeper into the monitoring of social impacts of renewable energy sources and training on new skills needed for advanced technologies. Apart from the literature review, previously developed social impact frameworks and methodologies were analysed for useful insight to be gained on relevant methodologies and approaches.

Step 2 – Setting objectives of the SIMA framework: The sub-objectives of the SIMA were aligned with the objectives, in section 1.1 of the SKILLBILL GA and expected outcomes and impacts of the projects as presented in section 2.1 of SKILLBILL GA. In addition, the SIMA sub-objectives were matched with the four main pillars of SKILLBILL, which are the four main activities of SKILLBILL [(i) Four Working Groups, formulated under the Stakeholder Joint Initiative - WP2, (ii) Green Portal - WP3, (iii) European Specialisation Programme - WP4 and (iv) Vocational Educational Training - WP5] (For details please see Chapter 3.2 of this deliverable).

Step 3 – Defining the impact indicators: The SIMA sub-objectives were “translated” into a set of indicators and their metrics for the four main pillars of SKILLBILL, thoughtfully structured in alignment

with distinct project objectives and impact areas. In that way, a straightforward process was designed to capture, measure, and understand each SIMA sub-objective.

Step 4 – Framework elaboration: The methods to monitor the key project activities (four main pillars of SKILLBILL⁵) were developed, along with the respective tools, including questionnaires, template reports, and databases. The final framework was circulated by Q-PLAN to all the involved partners to ensure that everyone involved in leading SKILLBILL's main activities is well aware of the notions to be monitored and the type, extent, and regularity of data to be collected.

Step 5 – Data collection and analysis: Leading partners of the main pillars of SKILLBILL⁵ were responsible for collecting the data, making use of the material developed under this SIMA framework, and sharing it with Q-PLAN. This final step also involved the interpretation of the indicators to the impacts achieved by Q-PLAN.

3.2 The SIMA model of SKILLBILL

The overarching aim of the SKILLBILL SIMA model was to measure and monitor the impacts generated through the project's activities on the engaged stakeholders. As such, this tailor-made model aimed to assess the social performance of SKILLBILL activities, either positive or negative.

The main pillars of SKILLBILL were four, which ran in parallel during the course of the project, as presented below.

Four **Working Groups** (WGs) under the SKILLBILL Stakeholder Joint Initiative: Stakeholders across the entire RES value chains were united in four interdisciplinary Working Groups, in Renewable and Sustainable Electricity, Sustainable Mobility, Renewable and Sustainable Heat, and Renewable and Sustainable Fuels. The main aim was to identify skill gaps in the RES workforce and translate them into training needs in advanced technologies.

Green Portal (GP): An online platform, which included materials with assigned quality labels, on several RES technologies, concentrated in a dedicated website. It was addressed to students, teachers, adult learning, and working professionals, among other categories, in order to facilitate easy access to such materials. The Green Portal aimed to light up a path to valuable, validated RES materials, concentrated in a joint online information centre.

European Specialisation Programme (ESP): A higher-education programme developed by the SKILLBILL project and the four academic partners, dedicated to students with a bachelor's in a relevant sector and interested in continuing their studies in RES technologies. This aimed to develop the new generation of RES experts.

Vocational Educational Training (VET): A training programme developed under SKILLBILL, offering online synchronous and asynchronous courses addressed to employees, technicians, and professionals of the energy sector, to reskill/ upskill them with new capacities in the energy sector.

⁵ Four Working Groups, formulated under the Stakeholder Joint Initiative (WP2), Green Portal (WP3), European Specialisation Program (WP4) and Vocational Educational Training (WP5).

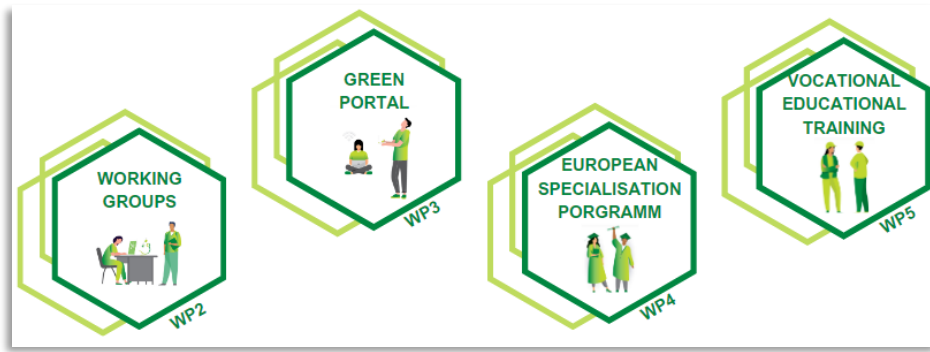


Figure 2. SKILLBILL main pillars

3.3 Interrelation of SKILLBILL activities with social outcomes

The collaborative efforts of the four **Working Groups** aimed to create greener and more sustainable RES technologies and thus make a significant difference in society. WGs fostered RES training, identified gaps and needs, and brought together solutions, translated into skills needed in advanced RES technologies. In parallel, WGs promoted technological innovations and collectively committed towards a sustainable future. Last but not least, the WGs constituted settled networks of experts that exchanged knowledge and know-how in the long run of the project and beyond.

The **Green Portal** aimed to be a go-to source for quality information on renewable energy sources, with a mission to boost and speed up the growth of sustainable solutions. This initiative aimed at a positive social impact by providing a central hub for valuable information with easy-to-find access, fostering awareness, contributing to informed decision-making, and expediting the adoption of eco-friendly solutions. The wide range of information that the Portal offers empowers individuals with knowledge. Moreover, it enhances inclusivity by providing accessible information and services to diverse groups of people. This can play a role in reducing digital divides and promoting equal opportunities for knowledge.

The **European Specialisation Programme** and **Vocational Educational Training** programmes have been working towards the development of advanced, lifelong education on renewable energy sources at the European level. These programmes equipped individuals with practical, job-specific skills that are in demand in the labour market in the current period, thus enhancing their employability. More specifically, the European Specialisation Programme aimed at generating a skilled specialised workforce that contributes to increased productivity and innovation in industries. This, in turn, is expected to have positive effects on the overall economic development of a region. Regarding VET, it provides individuals with diverse backgrounds and education levels the opportunity to acquire skills and qualifications necessary for well-paying jobs, promoting social mobility, reducing unemployment rates in the long run, and income inequality among professionals/employees.

All SKILLBILL activities (including WG, GP, ESP, VET) came together with a common mission, addressing the **gender gap in STEM**⁶ and **boosting awareness of renewable energy sources**, marking a step towards a socially inclusive and environmentally conscious future. Towards this goal, SKILLBILL used a multifaceted approach, guiding the development of more effective and widespread advanced RES technologies.

⁶ STEM is an acronym that stands for science, technology, engineering, and mathematics. Source: [Wikipedia](https://en.wikipedia.org/wiki/STEM_(education))

3.4 SKILLBILL Social Impact Canvas

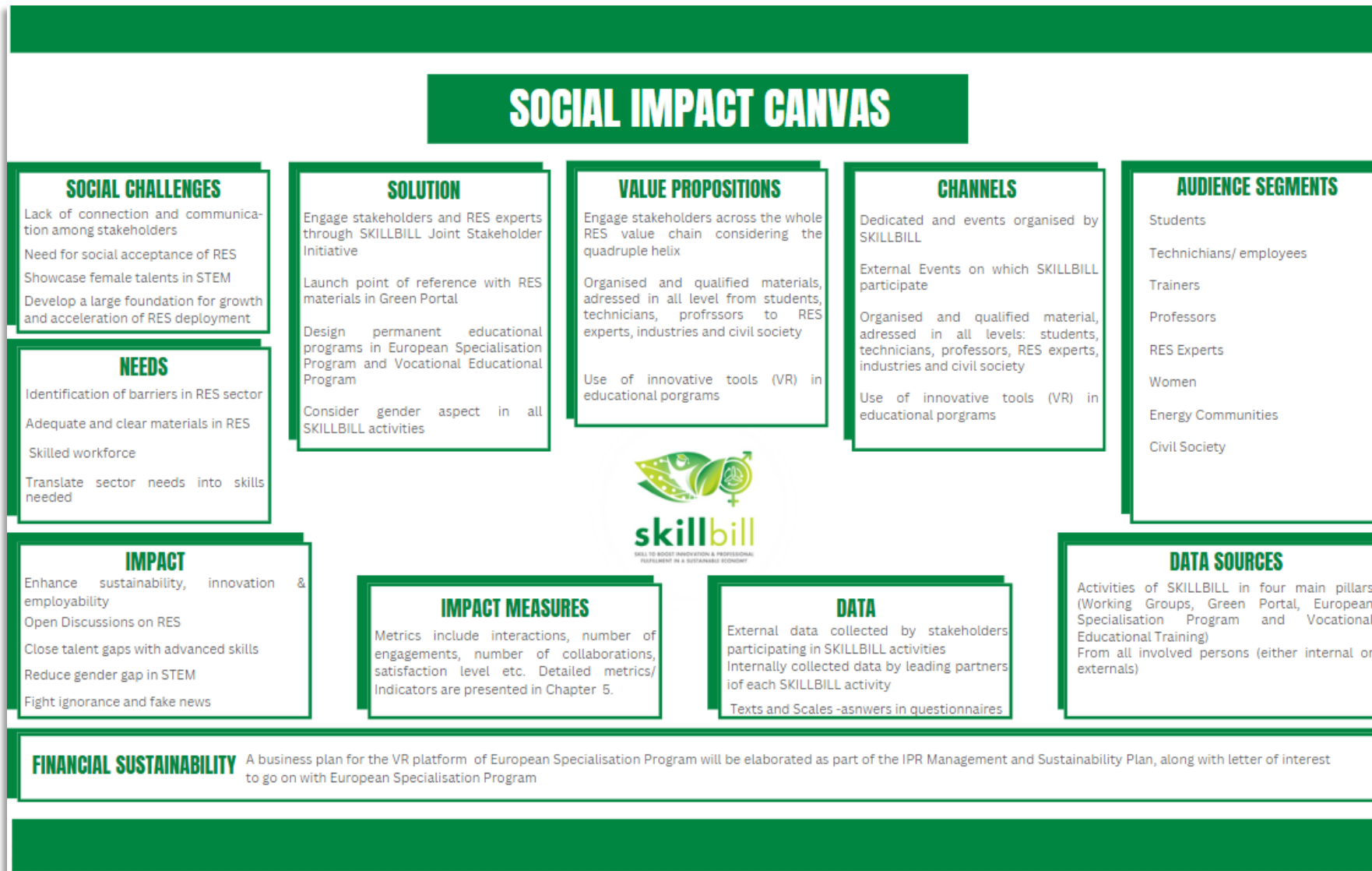


Figure 3. SKILLBILL Social Impact Canvas (template based on Impact Canvas from MEIMIND)

3.5 Audience Segments

A two-fold approach was employed for the data collection process towards the activities of the SKILLBILL Project. The SKILLBILL SIMA model gathered anonymised data from actively involved stakeholders in each activity, as well as from the consortium partners leading these activities. The detailed breakdown is provided in the table below.

	Stakeholders	SKILLBILL partner
Working Groups	Experts in RES were actively involved and engaged in the WG activities, as members of each WG.	Q-PLAN, as the manager of all Working Groups. Lighthouse Experts, SKILLBILL technical partners, leading the technical conversations among WG members (UNITUS, USE, METROPOLIA, EREF).
Green Portal	Users of Green Portal, civil society, students, technicians, teachers, professors, researchers, environmental influencers, etc.	A0CO2, as the responsible partner for developing and maintaining the online platform.
European Specialisation Programme	Students, attendees of the ESP courses	UNITUS, as the manager of the programme on behalf of SKILLBILL
Vocational Educational Training	Students, professional attendees of the courses, and trainers	SINERGIE, as the responsible partner for the VET courses

4. Sub-objectives of the model

The sub-objectives of the SKILLBILL SIMA model were designed in accordance with and in alignment with the GA provisions, as presented in the previous chapter. SKILLBILL aimed to recruit the RES sector with a skilled workforce, boost RES awareness, and bridge the gender gap in the sector by:

- i) Identifying the gaps and needs in skills, considering advanced RES technologies, and bridging stakeholders across the RES value chain.
- ii) Developing an online platform with labelled and validated material, addressed to several levels of expertise, which is easily accessible to everyone.
- iii) Designing advanced training programmes for postgraduate students and technicians.

With these in mind, the following impact measurement sub-objectives were set and followed during the impact assessment exercise, focusing on measuring performance towards the following sub-objectives. In order to match objectives and sub-objectives with specific activities of the project, each SKILLBILL pillar was matched with its own objective and set of sub-objectives, as presented below.

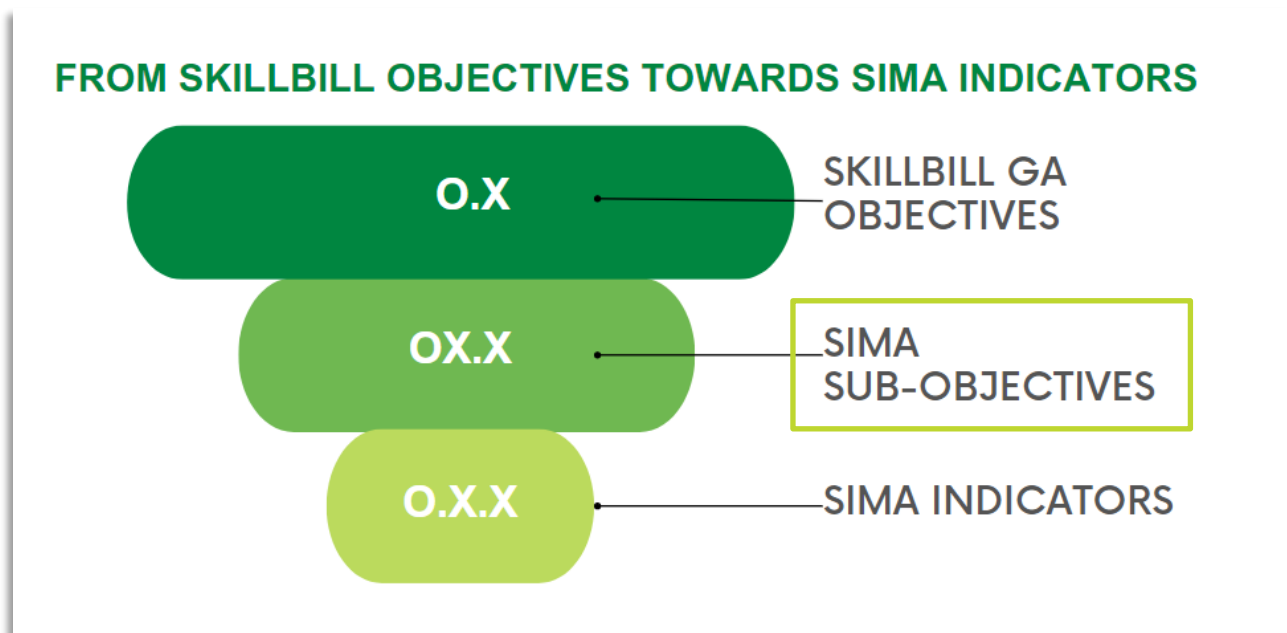


Figure 4. Transition from SKILLBILL GA objectives to SIMA sub-objectives and SIMA indicators.

4.1 Objectives and Sub-objectives of the Social Impact assessment of the four Working Groups

The GA objective (O1) related to the four WGs under the Stakeholder Joint initiative of the SKILLBILL was **to steer the development of a greener, more effective, and pervasive next generation of sustainable technology**. Ensuring that the SIMA model encompassed an evaluation of the social, economic, and environmental aspects, collaboration and engagement among stakeholders were assessed, along with the promotion of inclusivity and transparency on the WG members' activities under SKILLBILL. In addition, WG findings were shaped to inform the development of sustainable technologies that not only meet technological standards but also contribute positively to society,

ensuring a well-rounded and ethically responsible innovation. Table 1 below presents the set of sub-objectives for the four Working Groups.

Table 1. Sub-objectives of the SKILLBILL SIMA model addressed to the Working Groups

Sub-objectives	Description Explanation
O1.1 Mobilise stakeholder engagement and networking to address the lack of synergies	Aimed to evaluate the project's success in fostering a collaborative and engaged community within the renewable energy sector, promoting knowledge sharing, and establishing a network that goes beyond traditional boundaries.
O1.2 Open discussions and adequate language	Helped gauge the project's effectiveness in fostering open, clear, and inclusive discussions, ensuring that diverse stakeholders could actively contribute, ultimately promoting transparency in the renewable energy dialogue.
O1.3 Accountability and trust	Focused on measuring the project's impact on building trust, ensuring accountability, which contributed to the overall integrity and credibility of the renewable energy initiatives.
O1.4 Adequate dissemination of policy and technical recommendations	Aimed to understand the project's success in effectively communicating and implementing policy and technical recommendations, ensuring that valuable insights were widely shared and contributed to positive changes in the renewable energy landscape.
O1.5 Involvement of members in discussions	Sought to evaluate the level of active involvement and meaningful contributions from project members, promoting a dynamic and collaborative environment that fostered innovative discussions and solutions for the RES sector.
O1.6 Increased employability	Measured the project's success in enhancing the employability of participants, facilitating quicker job placements, and garnering positive feedback from employers in the renewable energy sector, on behalf of RES experts.
O1.7 Reduced Skills Gap	Evaluated the project's effectiveness in closing the gap between required and possessed skills, ensuring that participants felt adequately prepared and contributed to minimising skills shortages in the RES sector.
O1.8 Diverse and Inclusive Workforce	Promoted equal opportunities, representation, and inclusion of individuals from different backgrounds, including but not limited to gender, ethnicity, and socio-economic status. Also, it ensured building a workforce that reflected the rich diversity of society, fostering an environment where a wide range of perspectives and talents thrived, ultimately enriching the social status of the renewable energy industry.

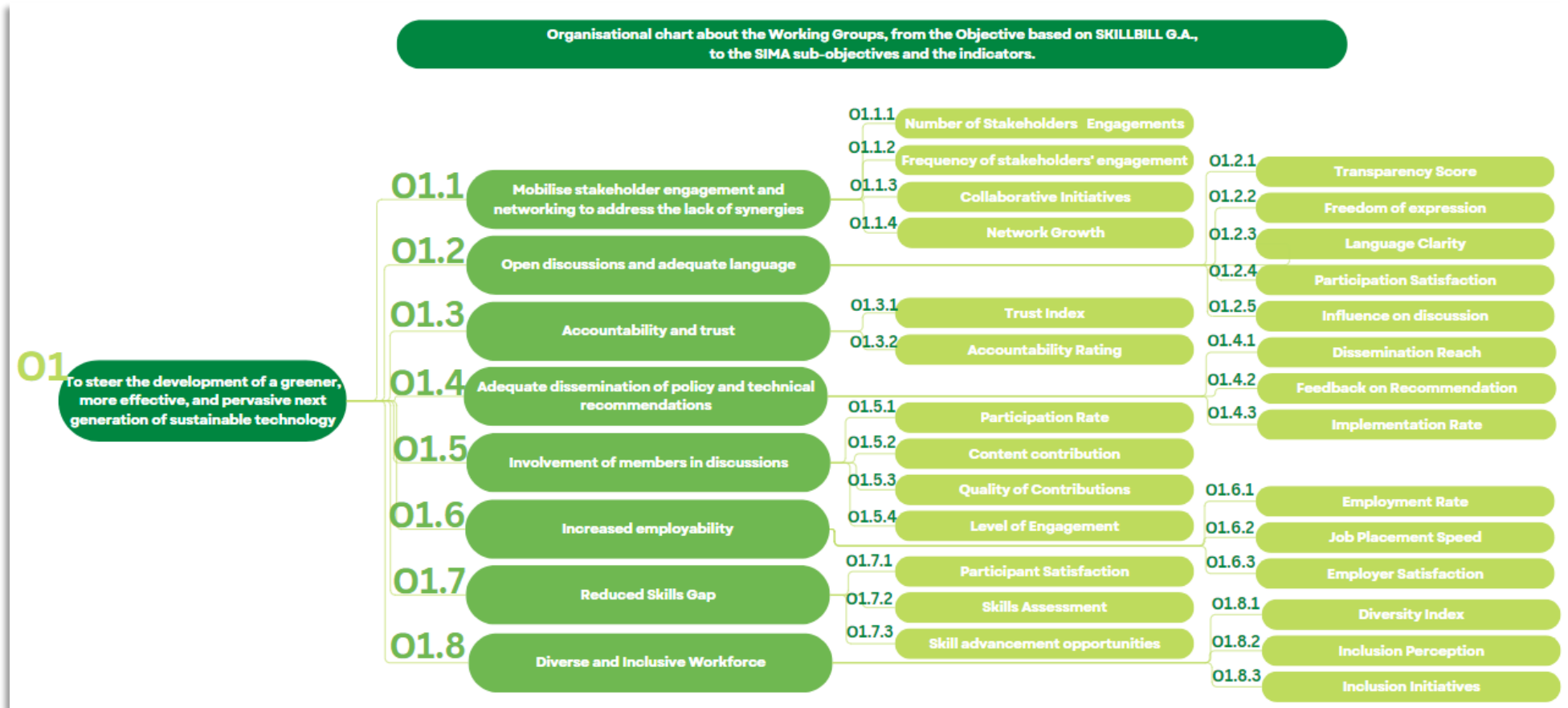


Figure 5. Overview of the Working Groups narrative

4.2 Objectives and sub-objectives for the social impact assessment of the Green Portal

The GA objective (O2) for the Green Portal was **to launch a central point of reference of qualitative information on RES and promote and accelerate the development of sustainable solutions**. The primary focus was not only to provide valuable insights into RES technologies but also to strategically incorporate features that facilitated social aspects of RES, raising RES awareness, and cultivating a community that actively participated in sustainable and socially responsible energy solutions. Table 2 below presents the set of sub-objectives for the Green Portal.

Table 2. Sub-objectives of the SKILLBILL SIMA model addressed to the Green Portal

Sub-objectives	Description Explanation
O2.1 User-friendly features with adequate language	Assessed the ease of use and language appropriateness of the platform to ensure that individuals at various expertise levels could access and comprehend renewable energy materials, thereby fostering inclusivity and equal participation in sustainable practices.
O2.2 Improved RES social acceptance	Evaluated user satisfaction and community engagement to gauge the platform's effectiveness in building social acceptance for renewable energy solutions, aiming to create a supportive and engaged society around sustainable practices.
O2.3 Meeting citizens' needs	Examined the platform's ability to address specific user needs and the relevance of content to ensure it met the diverse requirements of citizens, contributing to a more informed and empowered public regarding RES solutions.
O2.4 Materials for different levels	Assessed the adaptability and diversity of materials on the platform to reflect to users at different expertise levels, promoting an inclusive learning environment and encouraging widespread participation in renewable energy education.
O2.5 Material availability of adequate and clear information	Evaluated the clarity and completeness of materials to enhance accessibility and understanding of content, ultimately contributing to informed decision-making and behavioural change towards sustainable energy practices.
O2.6 Daily behaviour, long-term choices, and levels of acceptance	Analysed change in daily behaviour, long-term commitments, and acceptance levels to measure the platform's influence on fostering sustainable habits and cultivating a sustained, widespread acceptance of RES practices.
O2.7 Enhanced knowledge dissemination	Assessed the platform's impact on knowledge sharing and acquisition to enhance the dissemination of information, fostering a community of informed individuals capable of promoting and advocating for RES solutions.

Sub-objectives	Description Explanation
O2.8 Educational empowerment	Examined user perceptions of empowerment and skills enhancement to determine the platform's effectiveness in educational empowerment, contributing to a skilled workforce and an informed society in the field of RES.
O2.9 Global Learning	Evaluated the increased global awareness of platform materials, contributing to a collective global effort to address renewable energy challenges and promote sustainable solutions.
O2.10 Reduced information barriers	Assessed improved accessibility and information reach with fewer barriers, ensuring that underserved communities had equal access to renewable energy information and resources, and promoting inclusivity in sustainable practices.
O2.11 Promotion of green jobs	Measured the perceived impact on job creation and job seeker satisfaction, indicating the platform's contribution to the promotion of green jobs within the renewable energy sector, fostering economic growth in sustainable industries.
O2.12 Measurable engagement	Monitored platform engagement and material utilisation to gauge user involvement and interaction, providing insights into the platform's overall impact on fostering continuous learning and sustained engagement with RES materials.

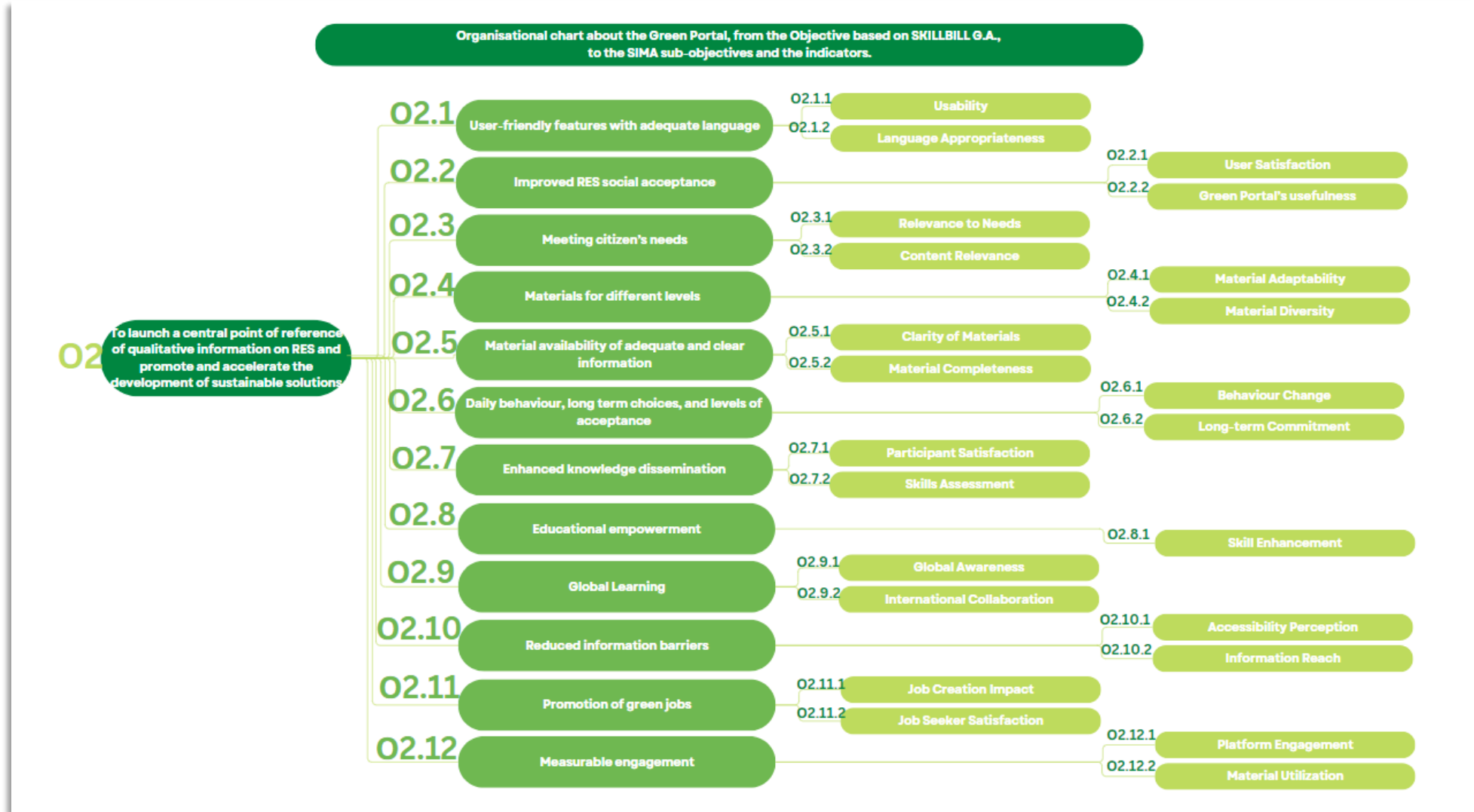


Figure 6. Overview of the Green Portal Narrative

4.3 Objectives and sub-objectives for the social impact assessment of the European Specialisation Programme and vocational Educational Training (Educational Programmes)

The GA objective for the European Specialisation Programme (ESP) (O3) was “to develop an advanced permanent education programme on Renewable Energy Sources (RES) at European level”. This programme aimed not only to provide postgraduate students with cutting-edge technical knowledge but also with a deep understanding of the societal implications of RES advancements. Towards this focus, SKILLBILL SIMA was employed to measure the programme's effectiveness in fostering community engagement, promoting diversity and inclusivity, and ensuring that its graduates contributed positively to addressing societal challenges related to energy sustainability.

In addition, the GA objective for the Vocational Education Training (VET) programme on RES (O4) was to develop a technical permanent programme to equip technicians with hands-on skills while fostering a keen awareness of their role in shaping socially responsible energy solutions. Towards this focus, SKILLBILL SIMA was employed to evaluate the programme's effectiveness in closing skill gaps, enhancing employability, and contributing to the well-being of communities through sustainable practices. The goal was to ensure that graduates of the VET programme not only excel in technical competence but also actively engage in socially impactful initiatives within the renewable energy sector. Table 3 below presents the set of sub-objectives for the ESP and the VET.

Table 3. Sub-objectives of the SKILLBILL SIMA model addressed to Educational Programmes

Sub-objectives	Description Explanation
O3.1 & O4.1 Increased skills (acquisition of skills)	Assessed whether students perceive an improvement in their skills and knowledge related to RES and evaluated the newly acquired skills for students in professional or academic life, indicating the practical application and relevance of the programmes. In addition, the extent to which students felt more proficient in solving real-world problems in the field of RES as a result of the programmes.
O3.2 & O4.2 Innovation method, use of Virtual Reality in educational programmes	Assessed the effectiveness and satisfaction with the innovative use of Extended/Augmented Reality (XR/AR) in the programme. Explored students' perceptions of how the integration of XR/AR technology enhanced their overall learning experience.
O3.3 & O4.3 Maximisation of talent	Provided insights into the programme's effectiveness in identifying and developing individual talents and measures the extent to which students contribute to innovative projects or outputs as a result of the educational programmes, reflecting the maximisation of their creative potential
O3.4 & O4.4 Equal access to education	Measured the equal access and opportunities for students from various backgrounds in educational programmes, assessing the inclusivity and accessibility of the programme. Also, examined the representation of students from diverse backgrounds in

Sub-objectives	Description Explanation
	leadership or influential roles within the programme, providing an additional dimension to inclusivity.
O3.5 & O4.5 Flexibility, and greener aspects of the educational programmes	Measured the level of satisfaction with the flexibility of the educational programmes, specifically focusing on the activities and environmental considerations. Moreover, measured the flexibility of content and course scheduling. the
O3.6 & O4.6 Continuous learning	Assessed students' motivation and behaviour related to continuous learning at professional development in the RES field after programme completion, and reflecting their commitment to ongoing professional development in the RES field
O3.7 & O4.7 Career path (workforce enhancement)	Assessed the programme's impact on students' career advancement and opportunities for promotions, assessing how the educational programmes contribute to workforce enhancement.
O3.8 & O4.8 New job acquisition, against unemployment	Indicated the educational programmes' effectiveness in facilitating employment and evaluated the success of the programme in helping unemployed individuals secure jobs related to RES.
O3.9 & O4.9 Enrolment (total rates/gender/age)	Explored whether the programme provides equal access and opportunities for students from various backgrounds, genders, and age groups, examining the programme's inclusivity and effectiveness in catering to diverse demographics.
O3.10 & O4.10 Collaboration between organisations	Measured the collaboration and the knowledge exchange that is facilitated by collaborative efforts between the educational organisations.
O3.11 & O4.11 Comprehensive organisational framework	Measured the satisfaction level of the internal organisation of the educational programme, related to the preparation time needed for an effective educational programme that enjoys high attendance by its students.
O3.12 & O4.12 Free communication of ideas, concerns, suggestions	Assessed the open communication environment with SKILLBILL partners, Professors, and students, creating a culture where individuals felt comfortable expressing their thoughts, raising concerns, and sharing suggestions without fear of reprisal or judgment. It emphasised fostering a two-way communication channel that promoted free expression and active participation from all involved parties.

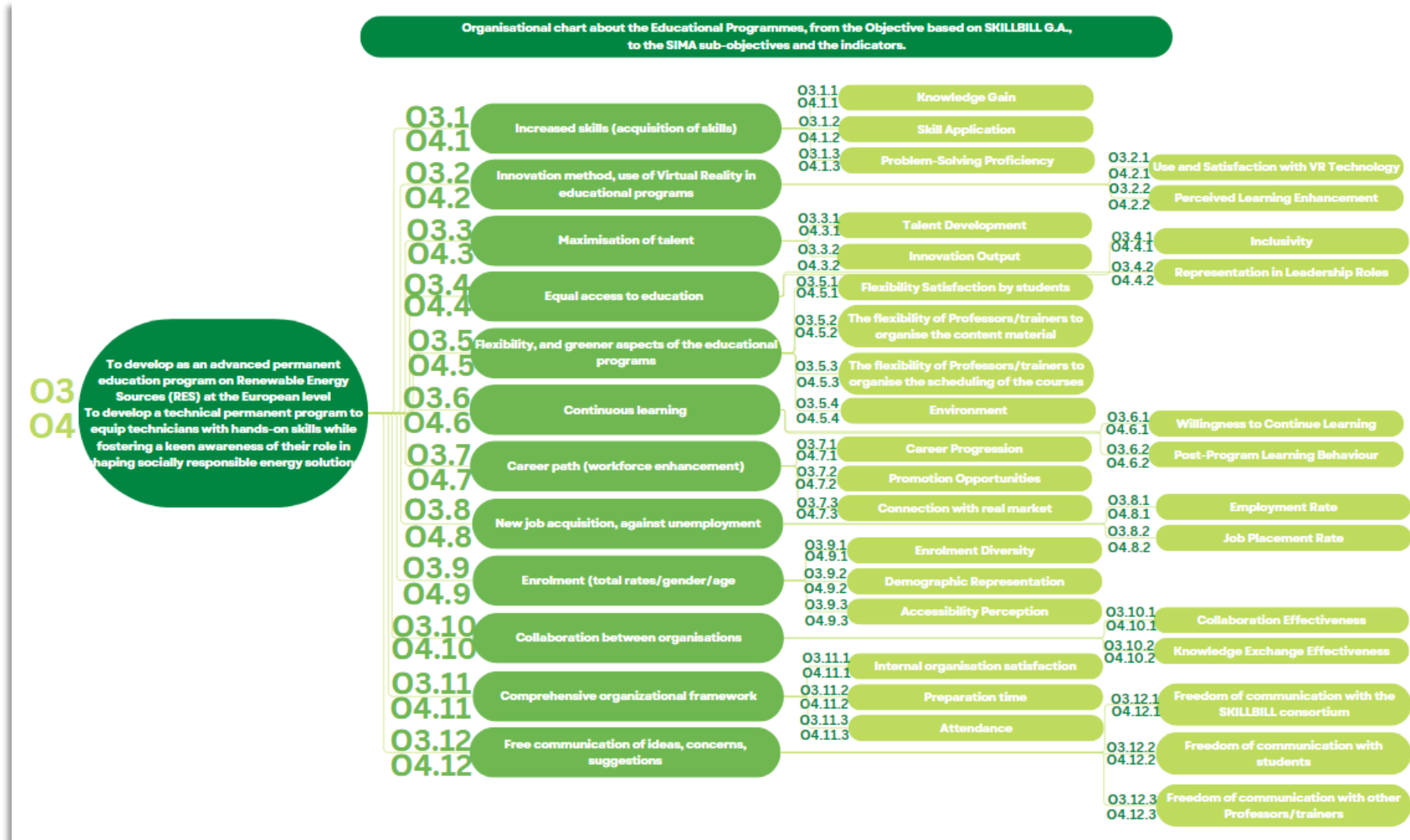


Figure 7. Overview of Educational Programmes Narrative

4.4 Horizontal objectives and sub-objectives across SKILLBILL's main pillars

Towards the four main pillars of the SKILLBILL project, including the four Working Groups, the Green Portal, the European Specialisation Programme, and the Vocational Education Training, a dedicated commitment was made to address and reduce the gender gap in STEM⁶ (O5). In the SKILLBILL project, the participation of women was encouraged in all pillars. The SKILLBILL SIMA model included metrics to measure the success of these efforts, ensuring that the activities contribute to a more balanced representation of genders within the renewable energy sector. By fostering an environment that values diversity and actively works towards gender equality, a more inclusive and socially responsible landscape within STEM disciplines were aspired. Table 4 below presents the set of sub-objectives for the horizontal objectives for the gender aspect in STEM.

Table 4. Sub-objectives of the SKILLBILL SIMA model addressed gender aspects and RES awareness.

Sub-objectives	Description Explanation
O5.1 Understanding Women's and men behaviour and Attitude	Measuring the current state of gender equality in the context of RES, this metric aimed to contribute to breaking down biased views, fostering a more inclusive environment, and promoting social change within the RES sector. The increase in the representation of women in decision-making roles served as a crucial measure for the project's impact on societal aspects, making progress towards gender equality and diversity in leadership within renewable energy organisations.
O5.2 Women encouragement	Reflecting SKILLBILL's impact in contributing to a more integrated and supportive professional community, in creating opportunities for connection and collaboration, and in recognising the achievements of by women in renewable energy. This sub-objective shifted societal perceptions and contributed to a more inclusive narrative of the accomplishments of women in the field.
O5.3 Women's effort for equal results	Promoting equal opportunities and active engagement in initiatives was a measure of the SKILLBILL's broader social impact. This sub-objective measured the commitment to systemic change and the cultivation of a culture that actively supports gender equality in renewable energy, progressing in energy careers. By that, was counted how actively SKILLBILL contributed to breaking down barriers and fostered an environment that promoted equal opportunities for career growth. Evaluating the perception of work-life balance for women in renewable energy reflected the project's impact on shaping attitudes towards gender-specific challenges, contributing to a more balanced and equitable professional environment.

Sub-objectives	Description Explanation
O5.4 Equal access to education	Accessing professional development opportunities for all levels of education in renewable energy by facilitating skill enhancement, knowledge dissemination, and overall empowerment within the sector.

In parallel, and across all SKILLBILL activities, increased awareness of RES was fostered (O6). SKILLBILL activities were designed not only to provide technical knowledge but also to disseminate information widely, ensuring that diverse stakeholders, communities, policymakers, and civil society, gain a comprehensive understanding of the significance of RES. Metrics within the SKILLBILL SIMA model measured the effectiveness of the awareness and the extent to which knowledge dissemination contributes to informed decision-making, community engagement, and a broader societal understanding of the importance of transitioning towards RES solutions. Table 5 below presents the set of sub-objectives for the horizontal objectives for RES awareness increase.

Table 5. Sub-objectives of the SKILLBILL SIMA model addressed to RES awareness.

Sub-objectives	Description Explanation
O6.1 Information, dissemination and public perception regarding renewable energy sources and technologies	Focusing on ensuring access to accurate information, assessing the reliability of the information available, and fostering interest in renewable energy sources and technologies.
O6.2 Promoting awareness and understanding of energy-related issues, trends, and policies	Increasing awareness and understanding among the target audience regarding various aspects of energy, including energy problems, emerging trends in renewable energy sources (RES), and relevant policies. This objective aimed to educate and inform individuals about future trends and regulatory frameworks associated with energy, particularly emphasising the importance of sustainability and renewable energy adoption.
O6.3 Recognising and understanding obstacles, challenges, and opportunities related to the adoption and utilisation of renewable energy sources	Assessing current barriers hindering the widespread use of RES, identifying potential future challenges that may arise in the renewable energy sector, and recognising global opportunities for advancing renewable energy technologies and practices.
O6.4 Adoption of RES in everyday practices	Integrating the use of renewable energy sources (RES) into routine activities and habits of individuals, organisations, or communities. This objective entailed encouraging and facilitating the widespread utilisation of renewable energy technologies such as solar, wind, hydroelectric, biomass, or geothermal energy for various purposes like electricity generation, heating, cooling, transportation, and other energy needs in everyday life.

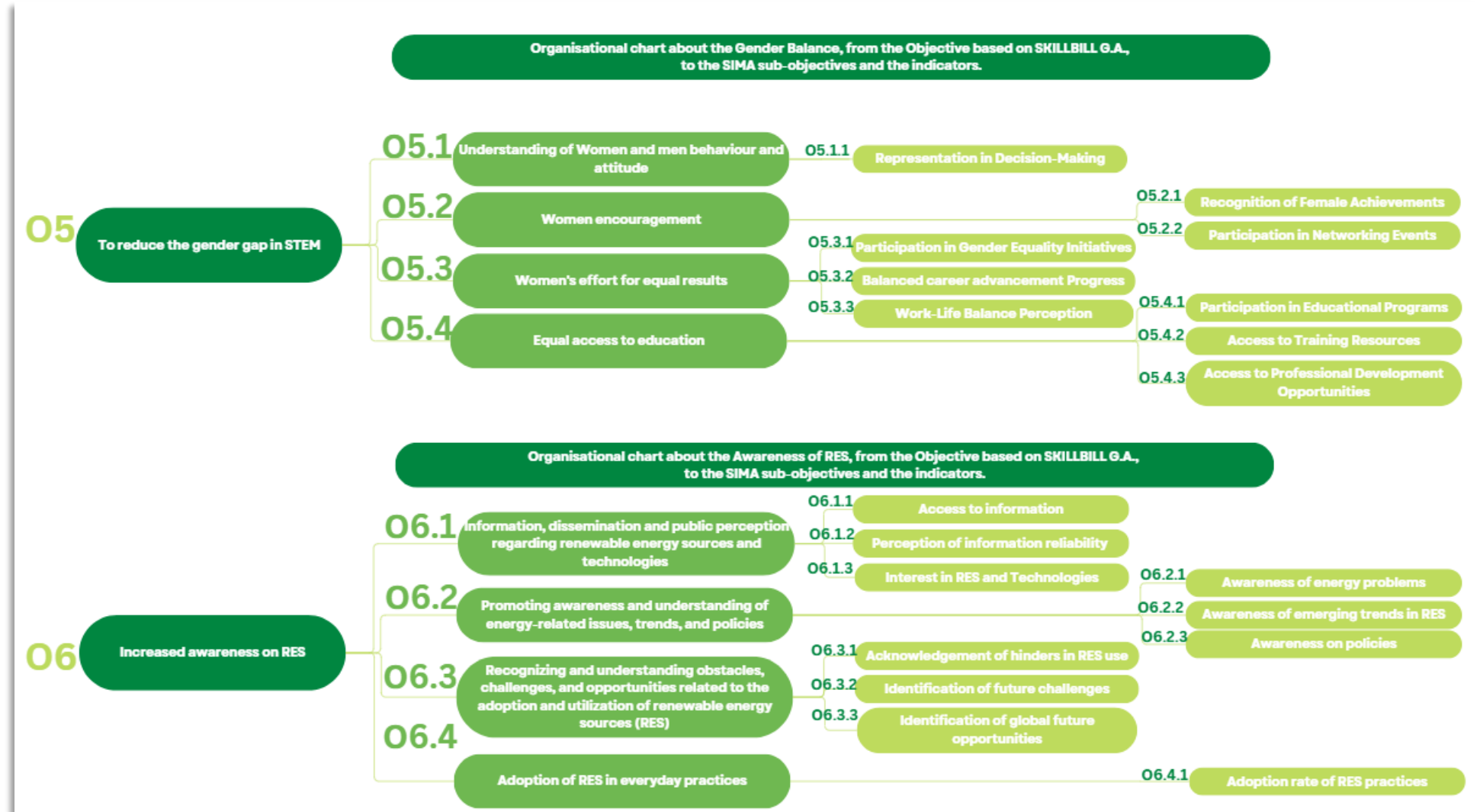


Figure 8. Overview of horizontal activities narrative

5. Calculating the impact indicators

This chapter presents the set of indicators employed to measure the progress toward each of the SKILLBILL impact sub-objectives. In the SKILLBILL SIMA model, the bridging of SIMA objectives to specific indicators was navigated through a systematic approach. The social impact sub-objectives were initially defined towards precision and measurability, as was detailed in the previous chapter. Subsequently, indicators were identified, aligning directly with these objectives, enabling the systematic assessment of progress and success. These indicators served as quantifiable metrics, facilitating the assessment of progress and success. This approach ensured that SKILLBILL activities are consistently monitored and evaluated, providing valuable insights into their effectiveness.

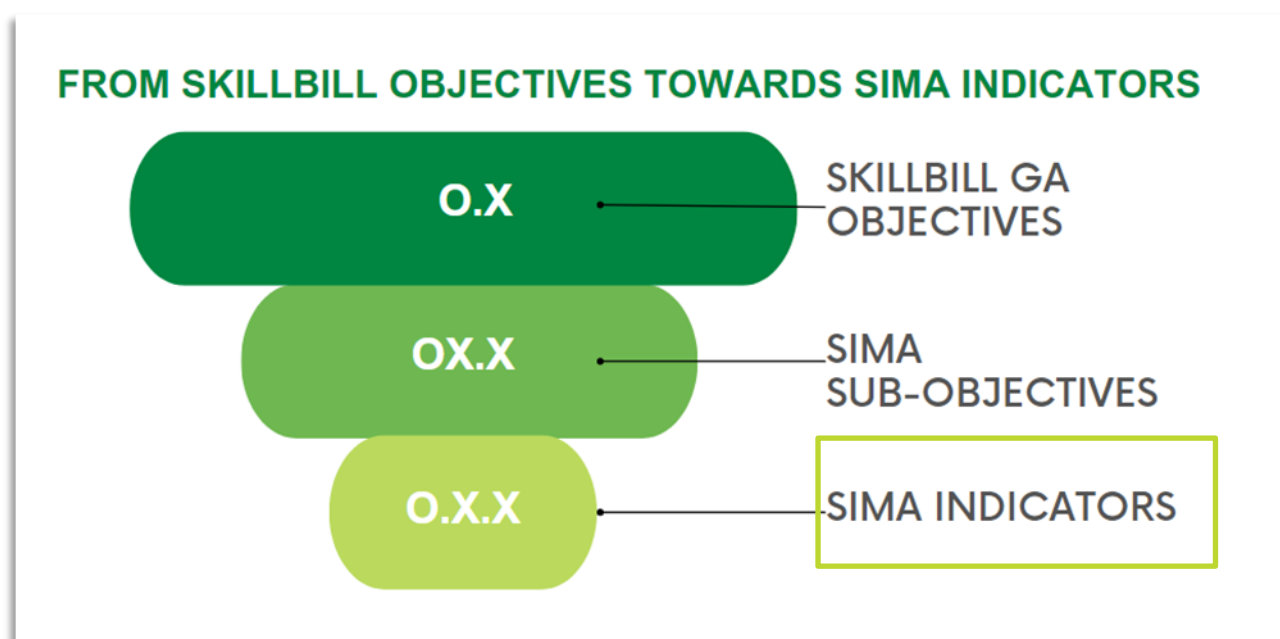


Figure 9. Transition from SKILLBILL GA objectives to SIMA sub-objectives and SIMA indicators.

Hereunder, the indicators are grouped according to the objective and sub-objective to which they are related.

5.1 Four Working Groups Indicators

The O1 “Steer the development of a greener, more effective and pervasive next generation of sustainable technology”, is thoroughly analysed into the following indicators, correlated with the sub-objectives.

Table 6. SIMA indicators of four WGs

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
O1.1 Mobilisation of stakeholder	Number of Stakeholders Engagements	Count of stakeholders	O1.1.1

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
engagement and networking, to address the lack of synergies	Frequency of stakeholders' engagement	Frequency of interactions with relevant stakeholders	O1.1.2
	Collaborative Initiatives	Number of collaborative projects initiated	O1.1.3
	Network Growth	Increase in the size of the stakeholders/WG network	O1.1.4
O1.2 Open discussions and adequate language	Transparency Score	A score based on how transparent discussions and communication were	O1.2.1
	Freedom of expression	The percentage of participants who expressed their opinion freely	O1.2.2
	Language Clarity	The percentage of participants who found the language used in discussions clear	O1.2.3
	Participation Satisfaction	Participants 'percentage of satisfaction with the open discussions	O1.2.4
	Influence on the discussion	Percentage of experts who had significantly influenced the discussions	O1.2.5
O1.3 Accountability and trust	Trust Index	A score measuring trust in project activities	O1.3.1
	Accountability Rating	Rating of perceived accountability in project actions	O1.3.2
O1.4 Adequate dissemination of policy and technical recommendations	Dissemination Reach	The number of individuals or organisations that had received SKILLBILL policy and technical recommendations	O1.4.1

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
	Feedback on Recommendation	The number of responses or feedback received on recommendations	O1.4.2
	Implementation Rate	The percentage of stakeholders who had used the recommendations	O1.4.3
O1.5 Involvement of members in discussions	Participation Rate	The percentage of WG members actively participating in discussions	O1.5.1
	Content contribution	Number of allocated contributions to the WG discussions	O1.5.2
	Quality of Contributions	An assessment of the quality of contributions by project members	O1.5.3
	Level of Engagement	The average time spent by members in discussions	O1.5.4
O1.6 Increased employability	Employment Rate	The percentage of project participants who had secured employment	O1.6.1
	Job Placement Speed	Average time taken to secure employment after participation	O1.6.2
	Employer Satisfaction	Employer satisfaction with the employability of project participants.	O1.6.3
O1.7 Reduced Skills Gap	Participant Satisfaction	Participant satisfaction with skills development	O1.7.1
	Skills Assessment	Improvement in skills as assessed by project participants	O1.7.2
	Skill advancement opportunities	Open qualitative answer	O1.7.3

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
O1.8 Diverse and Inclusive Workforce	Diversity Index	A score assessing the diversity of the project's workforce.	O1.8.1
	Inclusion Perception	Participant perception of inclusivity within the project	O1.8.2
	Inclusion Initiatives	A number of initiatives promoting diversity and inclusion.	O1.8.3

5.2 Green Portal Indicators

The O2 “launch a central point of reference of qualitative information on RES and promote and accelerate the development of sustainable solutions” was thoroughly analysed into the following indicators, correlated with the sub-objectives.

Table 7. SIMA indicators of the Green Portal

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
O2.1 User-friendly features with adequate language	Usability	Percentage of users who found the Green Portal easy to navigate	O2.1.1
	Language Appropriateness	Percentage of users who found the language used in the materials appropriate for their level.	O2.1.2
O2.2 Improved RES social acceptance	User Satisfaction	User satisfaction rate of the platform.	O2.2.1
	Green Portal's usefulness	Percentage of users who found the Green Portal useful or very useful	O2.2.2
O2.3 Meeting citizens' needs	Relevance to Needs	Percentage of users who believed the platform met their specific needs	O2.3.1
	Content Relevance	Average relevance rating of materials to users' interests.	O2.3.2

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
O2.4 Materials for different levels	Material Adaptability	Percentage of users who found materials suitable for their level (beginner, intermediate, expert)	O2.4.1
	Material Diversity	Percentage of users who found the material diversity ample	O2.4.2
O2.5 Material availability of adequate and clear information	Clarity of Materials	Percentage of users who found the materials clear and easy to understand.	O2.5.1
	Material Completeness	Percentage of materials that was considered complete and comprehensive by users.	O2.5.2
O2.6 Daily behaviour, long-term choices, and levels of acceptance	Behaviour Change	Percentage of users who reported changes in daily behaviour due to platform use.	O2.6.1
	Long-term Commitment	Percentage of users committed to long-term engagement on the Green Portal	O2.6.2
O2.7 Enhanced knowledge dissemination	Knowledge Sharing	Frequency of users sharing platform materials with others.	O2.7.1
	Knowledge Acquisition	Improvement in users' knowledge of RES topics.	O2.7.2
O2.8 Educational empowerment	Skill Enhancement	Percentage of users who reported improved skills related to RES	O2.8.1
O2.9 Global Learning	Global Awareness	Percentage of users who reported an increased awareness of global RES challenges.	O2.9.1
	International Collaboration	A number of users engaged in international collaborative efforts related to RES.	O2.9.2

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
O2.10 Reduced information barriers	Accessibility Perception	Percentage of users who acknowledged that the platform offers them improved accessibility to RES information.	O2.10.1
	Information Reach	Number of users who reported sharing platform materials with underserved communities.	O2.10.2
O2.11 Promotion of green jobs	Job Creation Impact	Percentage of users who believed the platform contributed to job creation in the RES sector.	O2.11.1
	Job Seeker Satisfaction	Satisfaction level of users who planned green jobs through the materials of the platform.	O2.11.2
O2.12 Measurable engagement	Platform Engagement	Number of hours or sessions spent on the platform.	O2.12.1
	Material Utilisation	Number of materials accessed compared to the total available	O2.12.2

5.3 European Specialisation Programmes and Vocational Educational Training (Educational Programmes) Indicators

The O3 “development of an advanced permanent education programme on RES at European level” and O4 “development of a technical permanent educational programme” were thoroughly analysed into the following indicators, correlated with the sub-objectives.

Table 8. SIMA Indicators of Educational Programmes

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
O3.1 & O4.1 Increased skills (acquisition of skills)	Knowledge Gain	Percentage of increase in knowledge/skills post-programme.	O3.1.1 & O4.1.1

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
	Skill Application	Percentage of students who apply newly acquired skills in their work/studies.	O3.1.2 & O4.1.2
	Problem-Solving Proficiency	Percentage of students expressing an improvement in problem-solving proficiency in the field of RES	O3.1.3 & O4.1.3
O3.2 & O4.2 Innovation method, use of Virtual and Augmented Reality in educational programmes	Use and Satisfaction with XR/AR Technology	Percentage of students using XR/AR and their satisfaction level.	O3.2.1 & O4.2.1
	Perceived Learning Enhancement	Percentage of students who perceived an enhancement in their overall learning experience due to the integration of XR/AR technology.	O3.2.2 & O4.2.2
O3.3 & O4.3 Maximisation of talent	Talent Development	Percentage of students who felt their talents had been maximised.	O3.3.1 & O4.3.1
	Innovation Output	Percentage of students contributing to innovative projects or outputs as a result of the programme.	O3.3.2 & O4.3.2
O3.4 & O4.4 Equal access to education	Inclusivity	Percentage of students from diverse backgrounds.	O3.4.1 & O4.4.1
	Representation in Leadership Roles	Percentage of students from diverse backgrounds in leadership or influential roles within the programme.	O3.4.2 & O4.4.2
O3.5 & O4.5 Flexibility, and greener aspects of the educational programmes	Flexibility Satisfaction by students	Percentage of students satisfied with programme flexibility.	O3.5.1 & O4.5.1
	The flexibility of Professors/trainers to	Percentage of Professors/trainers	O3.5.2 & O4.5.2

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
	organise the content material	satisfied with the content material	
	The flexibility of Professors/trainers to organise the scheduling of the courses	Percentage of Professors/trainers satisfied with the scheduling of the courses	O3.5.3 & O4.5.3
	Environment	Percentage of students satisfied with environmental aspects of the programme	O3.5.4 & O4.5.4
O3.6 & O4.6 Continuous learning	Willingness to Continue Learning	Percentage of students interested in further learning.	O3.6.1 & O4.6.1
	Post-Programme Learning Behaviour	Percentage of students engaging in post-programme learning activities.	O3.6.2 & O4.6.2
O3.7 & O4.7 Career path (workforce enhancement)	Career Progression	Percentage of students who had advanced in their careers.	O3.7.1 & O4.7.1
	Promotion Opportunities	Percentage of students who had been offered or received promotions in their current jobs since completing the programme.	O3.7.2 & O4.7.2
	Connection with real market	Percentage of students & Professors/trainers that were satisfied by the relation of ESP's content with the real-life needs	O3.7.3 & O4.7.3
O3.8 & O4.8 New jobs acquisition, against unemployment	Employment Rate	Percentage of previously unemployed students who found a job.	O3.8.1 & O4.8.1
	Job Placement Rate	Percentage of previously unemployed students who have successfully found a job related to renewable energy sources (RES)	O3.8.2 & O4.8.2

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
		within a specified time frame after completing the programme.	
O3.9 & O4.9 Enrolment (total rates/gender/age)	Enrolment Diversity	Percentage of students from different genders and age groups.	O3.9.1 & O4.9.1
	Demographic Representation	Percentage distribution of students across different gender and age groups in the programme.	O3.9.2 & O4.9.2
	Accessibility Perception	Percentage of students who perceive the programme as accessible regardless of background.	O3.9.3 & O4.9.3
O3.10 & O4.10 Collaboration between organisations	Collaboration Effectiveness	The measure of collaboration effectiveness among universities	O3.10.1 & O4.10.1
	Knowledge Exchange Effectiveness	Percentage of students who believed the collaboration between universities has enhanced knowledge exchange.	O3.10.2 & O4.10.3
O3.11 & O4.11 Organisation of the Programme	Internal organisation satisfaction	Percentage of professors/trainers who were satisfied with the internal organisation of the ESP/VET	O3.11.1 & O4.11.1
	Preparation time	Percentage of professors/trainers who were satisfied with the preparation time given for each course	O3.11.2 & O4.11.2
	Attendance	Percentage of Professors/trainers who were satisfied with the number of students attending the ESP/ VET programme	O3.11.3 & O4.11.3

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
O3.12 & O4.12 Free communication of ideas, concerns, suggestions	Freedom of communication with the SKILLBILL consortium	Percentage of professors/trainers who were satisfied with the freedom of communication with the SKILLBILL consortium	O3.12.1 & O4.12.1
	Freedom of communication with students	Percentage of professors/trainers who were satisfied with the freedom of communication with students	O3.12.2 & O4.12.2
	Freedom of communication with other Professors/trainers	Percentage of professors/trainers who were satisfied with the freedom of communication with other Professors	O3.12.3 & O4.12.3

5.4 Indicators of assessing gender balance across SKILLBILL's main pillars

The O5 “Reduce the gender gap in STEM” is thoroughly analysed into the following indicators, correlated with the sub-objectives.

Table 9. SIMA indicators of horizontal objectives across SKILLBILL's main pillars on gender aspects

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
O5.1 Understanding of women's and men's behaviour and attitudes.	Representation in Decision-Making	Percentage increase in the representation of women in decision-making roles within renewable energy organisations.	O5.1.1
O5.2 Women encouragement	Recognition of Female Achievements	Percentage increase in the recognition of achievements by women in renewable energy.	O5.2.1
	Participation in Networking Events	Percentage of women participating in networking	O5.2.2

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
		events within the renewable energy sector.	
O5.3 Women's effort for equal results	Participation in Gender Equality Initiatives	Percentage of participants actively engaged in initiatives promoting equal opportunities for women.	O5.3.1
	Balanced career advancement Progress	Increase in the percentage of women progressing in their renewable energy careers.	O5.3.2
	Work-Life Balance Perception	Change in perception regarding work-life balance for women in renewable energy.	O5.3.3
O5.4 Equal access to education	Participation in Educational Programmes	Percentage of women enrolled in renewable energy education programmes.	O5.4.1
	Access to Training Resources	Availability and accessibility of training resources for women in renewable energy	O5.4.2
	Access to Professional Development Opportunities	Percentage of women with access to professional development opportunities in renewable energy.	O5.4.3

5.5 Awareness of RES Indicators

The **O6 “Increased awareness on RES”** was a common objective that probes all SKILLBILL pillars. It is analysed into the following indicators, correlated with the sub-objectives.

Table 10. SIMA indicators of the horizontal awareness objective across all SKILLBILL main pillars

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
O6.1 Information, dissemination and public perception regarding renewable	Access to information	Percentage of respondents who selected each option provided in the multiple-choice question to	O6.1.1

Sub-objectives (Impact Areas)	Indicators	Metrics	Identifier
energy sources and technologies		determine the most frequently used sources for information on renewable energy systems	
	Perception of information reliability	Perceived reliability rate	O6.1.2
	Interest in Renewable Energy Sources and Technologies	Interest Score for different Technologies (Rating for each renewable energy technology)	O6.1.3
O6.2 Promoting awareness and understanding of energy-related issues, trends, and policies	Awareness of energy problems	Aspect Agreement Score: calculation of the score for stronger agreement with the notion that energy problems are related to	O6.2.1
	Awareness of emerging trends in RES	Average Awareness Score for Each Trend	O6.2.2
	Awareness of policies	Policy Influence Score for Each Policy/Regulation	O6.2.3
O6.3 Recognising and understanding obstacles, challenges, and opportunities related to the adoption and utilisation of renewable energy sources (RES)	Acknowledgement of hinders in RES use	Percentage of the most significant reasons hindering the increased use of RES	O6.3.1
	Identification of future challenges	Rating for each future challenge to identify which challenges are most pressing	O6.3.2
	Identification of global future opportunities	Rating for each future opportunity to identify the most promising or impactful opportunities	O6.3.3
O6.4 Adoption of RES in everyday practices	Adoption rate of RES practices	The contribution rate of each practice in promoting the adoption of renewable energy	O6.4.1

6. Methodology for data collection

6.1 Data Management Provision

SKILLBILL project handled personal data with due diligence and according to its D1.1: Project Management Plan (PMP) and Data Management Plan (DMP). It respected the provisions set by the General Data Protection Regulation (GDPR) and took any steps required to make the data collected/generated FAIR (Findable, Accessible, Interoperable, and Reusable). In the context of T6.4, a few personal details were collected, such as the stakeholder group, gender, and job position. Nevertheless, anonymised responses to questionnaires were utilised in the context of the SIMA model.

Effective data management was critical for the success of the SKILLBILL SIMA model. To achieve this, clear rules for data collection were established and standardised methods to maintain consistency in data collection were defined.

For seamless data management, each WP leader (Q-PLAN, AOCO2, UNITUS, and SINERGIE) was responsible for collecting data for the SIMA. Data were collected through questionnaires and addressed to relevant audiences. The questionnaires were developed in the most convenient tool that best serves the respective SKILLBILL WP Leader (i.e. questionnaires in Google Forms, etc). Any personal data was processed lawfully, fairly, and transparently in relation to the data subject. None of the questionnaires asked for personal data (name, surname, e-mail). The WP Leader, on the other hand, was responsible for fostering transparency and trust when involving stakeholders, users, and students in the implementation of data processes. Guidelines from D1.1 Project Management Plan (PMP) and Data Management Plan (DMP), and section 5 “Social Ethical, Legal, Privacy issue” were utilised to support this process.

For rational and responsible data management, each WP leader (Q-PLAN, AOCO2, UNITUS, and SINERGIE) secured storage solutions and implemented version control mechanisms. Standardised data formats and metadata played a pivotal role in facilitating interoperability, improving data discoverability, and providing essential context for analysis.

Compliance with relevant regulations, including data protection standards and ethical considerations, was paramount. Staying informed about changes in regulations and updating policies accordingly ensured that data management practices aligned with legal and ethical frameworks. By incorporating these provisions, organisations navigated the complexities of social impact monitoring with a robust and ethical approach, contributing to positive societal change.

On top of the above, after completing the SKILLBILL SIMA activities, any necessary action will be taken to make the data collected/generated FAIR. In particular, aggregate and anonymised data will be uploaded to Zenodo, which automatically links to Open AIRE. Finally, data findability will be fostered thanks to the metadata that will be included.

6.2 Monitoring Methods and Tools

As previously mentioned, the SKILLBILL project established independent pillars bridging several actors across the renewable energy sector at different educational levels, to translate the skills needed for advanced technologies and to design appropriate training programmes and sources with information available to everyone.

In this context, the SKILLBILL SIMA model established a framework, which included several methods to ensure that data and other information were captured at all project levels and from all SKILLBILL activities. In particular, the key methods employed are:

- (i) collection of feedback from the four WG members and the four technical facilitators, named Lighthouse experts in the context of SKILLBILL,
- (ii) collection of data from the GP users, along with feedback from the responsible partners for maintaining, upgrading, and labelling materials on the GP
- (iii) collection of feedback from the students of training programmes (both ESP and VET), and feedback for the involved SKILLBILL partners who manage them.

The SKILLBILL SIMA model adopted a multiplayer approach, including a mix of qualitative and quantitative data, collecting feedback from various stakeholders, users, and students (internal and external). The multilayer approach was effective because quantitative study provided quantifiable apprehension of the project achievements, while the qualitative method allowed the contextualisation and capture of an intervention's importance. This allows a holistic view of the performance of the activities, the way stakeholders perceive them, and the potential impacts project activities have had. Within the following pages, all selected methods are further explained.

6.2.1 *Feedback collection from the four Working Groups*

The main activity of the four WGs was to translate the new technological advancements into skills needed and close the skills gaps with customised job profiles, to be used for the tailored design of the training programmes and obtain insight into the real market renewable energy needs.

The SKILLBILL WGs under the Joint Stakeholder Initiative focused on mobilising stakeholder engagement and networking in the renewable energy sector, aiming to create a collaborative and engaged community. Emphasising open discussions and inclusive language among WGs' members, the project strived for transparency, accountability, and trust in decision-making processes. Additionally, SKILLBILL aimed to disseminate policy and technical recommendations effectively, ensuring the widespread sharing of valuable insights for positive changes in the sector. SKILLBILL SIMA model evaluated its success based on the active involvement of members in discussions, fostering a dynamic and collaborative environment for innovative solutions. Moreover, SKILLBILL measured its social impact by enhancing employability (according to needs), reducing skills gaps, and producing industry-ready graduates, contributing to a diverse and inclusive workforce in the renewable energy industry.

Towards the efficient collection of feedback, a questionnaire was elaborated to capture feedback from the WG members (experts in the energy sector). The questionnaire was filled out twice in the project run to capture positive or negative change towards the social impact of this specific SKILLBILL activity. More specifically, the questionnaires were designed to collect input after the second WG meeting in May/June 2024, and after the fourth and final WG meeting in May/June 2025.

In parallel with the dedicated questionnaires of the WGs, the questionnaires on the gender aspects and the awareness raising were utilised.

For that reason, the responsible task leader of WG activities (Q-PLAN) was responsible for collecting answers from both rounds of data collection. Then the data was aggregated and interpreted (by Q-PLAN). The table below summarises the data collection model of the four WGs.

Table 11. Data collection from the four WGs

Data collection of the four WGs summary	
Tools	How was the data collected? By online questionnaires (i.e. Google Forms), addressed to WGs members and the LHEs.
Questionnaires to be used	Which questionnaires were used? Annex I, Annex IV, and Annex V
Timing	When was the data collected? Twice during the course of the project, after the second and the fourth WG meetings (May / June 2024 and May / June 2025, respectively)
No of Responses	How many people responded? 36 responses were collected in May/June 2024 24 responses were collected in May/June 2025
Data Control	Who owned the data? T6.4 Leader (Q-PLAN), as the answers were directly addressed to Q-PLAN, who created the questionnaires.
Design to action	How was on-time delivery ensured? The feedback was asked right after the meetings, resolving immediately any problems and concerns that may have arisen, and ensuring the quality of the final results.
Step afterwards	How was the data used? T6.4 leader aggregated the data, storing them in its database, to use them for assessment and evaluation of results.

6.2.2 Feedback Collection from Green Portal

The main activity of the GP was to create an open environment, summarising all the available information in one place, and awarding it with a label of quality.

The SKILLBILL GP served as an inclusive online platform with a primary focus on ensuring user-friendly features and language accessibility, enabling individuals at several levels in terms of expertise to access and comprehend renewable energy materials. It aimed to build social acceptance of renewable energy solutions by assessing user satisfaction and community engagement. The platform addressed specific user needs, ensuring the relevance of content and contributing to a more informed and empowered public. By offering adaptable and diverse materials for different expertise levels, SKILLBILL promoted inclusivity in renewable energy education. This platform strived to enhance knowledge dissemination, empower users through skills empowerment, and foster global awareness of renewable energy challenges. It actively worked towards reducing information-sharing barriers to ensure all interested parties had equal access to renewable energy

information. Moreover, the platform aimed to contribute to the promotion of green jobs within the renewable energy sector, fostering economic growth in sustainable industries. Continuous monitoring of user engagement and online informative material utilisation provided insights into the platform's overall impact on fostering sustained learning and engagement with renewable energy informative materials.

Towards the efficient collection of feedback, two questionnaires were elaborated. The first was addressed to the users in the form of a brief pop-up window, with short and easy questions, to grab their insights, while the second one was addressed to the responsible partners of the Green Portal (A0CO2), collecting insights through Google Analytics. Anonymised answers for the users were collected and aggregated three times during the course of the project, while at the same time, the GP manager filled in the questionnaire addressed to them. In parallel with the dedicated questionnaires of the GPs, the questionnaires on gender aspects and the awareness raising were utilised. To follow a common timeline with other SKILLBILL activities, the answers were collected in May/June 2024 and May/June 2025. In addition, the answers of T1.5 questionnaires for the evaluation of female involvement and awareness were also utilised, as they were part of the GP before the starting point of T6.4, but were closely related.

For that reason, the GP task leader (A0CO2) was responsible for collecting answers from both questionnaires and sharing aggregated data with Q-PLAN in the timeframe described above, along with the answers from the questionnaire under T1.5. Then the data was summarised and interpreted by the responsible partner of the SKILLBILL SIMA model (Q-PLAN). The table below summarises the data collection model of the GP.

Table 12. Data collection from the Green Portal

Data collection of the Green Portal	
Tools	How was the data collected? By online questionnaires (id est., Google forms, pop-up forms), addressed to users of the Green Portal and the GP manager (A0CO2).
Questionnaires to be used	Which questionnaires were used? Annex II, Annex IV and Annex V, and also questionnaires that were developed under T1.5
Timing	When was the data collected? Following the other activities of SKILLBILL in May / June 2024 and May / June 2025.
No of Responses	How many people responded? 16 responses were collected in May/June 2024, 8 responses were collected in May/June 2025
Data Control	Who owned the data? WP3 Leader (A0CO2) incorporated the questionnaire addressed to users of the GP and collected the anonymised answers. Also had access to the Google Analytics platform for the questionnaire addressed to the GP manager.

Design to action	<p>How was on-time delivery ensured?</p> <p>As the main concern was on the users' feedback, the questionnaires were as concise as possible and easy to answer. Brief and targeted.</p>
Step forward	<p>How was the data used?</p> <p>WP3 leader aggregated the data and shared it with the responsible partner of the SKILLBILL SIMA model (Q-PLAN).</p>

6.2.3 *Feedback collection from educational programmes (ESP and VET)*

Two of the main activities of SKILLBILL were to create educational programmes addressed on several levels of expertise, and to skill, upskill and reskill interested individuals. The European Specialisation Programme has been developed in order to provide the next generation of workforce in the energy sector with advanced skills, closing the skill gap of the present industry. On the other hand, the Vocational Educational Training Programme was expected to provide technicians with the skills needed for their job capacity in their current position.

The evaluation of the social impact of the Educational Programmes included assessing students' perceptions of skill improvement, the practical application of acquired skills in professional or academic life, and their proficiency in solving real-world problems in the RES field. It was no coincidence that the programmes incorporated innovative methods, including the use of Extended/Augmented Reality (XR/AR), to advance the learning experience, paying special focus on both effectiveness and user satisfaction. SKILLBILL endeavours to maximise individual talents, encouraging students to contribute to innovative outputs. Ensuring equal access to education was a key goal, examining inclusivity, accessibility, and diverse representation in leadership roles. The programmes prioritised flexibility, safety, and environmental considerations. Continuous learning and commitment to ongoing professional development in the RES field were assessed, along with the impact on students' career advancement and workforce enhancement. The effectiveness in facilitating employment and mitigating unemployment, particularly in RES-related jobs, was a crucial aspect. Lastly, the programmes aimed at equal access and opportunities for students from diverse backgrounds, genders, and age groups, fostering inclusivity. The collaboration among educational organisations (Universities, VET organisations) was also measured, emphasising knowledge exchange and collective efforts in advancing renewable energy education. Overall, SKILLBILL educational programmes aspired to create a socially impactful ecosystem that empowered students, ensured inclusivity, and contributed to the growth of a skilled and diverse workforce in the renewable energy sector.

Towards the efficient collection of feedback, two questionnaires were elaborated. The first was addressed to the students from either the ESP or VET course, in the form of a Google Form, to grab their insights, while the second one was addressed to the responsible partners that run VET (SINERGIE). Anonymised answers by the students were collected and aggregated at the end of each round of courses, along with answers from the responsible manager of each activity. More specifically, questionnaires for the ESP students were collected by the WP4 Leader (UNITUS) at the beginning and at the end of the students' studies, anonymised and aggregated, to be shared with the responsible partner of the SIMA model (Q-PLAN) and interpreted. For the VET courses, a similar approach was followed; questionnaires were filled in by the students at the end of each course. At the same time, the responsible managers of the educational programmes were asked about their views on the training courses.

In parallel with the dedicated questionnaires of the educational programmes, the questionnaires on gender-specific aspects and RES awareness were used.

Then the data were summarised and interpreted by the responsible partner of the SKILLBILL SIMA model (Q-PLAN). The table below summarises the data collection model of the educational programmes.

Table 13. Data collection from the educational programmes

Data collection of the educational programmes	
Tools	<p>How was data collected?</p> <p>By online questionnaires (e.g. Google forms), addressed to students of the ESP.</p> <p>Online questionnaires (e.g. Google forms), addressed to students of VET and the VET manager (SINERGIE)</p>
Questionnaires to be used	<p>Which questionnaires were used?</p> <p>Annex III, Annex IV and Annex V</p>
Timing	<p>When was data collected?</p> <p>For the ESP, data was meant to be collected at the beginning and at the end of the studies during the course of the project, (February 2025 & and June 2025 for both ESP intakes of students)</p> <p>For the VET, at the end of each course.</p>
No of Responses	<p>How many people responded to ESP assessment?</p> <p>14 responses were collected in February 2025</p> <p>23 responses were collected in June 2025</p> <p>How many people responded to VET assessment?</p> <p>25 responses were collected in total</p>
Data Control	<p>Who owned the data?</p> <p>Data for the ESP were collected and owned by WP4 Leader (UNITUS), who addressed the questionnaire to students and collected anonymised answers. After that step, aggregated data were shared with the SKILLBILL SIMA model manager (Q-PLAN).</p> <p>Regarding VET, data were collected by WP5 Leader (SINERGIE), who addressed the questionnaire to the VET students and collect the anonymised data. SINERGIE then shared the anonymised aggregated data with Q-PLAN.</p>
Design to action	<p>How was on-time delivery ensured?</p> <p>The feedback was asked after the last section of the course, resolving immediately any problem or concern that may arise, ensuring the quality of the final results.</p>

Step forward	<p>How was the data used?</p> <p>WP4 leader for the ESP and WP5 leader for the VET aggregated the data, before sharing them with the responsible SIMA model partner (Q-PLAN), who, in turn, utilised it during the assessment and evaluation of results.</p>
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6.2.4 *Feedback collection from the horizontal assessment of gender balance and RES awareness*

The feedback of the horizontal assessment of gender balance and RES awareness was gathered in parallel with the dedicated collection of data of each respective SKILLBILL activity.

6.2.5 *Summary and Timeline*

The SIMA framework was the outcome of the close collaboration of Q-PLAN with all the relevant SKILLBILL WP Leaders. The aim was to find the most appropriate deployment procedures, complying with the provisions of the GA, in order to assess efficiently the social impact of SKILLBILL activities and gather insights for the upcoming steps. The initial version of this report served as a guide on the notions to be monitored, while the summary of responsibility, tasks and timing is summarised below.

Table 14. Summary table of responsibilities, tasks, and timing

	SKILLBILL activity	Tool	Timing	Responsible partner *
1	WGs	One questionnaire, addressed to WG members and LHEs, along with the questionnaire for the gender balance and the RES awareness	At least twice, after the second and the fourth WG meeting. May/June 2024 May/June 2025	Q-PLAN
2	Green Portal	One pop-up window survey, one questionnaire to the Green Portal manager, along with a questionnaire for the gender balance and the RES awareness. Answers to T1.5 were also utilised.	At least twice, during the course of the project and following the timeline of other SKILLBILL activities. Answers to T1.5 up to May/June 2024 May/June 2024 May/June 2025	A0CO2
3	European Specialisation Programme	A questionnaire, addressed to students.	In each academic year, answers were collected at the beginning and at the end, for each round of	UNITUS

SKILLBILL activity	Tool	Timing	Responsible partner *
Vocational Educational Training	<p>Two questionnaires, one addressed to students and one addressed to the manager of VET.</p> <p>In both activities, and in parallel with the dedicated questionnaires, the gender balance and the RES awareness questionnaires were also utilised.</p>	<p>ESP. February 2025, and June 2025.</p> <p>After each course</p>	SINERGIE

*Responsible partner for the collection and aggregation of anonymised data

7. Interpretation of Results

The SKILLBILL SIMA model played a dual role, not only to gather and process data on social impact but also to generate valuable insights. These insights helped assess progress towards specific SKILLBILL objectives and evaluate the impact of SKILLBILL activities on various social factors. In T6.4, detailed techniques and methods were outlined to conduct a thorough assessment of social impact, ensuring understanding of the outcomes and effectiveness of SKILLBILL initiatives.

7.1 Assessment VS Evaluation

Assessment and evaluation while closely related, yet they remain different from each other. The meaning of **assessment involves reviewing data to enhance current performance**, whereas **evaluation entails judging performance against established standards**. Assessment is an ongoing, continuous process, while evaluation serves as a concluding phase in the existing process⁷.

In the context of SKILLBILL, the primary focus was on activities that aimed to improve their outcomes. Simultaneously, there was a parallel effort to evaluate the impact of activities, contributing to the formulation of concrete outcomes. In particular, the purposes of the SKILLBILL SIMA model Assessment and Evaluation framework were (i) identifying the strong and weak points of the SKILLBILL approach, highlighting factors that contribute to success or hindrance, thus ultimately refining SKILLBILL activities; and (ii) collecting evidence on the societal, scientific, economic, and environmental impact of targeted training, to foster interest in renewable energy sources and formulate pertinent policy recommendations. This comprehensive framework ensures a holistic understanding of initiatives and guides strategic improvements for sustainable impact.

7.2 Interpretation techniques

After collecting the data, a key technique was chosen as the most suitable for processing and interpreting SKILLBILL SIMA results, providing valuable insights: the assessment involves comparison of (i) the values of monitored indicators against their predetermined targets established within the SKILLBILL GA, (ii) an internal comparison conducted among SKILLBILL's main pillars and activities, such level of satisfaction etc., between the baseline and the update of data collection. This two-faceted approach ensured a thorough analysis, allowing for insights into performance against targets, internal dynamics, and alignment with broader trends.

⁷ [Difference Between Assessment and Evaluation](#), testbook.com, 2023

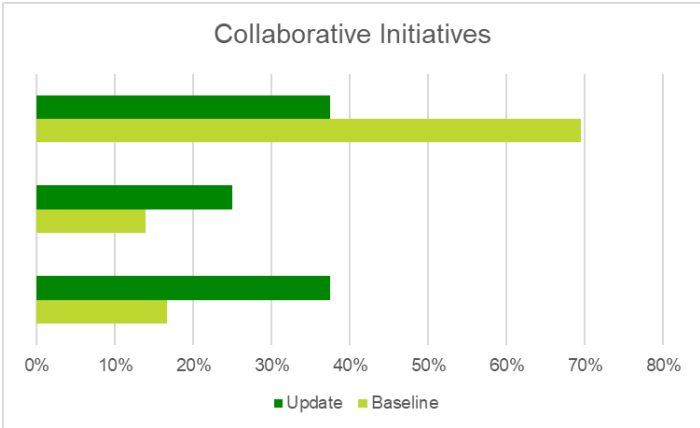
7.3 Working Groups

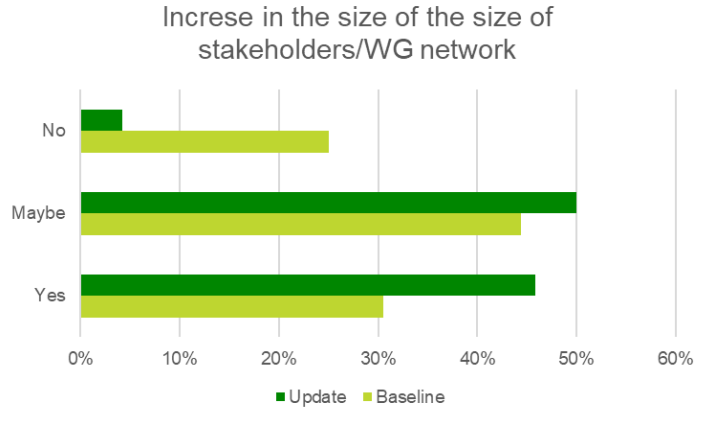
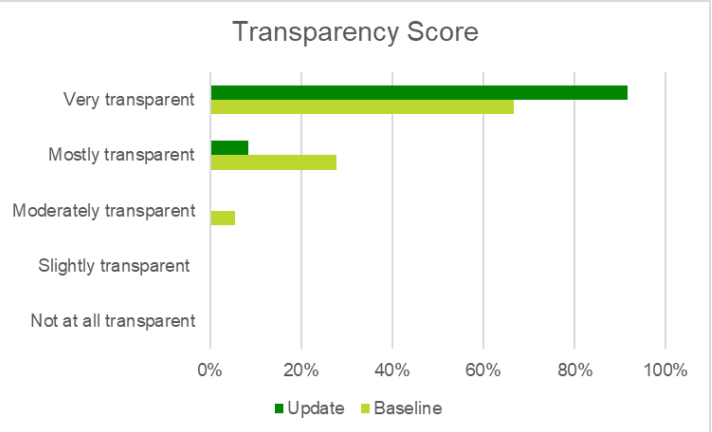
The following subsection presents and interprets the key results and insights gathered from the Working Group (WG) activities within the SKILLBILL project.

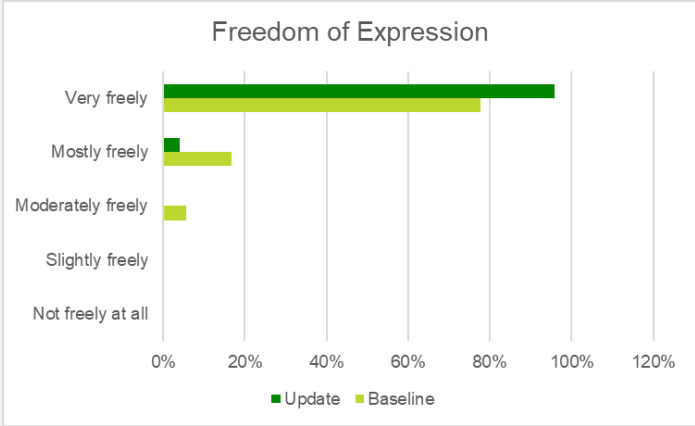
7.3.1 Analysis and Interpretation of WG insights

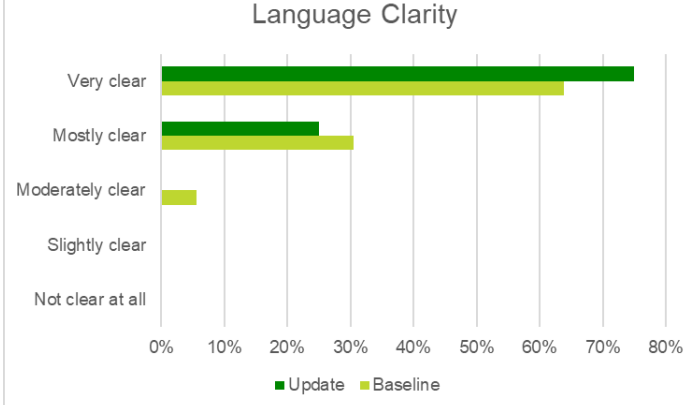
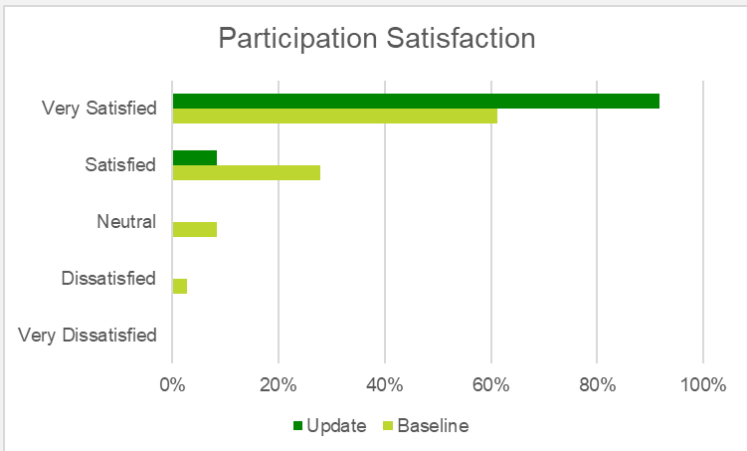
Table 15. Interpretation of Results for Working Groups

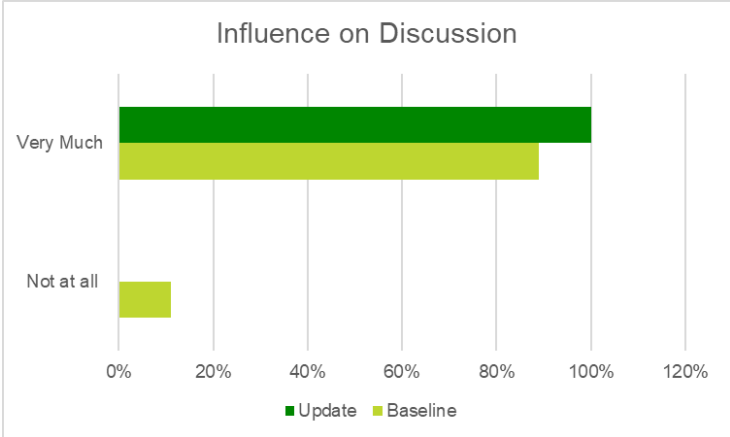
Sub-objectives (Impact Areas)	Indicators	Metrics -Question														
O1.1 Mobilisation of stakeholder engagement and networking, to address the lack of synergies	Number of Stakeholders Engagements	<p>Count of stakeholders</p> <p><i>[How many stakeholders have you been engaged with in the past year in the context of SKILLBILL WGs?]</i></p> <p>Baseline Average 8.1 stakeholders</p> <p>Final Average 8.5 stakeholders.</p> <p>The increase from 8.1 to 8.5 stakeholders represented a modest improvement (+0.4 stakeholders on average). While the change was in the right direction, it was relatively limited. This modest growth suggested some progress in engaging stakeholders and potentially enhancing synergies.</p>														
	Frequency of stakeholder engagement	<p>Frequency of interactions with relevant stakeholders</p> <p><i>[How frequently have you engaged with stakeholders related to renewable energy technology development through this project in the past year? Scale: Rarely, Occasionally, Frequently, Very Frequently]</i></p> <div data-bbox="679 1227 1378 1648"> <table border="1"> <caption>Frequency of stakeholders' engagement</caption> <thead> <tr> <th>Frequency</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Rarely</td> <td>18</td> <td>50</td> </tr> <tr> <td>Occasionally</td> <td>25</td> <td>75</td> </tr> <tr> <td>Frequently</td> <td>6</td> <td>18</td> </tr> <tr> <td>Very Frequently</td> <td>25</td> <td>6</td> </tr> </tbody> </table> </div> <p>The data showed a positive shift in stakeholder engagement frequency within the SKILLBILL project, with an increase in <i>very frequent</i> interactions (from 6% to 25%) and a reduction in <i>rare</i> engagements (from 50% to 18%), indicating stronger ties with a core group of stakeholders. However, the majority of interactions remained <i>occasional</i> (rising from 75% to 86%), suggesting that while the project has broadened its outreach, sustained and regular engagement was still limited.</p>	Frequency	Update (%)	Baseline (%)	Rarely	18	50	Occasionally	25	75	Frequently	6	18	Very Frequently	25
Frequency	Update (%)	Baseline (%)														
Rarely	18	50														
Occasionally	25	75														
Frequently	6	18														
Very Frequently	25	6														

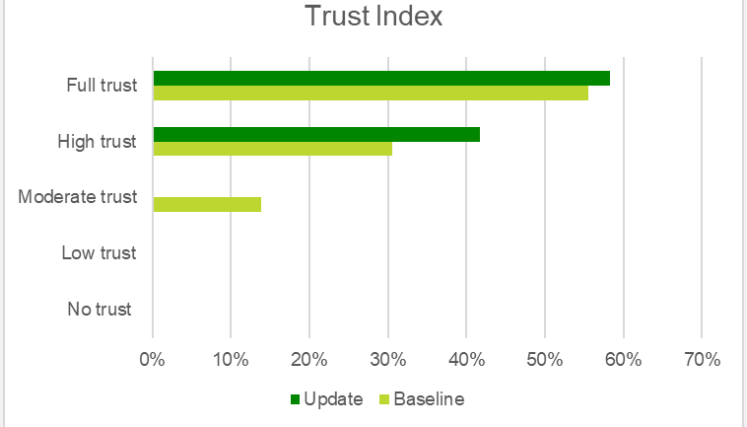
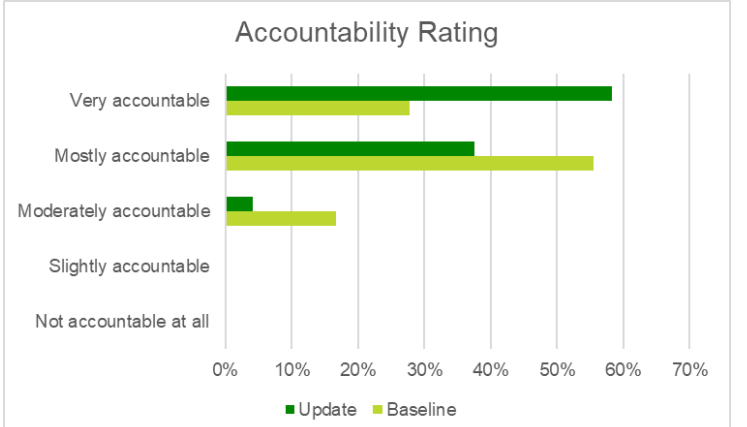
Sub-objectives (Impact Areas)	Indicators	Metrics -Question												
	Collaborative Initiatives	<p>Number of collaborative projects initiated</p> <p><i>[Have you been involved in any collaborative projects or initiatives related to renewable energy technology within this project? Scale: Yes, No]</i></p> <p><i>If yes, please name what kind of project they develop? Open text answer]</i></p>  <table border="1"> <caption>Collaborative Initiatives Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Top Category</td> <td>38</td> <td>69</td> </tr> <tr> <td>Middle Category</td> <td>25</td> <td>14</td> </tr> <tr> <td>Bottom Category</td> <td>38</td> <td>17</td> </tr> </tbody> </table> <p>The data indicated a significant positive shift in stakeholder involvement in collaborative projects or initiatives related to renewable energy technology within the SKILLBILL project. The percentage of respondents <i>actively</i> participating increased from 17% to 38%, reflecting growing engagement and concrete collaboration. Additionally, those uncertain (<i>maybe</i>) rose slightly from 14% to 25%, suggesting more stakeholders were exploring or considering involvement. Most notably, the proportion of stakeholders <i>not involved at all</i> dropped from 69% to 38%, a substantial decrease that points out improved outreach and mobilisation efforts. Overall, this trend suggested the project was successfully fostering more active participation and collaboration in renewable energy innovation, although there is still room to further reduce non-participation. Projects mentioned in the open answers included ALFA project, FemPower, W4RES, ALFA, SEANERGY, RES4CITY, TRANSIT, GreenSkills4H2, Renewable Energy Communities, HYPOSO, ETIP Hydropower, Hydropower Europe, PENHydro etc.</p>	Category	Update (%)	Baseline (%)	Top Category	38	69	Middle Category	25	14	Bottom Category	38	17
Category	Update (%)	Baseline (%)												
Top Category	38	69												
Middle Category	25	14												
Bottom Category	38	17												
	Network Growth	<p>Increase in the size of the stakeholders/WG network</p> <p><i>[Have you noticed an expansion in the network of stakeholders involved in renewable energy technology development activities due to this project? Scale: Yes, No]</i></p>												

Sub-objectives (Impact Areas)	Indicators	Metrics -Question
		<p style="text-align: center;">Increase in the size of the size of stakeholders/WG network</p>  <p>The data showed a clear perception of network expansion among stakeholders involved in renewable energy technology development due to the SKILLBILL project. The proportion of respondents who answered <i>Yes</i> increased from 31% to 46%, indicating a growing recognition of the project’s role in broadening stakeholder engagement. The <i>Maybe</i> responses also rose slightly from 44% to 50%, suggesting that more participants were observing signs of network growth, even if not definitively. Most significantly, those who saw <i>no expansion</i> dropped sharply from 25% to just 4%, highlighting a strong positive shift in perception.</p>
<p>O1.2 Open discussions and adequate language</p>	<p>Transparency Score</p>	<p>A score based on how transparent discussions and communication were</p> <p><i>On a scale of 1 to 5, how transparent do you find the discussions and communication related to renewable energy technology development within this project? Scale: Not transparent to Very transparent]</i></p>  <p>The data reflected a strong and improving perception of transparency in discussions and communication related to renewable energy technology development within the SKILLBILL project. The proportion of respondents rating communication as <i>very transparent</i> increased from 67%</p>

Sub-objectives (Impact Areas)	Indicators	Metrics -Question																		
		<p>to 92%, indicating a high level of satisfaction and trust among stakeholders. Simultaneously, all lower categories, including <i>moderately</i> and <i>mostly transparent</i>, saw declines, with <i>moderately transparent</i> dropping to 0%. Notably, there were no responses in the <i>not at all</i> or <i>slightly transparent</i> categories at any stage. This suggests that the project not only maintained a high standard of transparency but has significantly improved it over time, fostering an open and trusted communication environment among participants.</p>																		
	<p>Freedom of expression</p>	<p>The percentage of participants who expressed their opinion freely</p> <p><i>[How freely did you express your opinion during the WG meetings? Scale Not at all freely to Very freely]</i></p>  <table border="1"> <caption>Freedom of Expression Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very freely</td> <td>96</td> <td>78</td> </tr> <tr> <td>Mostly freely</td> <td>5</td> <td>15</td> </tr> <tr> <td>Moderately freely</td> <td>0</td> <td>5</td> </tr> <tr> <td>Slightly freely</td> <td>0</td> <td>0</td> </tr> <tr> <td>Not freely at all</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>The data indicated a strong and increasing sense of openness among participants in expressing their opinions during the SKILLBILL WG meetings. The percentage of respondents who felt they could express themselves <i>very freely</i> rose from 78% to 96%, demonstrating a significant improvement in the perceived inclusiveness and safety of the discussion environment. Lower levels of freedom, such as <i>moderately</i> and <i>mostly freely</i>, declined, with <i>moderately freely</i> dropping to 0%, indicating that more participants felt fully empowered to contribute. The absence of any responses in the <i>not at all</i> or <i>slightly freely</i> categories at both stages reinforced the positive and open nature of the WG meetings.</p>	Category	Update (%)	Baseline (%)	Very freely	96	78	Mostly freely	5	15	Moderately freely	0	5	Slightly freely	0	0	Not freely at all	0	0
Category	Update (%)	Baseline (%)																		
Very freely	96	78																		
Mostly freely	5	15																		
Moderately freely	0	5																		
Slightly freely	0	0																		
Not freely at all	0	0																		
	<p>Language Clarity</p>	<p>The percentage of participants who found the language used in discussions clear</p> <p><i>How clear and understandable do you find the language used in discussions about renewable energy technology development within this project? Scale: Not clear at all to Very clear]</i></p>																		

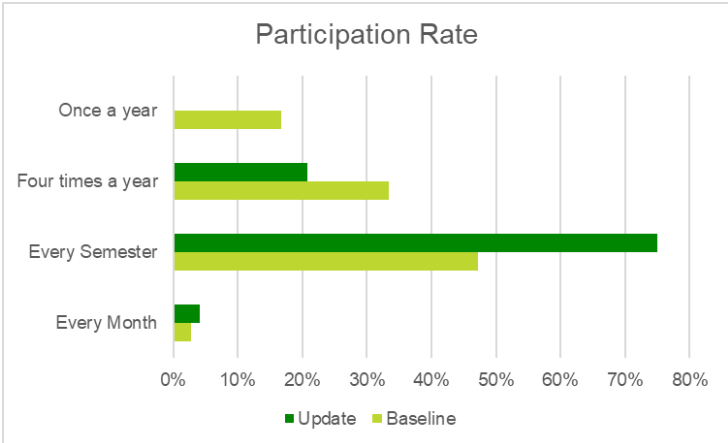
Sub-objectives (Impact Areas)	Indicators	Metrics -Question																		
		<p style="text-align: center;">Language Clarity</p>  <table border="1" data-bbox="678 280 1380 683"> <caption>Language Clarity Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very clear</td> <td>75</td> <td>64</td> </tr> <tr> <td>Mostly clear</td> <td>25</td> <td>30</td> </tr> <tr> <td>Moderately clear</td> <td>0</td> <td>5</td> </tr> <tr> <td>Slightly clear</td> <td>0</td> <td>0</td> </tr> <tr> <td>Not clear at all</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>The data showed that the clarity of language used in discussions about renewable energy technology development within the SKILLBILL project was perceived as very high and has improved over time. The proportion of respondents who found the language <i>very clear</i> increased from 64% to 75%, indicating growing effectiveness in communication. At the same time, responses in the <i>mostly clear</i> category decreased slightly, and those in the <i>moderately clear</i> category dropped to 0%, suggesting that more participants did not understand the content being discussed. There were no responses in the <i>not clear at all</i> or <i>slightly clear</i> categories at any stage, reinforcing the project's success in using accessible and comprehensible language during technical discussions.</p>	Category	Update (%)	Baseline (%)	Very clear	75	64	Mostly clear	25	30	Moderately clear	0	5	Slightly clear	0	0	Not clear at all	0	0
Category	Update (%)	Baseline (%)																		
Very clear	75	64																		
Mostly clear	25	30																		
Moderately clear	0	5																		
Slightly clear	0	0																		
Not clear at all	0	0																		
	<p style="text-align: center;">Participation Satisfaction</p>	<p>Participants 'percentage of satisfaction with the open discussions</p> <p><i>How satisfied are you with the clarity of language and openness of discussions related to renewable energy technology development? Scale Very Dissatisfied to Very Satisfied]</i></p>  <table border="1" data-bbox="678 1489 1428 1937"> <caption>Participation Satisfaction Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very Satisfied</td> <td>90</td> <td>60</td> </tr> <tr> <td>Satisfied</td> <td>10</td> <td>28</td> </tr> <tr> <td>Neutral</td> <td>0</td> <td>8</td> </tr> <tr> <td>Dissatisfied</td> <td>0</td> <td>3</td> </tr> <tr> <td>Very Dissatisfied</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>The results indicated a strong and growing level of satisfaction with the clarity of language and openness of discussions related to renewable energy technology</p>	Category	Update (%)	Baseline (%)	Very Satisfied	90	60	Satisfied	10	28	Neutral	0	8	Dissatisfied	0	3	Very Dissatisfied	0	0
Category	Update (%)	Baseline (%)																		
Very Satisfied	90	60																		
Satisfied	10	28																		
Neutral	0	8																		
Dissatisfied	0	3																		
Very Dissatisfied	0	0																		

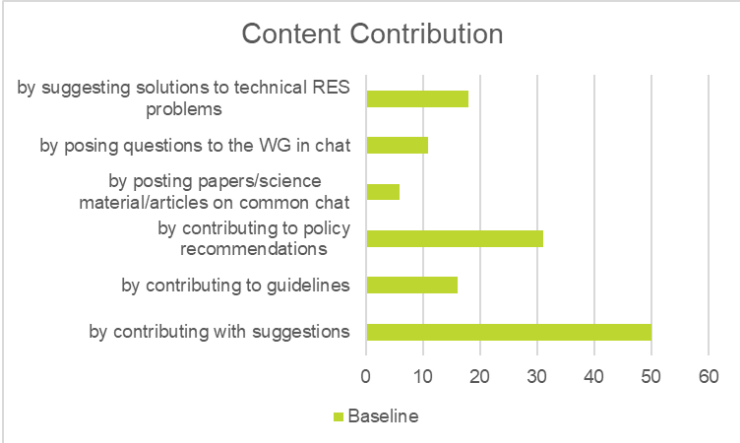
Sub-objectives (Impact Areas)	Indicators	Metrics -Question									
		<p>development within the SKILLBILL project. The percentage of participants who reported being <i>very satisfied</i> rose significantly from 61% to 92%, while all lower satisfaction levels—including <i>dissatisfied</i>, <i>neutral</i>, and <i>satisfied</i>—dropped to 0–8%, with no respondents expressing dissatisfaction in the latest update. This shift highlighted a clear improvement in how effectively and openly the project communicates complex topics, creating an inclusive and transparent dialogue environment for stakeholders.</p>									
	<p>Influence on discussion</p>	<p>Percentage of experts who had significantly influenced the discussions</p> <p><i>[How much do you believe your opinion influenced the discussion or the recommendations' development? Scale: Not at all to Very much]</i></p>  <table border="1"> <caption>Influence on Discussion Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very Much</td> <td>100</td> <td>89</td> </tr> <tr> <td>Not at all</td> <td>0</td> <td>11</td> </tr> </tbody> </table> <p>The data reflected a strong and improved perception among participants that their opinions influenced discussions and the development of recommendations within the SKILLBILL project. Initially, 89% felt their input had a significant impact (<i>Very Much</i>), which increased to 100% in the latest update. Notably, the proportion who felt their opinion had <i>no influence</i> at all dropped from 11% to 0%, indicating a complete shift toward inclusive and participatory decision-making. This suggested that the project had been highly successful in creating a collaborative environment where stakeholders feel heard and valued.</p>	Category	Update (%)	Baseline (%)	Very Much	100	89	Not at all	0	11
Category	Update (%)	Baseline (%)									
Very Much	100	89									
Not at all	0	11									
<p>O1.3 Accountability and trust</p>	<p>Trust Index</p>	<p>A score measuring trust in project activities</p> <p><i>[How much do you trust the project activities and actions related to renewable energy technology development? Scale No trust to Full trust]</i></p>									

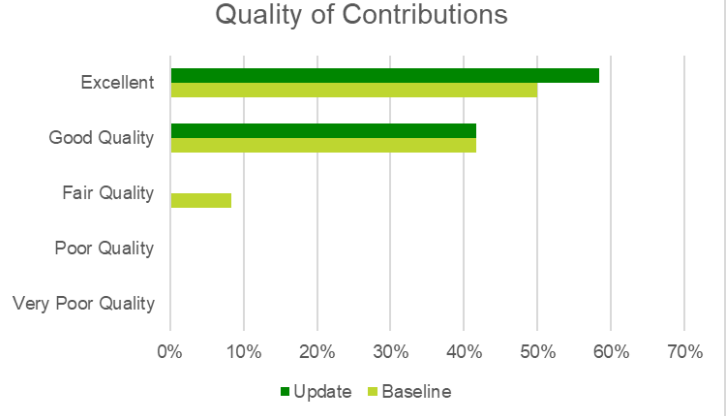
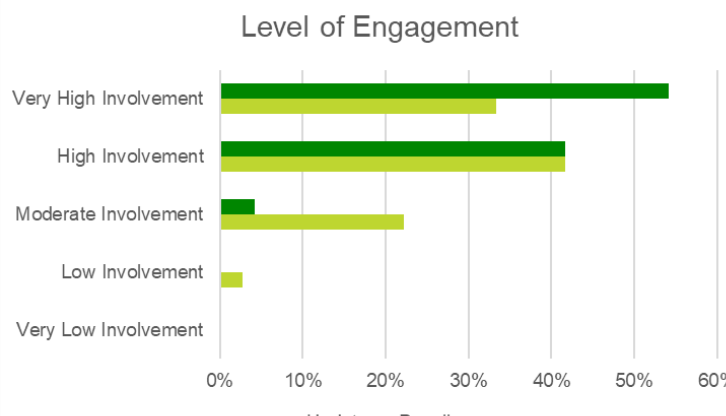
Sub-objectives (Impact Areas)	Indicators	Metrics -Question																		
		<p style="text-align: center;">Trust Index</p>  <table border="1" data-bbox="678 280 1428 705"> <caption>Trust Index Data</caption> <thead> <tr> <th>Trust Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Full trust</td> <td>58</td> <td>56</td> </tr> <tr> <td>High trust</td> <td>42</td> <td>31</td> </tr> <tr> <td>Moderate trust</td> <td>0</td> <td>15</td> </tr> <tr> <td>Low trust</td> <td>0</td> <td>0</td> </tr> <tr> <td>No trust</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>The data showed a high and growing level of trust in the SKILLBILL project's activities related to renewable energy technology development. The percentage of participants expressing <i>full trust</i> increased slightly from 56% to 58%, while those reporting <i>high trust</i> also rose from 31% to 42%. At the same time, the <i>moderate trust</i> responses declined to 0%, and no participants reported low or <i>no trust</i> at any point. This indicated a positive trend toward stronger stakeholder confidence, suggesting that the project was consistently building credibility through its actions, transparency, and engagement practices.</p>	Trust Level	Update (%)	Baseline (%)	Full trust	58	56	High trust	42	31	Moderate trust	0	15	Low trust	0	0	No trust	0	0
Trust Level	Update (%)	Baseline (%)																		
Full trust	58	56																		
High trust	42	31																		
Moderate trust	0	15																		
Low trust	0	0																		
No trust	0	0																		
	<p style="text-align: center;">Accountability Rating</p>	<p style="text-align: center;">Rating of perceived accountability in project actions</p> <p><i>[How accountable do you perceive the actions and decisions made by this project in the context of renewable energy technology development? Scale: Not accountable to Very accountable]</i></p>  <table border="1" data-bbox="678 1355 1428 1780"> <caption>Accountability Rating Data</caption> <thead> <tr> <th>Accountability Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very accountable</td> <td>58</td> <td>28</td> </tr> <tr> <td>Mostly accountable</td> <td>38</td> <td>56</td> </tr> <tr> <td>Moderately accountable</td> <td>5</td> <td>15</td> </tr> <tr> <td>Slightly accountable</td> <td>0</td> <td>0</td> </tr> <tr> <td>Not accountable at all</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>The data indicated a significant improvement in the perceived accountability of the SKILLBILL project's actions and decisions related to renewable energy technology development. The proportion of respondents who viewed the project as <i>very accountable</i> doubled from 28% to 58%, while those selecting <i>mostly accountable</i> decreased from 56% to 38%. At the same time,</p>	Accountability Level	Update (%)	Baseline (%)	Very accountable	58	28	Mostly accountable	38	56	Moderately accountable	5	15	Slightly accountable	0	0	Not accountable at all	0	0
Accountability Level	Update (%)	Baseline (%)																		
Very accountable	58	28																		
Mostly accountable	38	56																		
Moderately accountable	5	15																		
Slightly accountable	0	0																		
Not accountable at all	0	0																		

Sub-objectives (Impact Areas)	Indicators	Metrics -Question									
		<p><i>moderately accountable</i> responses dropped from 17% to 4%, and no respondents selected the lowest categories (<i>not</i> or <i>slightly accountable</i>) at any point. This shift reflected growing confidence among stakeholders in the project's transparency, responsibility, and integrity in its decision-making processes.</p>									
<p>O1.4 Adequate dissemination of policy and technical recommendations</p>	<p>Dissemination Reach</p>	<p>The number of individuals or organisations that had received SKILLBILL policy and technical recommendations</p> <p><i>[Have you disseminated the policy and technical recommendations related to renewable energy technology development developed by this project? Scale: Yes, No]</i></p> <p><i>[If yes, how many stakeholders/decision makers did you send the policy and technical recommendations to? Please write a number]</i></p> <div data-bbox="679 853 1406 1283" data-label="Figure"> <table border="1"> <caption>Dissemination Reach Data</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>No</td> <td>50</td> <td>78</td> </tr> <tr> <td>Yes</td> <td>50</td> <td>22</td> </tr> </tbody> </table> </div> <p>The data showed a significant increase in dissemination efforts of policy and technical recommendations related to renewable energy technology development within the SKILLBILL project. The proportion of respondents who reported <i>disseminating</i> the recommendations rose from 22% to 50%, indicating that half of the participants have actively shared project outcomes. Correspondingly, those who had <i>not disseminated</i> dropped from 78% to 50%, reflecting a positive shift in outreach and impact efforts.</p> <p>Attendees reported dissemination outreach to more than 500 stakeholders.</p>	Response	Update (%)	Baseline (%)	No	50	78	Yes	50	22
	Response	Update (%)	Baseline (%)								
No	50	78									
Yes	50	22									
<p>Feedback on Recommendation</p>	<p>The number of responses or feedback received on recommendations</p> <p><i>[Have you provided any feedback or suggestions on the policy and technical recommendations related to renewable energy technology produced by this project? Scale: Yes, Maybe, No]</i></p>										

Sub-objectives (Impact Areas)	Indicators	Metrics -Question												
		<p style="text-align: center;">Feedback on Recommendation</p>  <table border="1" data-bbox="683 282 1422 707"> <caption>Feedback on Recommendation Data</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>No</td> <td>13</td> <td>22</td> </tr> <tr> <td>Maybe</td> <td>29</td> <td>42</td> </tr> <tr> <td>Yes</td> <td>58</td> <td>36</td> </tr> </tbody> </table> <p>The data indicated a clear improvement in stakeholder involvement in shaping the policy and technical recommendations produced by the SKILLBILL project. The percentage of respondents who <i>actively provided</i> feedback or suggestions increased from 36% to 58%, showing stronger engagement in co-creation processes. Meanwhile, <i>maybe</i> responses decreased from 42% to 29%, suggesting that uncertainty or indirect involvement is being replaced by more decisive participation. Those who <i>did not provide</i> any feedback also declined from 22% to 13%, reinforcing the trend toward greater inclusivity and responsiveness. Overall, the results reflected growing stakeholder ownership and contribution to the project's outputs.</p>	Response	Update (%)	Baseline (%)	No	13	22	Maybe	29	42	Yes	58	36
Response	Update (%)	Baseline (%)												
No	13	22												
Maybe	29	42												
Yes	58	36												
	<p style="text-align: center;">Implementation Rate</p>	<p style="text-align: center;">The percentage of stakeholders who had used the recommendations</p> <p><i>[Have you utilised the policy and technical recommendations related to renewable energy technology development provided by this project? Scale: Yes, Maybe, No]</i></p>  <table border="1" data-bbox="683 1514 1422 1962"> <caption>Implementation Rate Data</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>No</td> <td>13</td> <td>20</td> </tr> <tr> <td>Maybe</td> <td>38</td> <td>45</td> </tr> <tr> <td>Yes</td> <td>50</td> <td>36</td> </tr> </tbody> </table> <p>The data showed a positive trend in the utilisation of policy and technical recommendations developed by the</p>	Response	Update (%)	Baseline (%)	No	13	20	Maybe	38	45	Yes	50	36
Response	Update (%)	Baseline (%)												
No	13	20												
Maybe	38	45												
Yes	50	36												

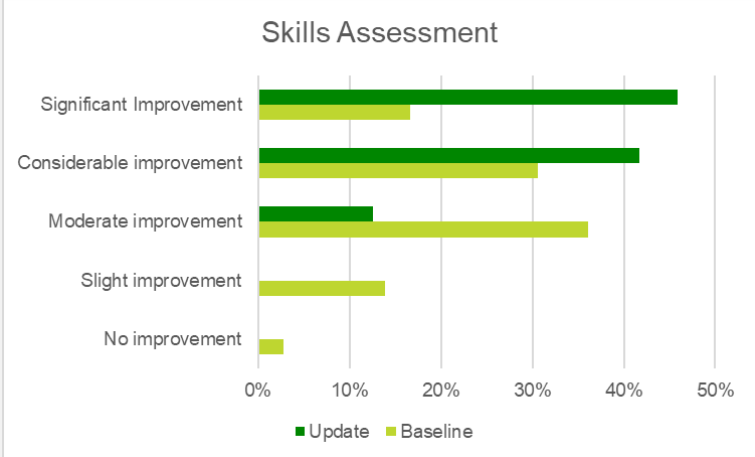
Sub-objectives (Impact Areas)	Indicators	Metrics -Question															
		<p>SKILLBILL project. The percentage of respondents who had <i>used</i> the recommendations increased from 36% to 50%, indicating that half of the stakeholders were actively applying the project's outputs. At the same time, <i>maybe</i> responses decreased from 44% to 38%, suggesting more stakeholders have moved from tentative awareness to confirmed use. The number of those <i>not using</i> the recommendations also declined from 19% to 13%, reflecting the growing relevance, accessibility, and practical value of the materials provided. Overall, this points to an increasing impact of the project's work on stakeholder practices and decision-making.</p>															
<p>O1.5 Involvement of members in discussions</p>	<p>Participation Rate</p>	<p>The percentage of WG members actively participating in discussions</p> <p><i>[How frequently have you participated in discussions (in WG chat and WG meetings) related to renewable energy technology development within the project? Multiple Choice: Every month, Every semester, four times a year, once a year]</i></p>  <table border="1"> <caption>Participation Rate Data</caption> <thead> <tr> <th>Frequency</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Once a year</td> <td>0%</td> <td>17%</td> </tr> <tr> <td>Four times a year</td> <td>21%</td> <td>33%</td> </tr> <tr> <td>Every Semester</td> <td>75%</td> <td>47%</td> </tr> <tr> <td>Every Month</td> <td>4%</td> <td>3%</td> </tr> </tbody> </table> <p>The data reflected a clear shift towards more consistent and structured participation in discussions related to renewable energy technology development within the SKILLBILL project. Participation on a <i>semester basis</i> increased from 47% to 75%, becoming the dominant pattern, while <i>once-a-year</i> participation dropped to 0%, indicating improved engagement regularity. The proportion of those engaging <i>four times a year</i> decreased from 33% to 21%, possibly reflecting a consolidation into more formalised semester-based meetings. <i>Monthly participation</i> remained low but stable (3% to 4%). Overall, the trend suggested improved coordination and a stronger commitment to regular dialogue among stakeholders.</p>	Frequency	Update (%)	Baseline (%)	Once a year	0%	17%	Four times a year	21%	33%	Every Semester	75%	47%	Every Month	4%	3%
Frequency	Update (%)	Baseline (%)															
Once a year	0%	17%															
Four times a year	21%	33%															
Every Semester	75%	47%															
Every Month	4%	3%															

Sub-objectives (Impact Areas)	Indicators	Metrics -Question														
	Content contribution	<p>Number of allocated contributions to the WG discussions</p> <p><i>[How did you actively contribute to the WG discussions? Multiple choice (by contributing with suggestions, by contributing to guidelines, by contributing to policy recommendations, by posting papers/science material/articles on common chat, by posing questions to the WG in chat, by suggesting solutions to technical RES problems)]</i></p>  <table border="1"> <caption>Content Contribution Data</caption> <thead> <tr> <th>Contribution Method</th> <th>Number of Contributions</th> </tr> </thead> <tbody> <tr> <td>by suggesting solutions to technical RES problems</td> <td>18</td> </tr> <tr> <td>by posing questions to the WG in chat</td> <td>11</td> </tr> <tr> <td>by posting papers/science material/articles on common chat</td> <td>6</td> </tr> <tr> <td>by contributing to policy recommendations</td> <td>31</td> </tr> <tr> <td>by contributing to guidelines</td> <td>16</td> </tr> <tr> <td>by contributing with suggestions</td> <td>50</td> </tr> </tbody> </table> <p>The data showed that stakeholders actively contributed to the SKILLBILL Working Group (WG) discussions in a variety of meaningful ways, with the most common form of participation being <i>suggestions</i> (50 responses), highlighting strong engagement in shaping the dialogue. A significant number also contributed to the development of <i>policy recommendations</i> (31) and technical guidelines (16), indicating active involvement in shaping project outputs. <i>Technical expertise</i> was also evident, with 18 stakeholders <i>suggesting solutions</i> to RES-related problems. <i>Contributions</i> were less frequent but still notable in posing questions in the WG chat (11) and sharing <i>scientific materials or articles</i> (6). Overall, the data reflected a well-rounded participation pattern, with a mix of strategic, technical, and knowledge-sharing inputs that enhance the collaborative quality of the project.</p>	Contribution Method	Number of Contributions	by suggesting solutions to technical RES problems	18	by posing questions to the WG in chat	11	by posting papers/science material/articles on common chat	6	by contributing to policy recommendations	31	by contributing to guidelines	16	by contributing with suggestions	50
Contribution Method	Number of Contributions															
by suggesting solutions to technical RES problems	18															
by posing questions to the WG in chat	11															
by posting papers/science material/articles on common chat	6															
by contributing to policy recommendations	31															
by contributing to guidelines	16															
by contributing with suggestions	50															
	Quality of Contributions	<p>An assessment of the quality of contributions by project members</p> <p><i>[How would you rate the quality of contributions made by WG members in discussions about renewable energy technology development within the project? Scale: Very Poor to Excellent]</i></p>														

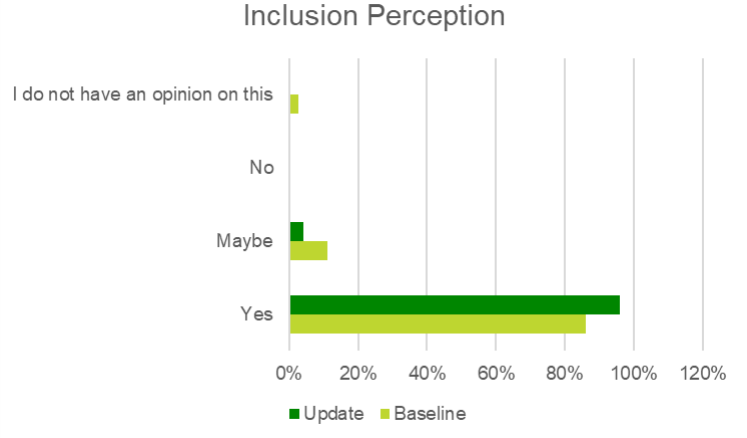
Sub-objectives (Impact Areas)	Indicators	Metrics -Question																		
		<p style="text-align: center;">Quality of Contributions</p>  <table border="1" data-bbox="683 280 1412 694"> <caption>Quality of Contributions Data</caption> <thead> <tr> <th>Quality Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>58</td> <td>50</td> </tr> <tr> <td>Good Quality</td> <td>42</td> <td>42</td> </tr> <tr> <td>Fair Quality</td> <td>0</td> <td>8</td> </tr> <tr> <td>Poor Quality</td> <td>0</td> <td>0</td> </tr> <tr> <td>Very Poor Quality</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>The data indicated a high and improving perception of the quality of contributions made by Working Group (WG) members in discussions on renewable energy technology development within the SKILLBILL project. The percentage of respondents rating the contributions as excellent increased from 50% to 58%, while good quality remained steady at 42%, showing consistent recognition of valuable input. Notably, ratings in the fair and lower categories dropped to 0%, indicating that all participants now view the quality of discussion as either good or excellent. This reflected a strong and trusted knowledge-sharing environment within the WGs, supporting effective collaboration and outcomes.</p>	Quality Level	Update (%)	Baseline (%)	Excellent	58	50	Good Quality	42	42	Fair Quality	0	8	Poor Quality	0	0	Very Poor Quality	0	0
Quality Level	Update (%)	Baseline (%)																		
Excellent	58	50																		
Good Quality	42	42																		
Fair Quality	0	8																		
Poor Quality	0	0																		
Very Poor Quality	0	0																		
	<p style="text-align: center;">Level of Engagement</p>	<p style="text-align: center;">The average time spent by members in discussions</p> <p><i>[How would you rate the average time spent by members in discussions? Scale: Very low involvement to Very high involvement]</i></p>  <table border="1" data-bbox="683 1400 1412 1814"> <caption>Level of Engagement Data</caption> <thead> <tr> <th>Involvement Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very High Involvement</td> <td>54</td> <td>33</td> </tr> <tr> <td>High Involvement</td> <td>42</td> <td>42</td> </tr> <tr> <td>Moderate Involvement</td> <td>4</td> <td>23</td> </tr> <tr> <td>Low Involvement</td> <td>0</td> <td>3</td> </tr> <tr> <td>Very Low Involvement</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>The data showed a clear improvement in the perceived time commitment of Working Group (WG) members to discussions within the SKILLBILL project. The proportion of respondents rating member involvement as <i>very high</i> increased from 33% to 54%, while moderate involvement</p>	Involvement Level	Update (%)	Baseline (%)	Very High Involvement	54	33	High Involvement	42	42	Moderate Involvement	4	23	Low Involvement	0	3	Very Low Involvement	0	0
Involvement Level	Update (%)	Baseline (%)																		
Very High Involvement	54	33																		
High Involvement	42	42																		
Moderate Involvement	4	23																		
Low Involvement	0	3																		
Very Low Involvement	0	0																		

Sub-objectives (Impact Areas)	Indicators	Metrics -Question												
		<p>dropped <i>significantly</i> from 22% to 4%, and <i>low involvement</i> fell to 0%. The percentage of those reporting <i>high involvement</i> remained stable at 42%, indicating consistent engagement among a core group. Overall, the shift toward higher involvement reflected growing dedication, active participation, and a stronger collective commitment to the project's discussions and objectives.</p>												
O1.6 Increased employability	Employment Rate	<p>The percentage of project participants who had secured employment</p> <p><i>[Have you successfully secured employment in the renewable energy sector as a direct result of your participation in this project? Scale: Yes, Maybe, No]</i></p>  <table border="1"> <caption>Employment Rate Data</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>No</td> <td>46%</td> <td>78%</td> </tr> <tr> <td>Maybe</td> <td>38%</td> <td>17%</td> </tr> <tr> <td>Yes</td> <td>17%</td> <td>6%</td> </tr> </tbody> </table> <p>The data suggested a positive impact of the SKILLBILL project on participants' employment prospects in the renewable energy sector. The proportion of respondents who <i>successfully</i> secured employment as a direct result of their involvement increased from 6% to 17%, while those who responded <i>maybe</i> rose from 17% to 38%, indicating that more participants perceived the project as having contributed to their job opportunities, even if indirectly. Most notably, the percentage of those who did <i>not</i> secure employment dropped significantly from 78% to 46%, reflecting a growing alignment between the project's activities and participants' professional development in the renewable energy field.</p>	Response	Update (%)	Baseline (%)	No	46%	78%	Maybe	38%	17%	Yes	17%	6%
	Response	Update (%)	Baseline (%)											
No	46%	78%												
Maybe	38%	17%												
Yes	17%	6%												
Job Placement Speed	<p>Average time taken to secure employment after participation</p> <p><i>[How long did it take you to secure employment in the renewable energy sector after you participated in this project? Scale: A month, a trimester, a semester, a year, more than a year]</i></p>													

Sub-objectives (Impact Areas)	Indicators	Metrics -Question																								
		<p style="text-align: center;">Job Placement Speed</p> <table border="1"> <caption>Job Placement Speed Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Did not answer</td> <td>13</td> <td>19</td> </tr> <tr> <td>I was already employed</td> <td>63</td> <td>75</td> </tr> <tr> <td>More than a year</td> <td>8</td> <td>0</td> </tr> <tr> <td>A year</td> <td>4</td> <td>0</td> </tr> <tr> <td>A semester</td> <td>8</td> <td>0</td> </tr> <tr> <td>A trimestere</td> <td>4</td> <td>0</td> </tr> <tr> <td>A month</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>The majority of respondents (63%) were employed in the renewable energy sector while participating in the SKILLBILL project, slightly down from 75% at baseline. Among those who secured employment afterwards, most did so gradually—8% within a <i>semester</i>, 4% within a <i>trimester</i>, 4% within a year, and 8% after <i>more than a year</i>—indicating that the project may have had an impact on employability. The decrease in <i>non-responses</i> (from 19% to 13%) suggested increased clarity or willingness to report employment outcomes.</p>	Category	Update (%)	Baseline (%)	Did not answer	13	19	I was already employed	63	75	More than a year	8	0	A year	4	0	A semester	8	0	A trimestere	4	0	A month	0	0
Category	Update (%)	Baseline (%)																								
Did not answer	13	19																								
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More than a year	8	0																								
A year	4	0																								
A semester	8	0																								
A trimestere	4	0																								
A month	0	0																								
O1.7 Reduced Skills Gap	Participant Satisfaction	<p style="text-align: center;">Participant satisfaction with skills development</p> <p><i>[How satisfied are you with the skills development opportunities and resources provided by this project in terms of reducing the skills gap in the renewable energy sector? Scale Very dissatisfied to Very satisfied]</i></p> <table border="1"> <caption>Participant Satisfaction Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very Satisfied</td> <td>63</td> <td>28</td> </tr> <tr> <td>Satisfied</td> <td>29</td> <td>50</td> </tr> <tr> <td>Neutral</td> <td>8</td> <td>19</td> </tr> <tr> <td>Dissatisfied</td> <td>0</td> <td>0</td> </tr> <tr> <td>Very Dissatisfied</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>The data revealed a strong improvement in satisfaction with the skills development opportunities and resources provided by the SKILLBILL project in addressing the skills gap in the renewable energy sector. The percentage of respondents who are <i>very satisfied</i> more than doubled, from 28% to 63%, while those who were simply <i>satisfied</i> decreased from 50% to 29%, indicating a shift toward</p>	Category	Update (%)	Baseline (%)	Very Satisfied	63	28	Satisfied	29	50	Neutral	8	19	Dissatisfied	0	0	Very Dissatisfied	0	0						
Category	Update (%)	Baseline (%)																								
Very Satisfied	63	28																								
Satisfied	29	50																								
Neutral	8	19																								
Dissatisfied	0	0																								
Very Dissatisfied	0	0																								

Sub-objectives (Impact Areas)	Indicators	Metrics -Question																		
		<p>higher satisfaction levels. Additionally, <i>neutral</i> responses dropped from 19% to 8%, and there were <i>no</i> reports of <i>dissatisfaction</i> in the latest update. This suggested that the project made significant progress in delivering valuable and impactful learning opportunities that effectively supported participants' upskilling in the renewable energy field.</p>																		
	<p>Skills Assessment</p>	<p>Improvement in skills as assessed by project participants</p> <p>[How would you rate the improvement in your skills as assessed by you, as a project participant? Scale: No improvement to Significant improvement]</p>  <table border="1"> <caption>Skills Assessment Data</caption> <thead> <tr> <th>Improvement Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Significant Improvement</td> <td>46%</td> <td>17%</td> </tr> <tr> <td>Considerable improvement</td> <td>42%</td> <td>31%</td> </tr> <tr> <td>Moderate improvement</td> <td>12%</td> <td>36%</td> </tr> <tr> <td>Slight improvement</td> <td>0%</td> <td>14%</td> </tr> <tr> <td>No improvement</td> <td>0%</td> <td>2%</td> </tr> </tbody> </table> <p>The data showed a clear and positive shift in participants' self-assessed skill improvement as a result of the SKILLBILL project. The percentage of respondents reporting <i>significant improvement</i> rose markedly from 17% to 46%, and those indicating <i>considerable improvement</i> increased from 31% to 42%, highlighting strong perceived progress in skill development. Meanwhile, responses indicating <i>moderate</i> or <i>slight improvement</i> dropped, and no respondents reported a <i>lack of improvement</i> in the latest update. This demonstrated that the project had been highly effective in enhancing participants' competencies, with most recognising substantial gains in their skills related to the renewable energy sector.</p>	Improvement Level	Update (%)	Baseline (%)	Significant Improvement	46%	17%	Considerable improvement	42%	31%	Moderate improvement	12%	36%	Slight improvement	0%	14%	No improvement	0%	2%
Improvement Level	Update (%)	Baseline (%)																		
Significant Improvement	46%	17%																		
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Moderate improvement	12%	36%																		
Slight improvement	0%	14%																		
No improvement	0%	2%																		
	<p>Skill advancement opportunities</p>	<p>Advancement opportunities via skills development</p> <p>[What are the project opportunities that led you to reduce your own skill gaps? Open answer]</p> <p>The SKILLBILL project provided valuable opportunities for skill development by enabling participants to collaborate with experts across different renewable energy</p>																		

Sub-objectives (Impact Areas)	Indicators	Metrics -Question																		
		<p>technologies and countries. Through active involvement in project activities like developing <i>course content</i> and <i>joint discussions</i>, participants gained <i>hands-on experience</i> and a deeper <i>understanding of sector dynamics</i>. Access to <i>new knowledge</i>, <i>best practices</i>, and successful project <i>data</i> helped them stay updated on European RES developments.</p>																		
<p>O1.8 Diverse and Inclusive Workforce</p>	<p>Diversity Index</p>	<p>A score assessing the diversity of the project's workforce.</p> <p><i>[How diverse do you perceive the WG experts in terms of representation from various backgrounds, including gender, ethnicity, and age? Scale: No diverse at all to Significantly diverse]</i></p>  <table border="1"> <caption>Diversity Index Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Significantly diverse</td> <td>63%</td> <td>25%</td> </tr> <tr> <td>Mostly diverse</td> <td>25%</td> <td>53%</td> </tr> <tr> <td>Moderately diverse</td> <td>13%</td> <td>22%</td> </tr> <tr> <td>Slightly diverse</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Not diverse at all</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table> <p>The perception of diversity among Working Group (WG) experts improved notably over the course of the project. Initially, 53% of respondents rated the group as <i>mostly diverse</i>, and 25% as <i>significantly diverse</i>. In the latest update, the share of those who see the WG as <i>significantly diverse</i> increased substantially to 63%, while those rating it as <i>mostly diverse</i> decreased to 25%, indicating a stronger recognition of diverse representation. There were no responses indicating <i>low</i> or <i>no diversity</i>. This suggested that the WG fostered a more inclusive environment, with a broad representation across gender, ethnicity, and age.</p>	Category	Update (%)	Baseline (%)	Significantly diverse	63%	25%	Mostly diverse	25%	53%	Moderately diverse	13%	22%	Slightly diverse	0%	0%	Not diverse at all	0%	0%
	Category	Update (%)	Baseline (%)																	
Significantly diverse	63%	25%																		
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Moderately diverse	13%	22%																		
Slightly diverse	0%	0%																		
Not diverse at all	0%	0%																		
<p>Inclusion Perception</p>	<p>Participant perception of inclusivity within the project</p> <p><i>[Do you feel that this project fosters an inclusive and welcoming environment for participants of various backgrounds and that all voices are heard and valued? Scale: Not at all, yes, I do not have an opinion on this]</i></p>																			

Sub-objectives (Impact Areas)	Indicators	Metrics -Question															
		<p style="text-align: center;">Inclusion Perception</p>  <table border="1" data-bbox="683 280 1433 716"> <caption>Data for Inclusion Perception Chart</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>I do not have an opinion on this</td> <td>0</td> <td>~5</td> </tr> <tr> <td>No</td> <td>0</td> <td>0</td> </tr> <tr> <td>Maybe</td> <td>~5</td> <td>~15</td> </tr> <tr> <td>Yes</td> <td>96</td> <td>86</td> </tr> </tbody> </table> <p>The data showed a very positive perception of the project's inclusiveness and openness. The vast majority of respondents—96%—<i>agree</i> that the project fostered an inclusive and welcoming environment where participants from diverse backgrounds feel heard and valued, up from 86% at baseline. Only a small minority remained <i>uncertain</i> (4%), and no one <i>disagreed</i>. This reflected the project's strong commitment to creating a respectful and supportive space for all voices in the renewable energy discussions.</p>	Response	Update (%)	Baseline (%)	I do not have an opinion on this	0	~5	No	0	0	Maybe	~5	~15	Yes	96	86
Response	Update (%)	Baseline (%)															
I do not have an opinion on this	0	~5															
No	0	0															
Maybe	~5	~15															
Yes	96	86															
	<p>Inclusion Initiatives</p>	<p>A number of initiatives promoting diversity and inclusion.</p> <p><i>[Have you observed or participated in any specific initiatives or activities within the project that promote diversity and inclusion among participants and stakeholders? If so, please describe your experience]</i></p> <p>Participants observed and engaged in several initiatives within the project that actively promote diversity and inclusion. Notably, <i>joint brainstorming sessions</i> on specific thematic areas brought together a wide range of experts, fostering diverse perspectives and collaborative problem-solving. Additionally, targeted activities like the <i>Green Portal</i> and the <i>school contest</i> were highlighted as key examples that focus on encouraging inclusion and broad participation among stakeholders and younger generations. These initiatives demonstrated the project's commitment to creating an inclusive environment that values diverse contributions.</p>															

7.3.2 Summary of WG Insights

The insights from the WG engagement within the SKILLBILL project revealed progress in stakeholder involvement, collaboration, and skills development related to renewable energy technology. Participation had become more regular and structured, with semester-based engagement. Members actively contributed through suggestions, policy input, and technical

problem-solving, and the quality of these contributions was highly valued, with the majority rating them as good or excellent. Trust, transparency, and openness in discussions improved, creating an inclusive environment where participants felt free to express their opinions and believed their input influenced outcomes. The project also successfully expanded its stakeholder network and promoted diversity, with growing recognition of broad representation across gender, ethnicity, and age. Many participants benefited from skill advancement opportunities through direct involvement in activities such as training programme development, expert exchanges, and access to best practices and knowledge at the European level. Satisfaction with the project’s support for reducing skill gaps was high, reflected in participants’ self-assessed considerable to significant improvement in their competencies. Employment outcomes had also seen a positive trend, with more respondents securing jobs in the renewable energy sector following their participation. Overall, the WG experience highlighted SKILLBILL’s effectiveness in fostering a collaborative, inclusive, and impactful platform that advances both professional development and sectoral innovation.

7.4 Green Portal

The following subsection presents and interprets the key results and insights gathered from the Green Portal (GP) activities within the SKILLBILL project.

7.4.1 Analysis of initial data collection from T1.5

Table 16. Evaluation of the awareness of RES, based on the initial collected data

Question Category /	Summary / Aggregation /	Interpretation
Personal Info & Background	Mostly STEM/RES educated, engineers, environmental engineers, some in R&D, energy service companies, some from other backgrounds, such microbiologist.	Most respondents had a STEM or RES-related education, and many were engineers or researchers working actively in renewable energy or energy-related fields. Some respondents came from other fields (economics, arts, humanities), showing a mix of technical and non-technical backgrounds.
Interest rating in Renewable Energy Sources (0=never heard, 5=know well)	Average scores across respondents (approx.):	<ul style="list-style-type: none"> • High interest (scores ~4-5): Solar photovoltaic, wind, biofuels, hydrogen, and to some extent, solar thermal. • Moderate interest (~3): Hydro, digestion, energy storage, heat pumps. • Lower interest (~2-3): Geothermal, gasification, biomass combustion, heat recovery, ocean energy. <p>The respondents were generally well aware and interested in mainstream and widely</p>
- Solar photovoltaic	~4.0	
- Solar thermal	~3.4	
- Hydrogen	~3.3	
- Wind	~4.0	

Question Category /	Summary / Aggregation /	Interpretation
- Biofuel (biodiesel, bioethanol, biomethane)	~3.6	deployed RES like solar PV and wind. Emerging or less mature technologies like gasification and ocean energy received lower attention, possibly due to less exposure or current deployment.
- Hydro	~3.2	
- Geothermal	~2.8	
- Gasification	~2.8	
- Digestion	~3.0	
- Biomass combustion	~2.7	
- Heat recovery	~2.7	
- Energy storage	~3.2	
- Heat pumps	~3.5	
- Ocean energy	~2.5	
Renewable energy sources considered:	Wind, solar, hydro, biomass, geothermal (majority consensus)	Respondents correctly identified wind, solar, hydro, biomass, and geothermal as renewable.
Fossil fuel identification:	Gases, Oil, Nuclear, and Biogas mentioned; Oil and gases are non-renewable fossil fuels	Fossil fuels like oil and gas were well recognised as non-renewable. There was some confusion around biogas and nuclear energy classification.
Greenhouse effect explanation:	Generally, A natural process regulating Earth's atmospheric temperature or warming due to human activities	The greenhouse effect was largely understood as a natural process affecting Earth's temperature, or related to human-induced climate change. This showed good baseline environmental literacy among respondents.
Information sources on RES:	Internet, books, asking technicians/experts	Information was mainly gathered from the internet, books, and experts.
Reliability of internet info:	Mixed opinions, generally not fully reliable; some rate it medium reliability (around 2)	However, the internet was not seen as fully reliable, reflecting a critical approach toward online info, possibly due to misinformation concerns.

Question Category /	Summary / Aggregation /	Interpretation
Perception of energy as a problem:	Present and future energy problems rated highly (around 4-5)	<ul style="list-style-type: none"> • Energy was seen as a pressing problem both now and for the future. • Problems were recognised across economic, environmental, social, political, and technical dimensions.
Energy problems related to aspects (rating presence):	Economic, Environmental, Social, Political, Technical aspects all rated as important (4+), very few said no problem	This indicates a holistic awareness that energy challenges are multi-faceted and require integrated solutions.
Reasons for limited RES use today:	Mainly, Lack of information/public participation, Lack of technologies, Lack of economic interests	<ul style="list-style-type: none"> • Key barriers included: <ul style="list-style-type: none"> ○ Lack of public information and participation in decisions. ○ Lack of technology (or perceived technology maturity). ○ Lack of economic incentives or interests. <p>The results suggest that, beyond technical readiness, social and economic factors significantly influence the pace of RES deployment.</p>
SKILLBILL website and Green Portal info:	Generally found to be easy to find, interesting, reliable, and abundant	<ul style="list-style-type: none"> • Platforms were generally found to be easy to use, reliable, interesting, and abundant in information. <p>Respondents value well-curated, accessible resources that support learning and decision-making on RES topics.</p>
Respondents' comments or additional notes:	Varying, but some were interested in ongoing R&D, public participation, and information transparency	

The respondents appeared knowledgeable and engaged with renewable energy, especially in mainstream technologies like solar and wind. While technical understanding was strong, social and economic factors are seen as critical bottlenecks to further RES adoption. The mixed reliability attributed to internet sources points to a need for trustworthy, expert-validated information channels. The recognition of energy as a complex and urgent issue across multiple dimensions suggested the audience was well placed to contribute to policy, research, and public awareness efforts.

Table 17. Evaluation of women involvement in RES

Question/Statement	Summary of Responses	Interpretation
Discriminated for gender	Mostly low to moderate (0 to 4), women report higher (2–4) than men (mostly 0)	Gender discrimination was experienced more by women, but not universally acknowledged; some men report no discrimination at all.
Paid less for gender	Mostly 0–3, women slightly higher (1–3), men mostly 0	Pay discrimination was perceived more by women, though not strongly felt by everyone.
Had to choose between family and work	Mostly 0–2, women report slightly higher values	Women felt more pressured to choose between family and work, but it's not a dominant issue for all respondents.
Men and women have different roles	Low overall (mostly 0–2), few exceptions	Traditional gender role stereotypes were generally not strongly endorsed among respondents.
A technical woman is less prepared	Mostly 0–4, with some women strongly rejecting this (0), but a couple of higher values	Mixed views: some scepticism existed about women's technical skills, but many rejected this stereotype.
A woman in a managerial role is better than a man	Varied responses from 0 to 5, women tend to rate higher	Some supported women managers, particularly among women; men were more divided or less supportive.
I would hire only technical men	Mostly low (0–2), except some higher values (up to 5) from men	Most rejected male-only hiring, but a minority held this bias.
A man in a managerial role is better than a woman	Mixed, from 0 to 5, with women mostly low and some men higher	Some perceived male managerial superiority, but many rejected this; a gender split was visible here.
Gender gap is a real problem	Mostly very high (3–5) across all respondents	Broad agreement that the gender gap exists and matters.
Gender gap is a problem of the past	Mostly low (0–2), some men slightly higher	General consensus that the gender gap was not just historical, still relevant that days (2024).
Gender gap can be reduced with laws	Mostly high (3–5)	Strong belief that legislation was key to reducing gender inequality.
Gender gap can be reduced with education	Mostly high (3–5)	Education was widely seen as effective in tackling gender issues.

Question/Statement	Summary of Responses	Interpretation
Gender gap can be reduced inside the family	Mostly high (3–5)	The family environment was important in shaping gender equality.
Gender gap can be reduced with good examples	Mostly high (3–5)	Role models and examples were recognised as positive influences.
Gender gap is an everyday experience	Mostly moderate to high (1–4), women tend to report higher	Women experienced the gender gap more personally and regularly than men.

The responses indicated that gender discrimination and inequality were still recognised as ongoing issues, particularly by women who reported experiencing discrimination and pay gaps more often than men. While traditional gender stereotypes—such as the idea that men and women should have different roles or that technical women were less prepared—were generally rejected, some biases persisted, especially among male respondents. There was a strong belief across the board that laws, education, family influence, and positive role models were key factors in reducing the gender gap. Women tended to experience gender bias more personally and frequently in their daily lives compared to men. Importantly, the view that gender inequality was only a problem of the past was largely dismissed, showing a shared understanding that this remained a relevant issue up to 2024 (based on the answers collected under T1.5). Although a few respondents, mainly men, held more conservative views on gender roles or hiring preferences, these views were in the minority. Overall, the data reflected a broad consensus on the reality of gender gaps and the need for continued efforts to address them.

Table 18. Strengthening the gender perspective in RES

Question Statement	Summary of Responses	Interpretation
Please give some info about you / your background	Respondents included men and women with STEM/RES education and work experience, including environmental engineering, electrical engineering, mechanical engineering, IT security, and business backgrounds linked to energy.	Diverse backgrounds reflected a mix of technical and non-technical STEM-related roles, highlighting multidisciplinary engagement in energy and RES fields.
Is the sector male- or female-dominated?	Most respondents agreed the sector was male-dominated; women often found themselves as minorities or only woman in the room. Some men acknowledged male dominance but did not report personal experiences of discrimination.	The sector remained male-dominated, with women frequently facing isolation and increased scrutiny, confirming persistent gender imbalance in STEM/RES fields.
Have you or anyone you	Women described having to prove their skills and confidence more than men,	Women experienced implicit or explicit gender bias more than

Question Statement /	Summary of Responses	Interpretation
know faced gender-based problems?	experiencing different treatment and occasional surprise about their presence. Men mostly did not report direct experience with discrimination, but noticed external biases.	men, who may have been less aware or affected personally, indicating a gendered difference in workplace experiences and challenges.
Suggested solutions to gender imbalance	Suggestions included promoting gender balance education from early schooling, mentorship programs, representation, hands-on labs, transparent pay, and showcasing female success stories.	Multi-level approaches involving education, mentorship, pay transparency, and positive role models were seen as key to reducing gender gaps in STEM/RES fields.
Additional comments	Some noted physical workplace design challenges, external client biases, and the need for orientation programs to debunk stereotypes. Women often felt the need to gain confidence and prove competence in male-dominated fields.	Gender bias extended beyond attitudes to practical issues; building confidence and challenging stereotypes early were essential for inclusion and retention of women in STEM/RES.

7.4.2 Analysis and interpretation of Green Portal Manager Insights

Table 19. Green Portal Manager Insights

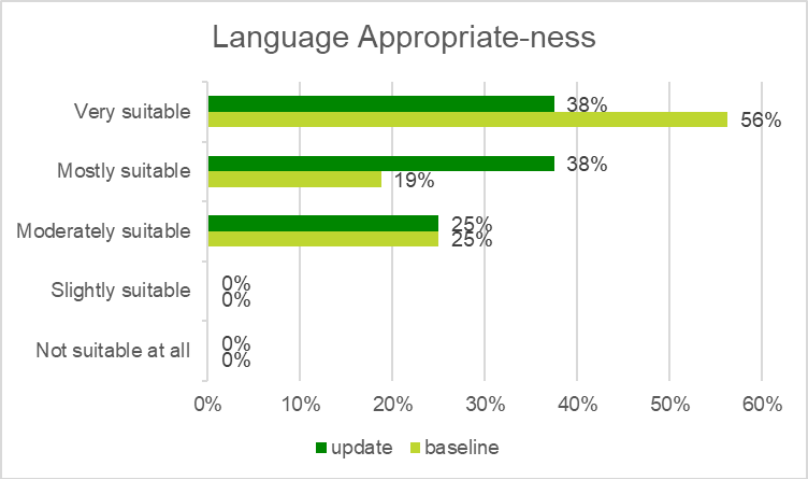
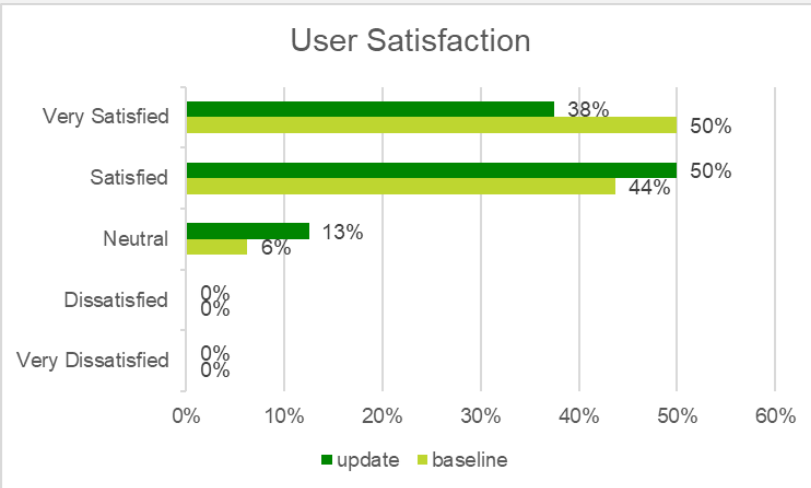
Question	Summary of Responses	Interpretation
Do you find materials suitable for your level of expertise?	All respondents found the materials suitable for their level of expertise, by positively answering the descriptive question	The platform successfully matched the manager’s expertise level. Content was perceived as accessible and appropriate for its audience.
Do you believe the material in the Green Portal is ample enough? (Scale 1–5)	All responses assessed as very ample the materials in GP.	Managers were fully satisfied with the breadth of materials available; they perceived the platform as comprehensive.
If not ample, what topic is not addressed at all or is insufficiently addressed?	Managers stated no missing or insufficient topics (e.g., I think all topics are sufficiently addressed)	The platform was seen as complete in coverage; there were currently no major content gaps reported by managers.
How many minutes or sessions do you spend on the platform per month?	Managers reported ~30 to 45 minutes per day, which implied high engagement	Managers were highly engaged with the platform, suggesting its perceived usefulness and relevance.

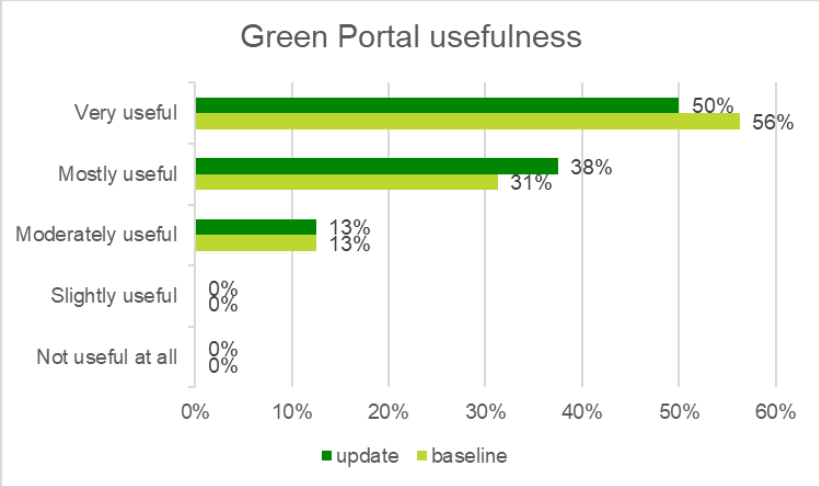
Question	Summary of Responses	Interpretation
How many materials do you typically access per session?	All users: One or two materials per session	While engagement was frequent, managers consumed a small number of materials per session, which suggested short, focused content or limited exploration

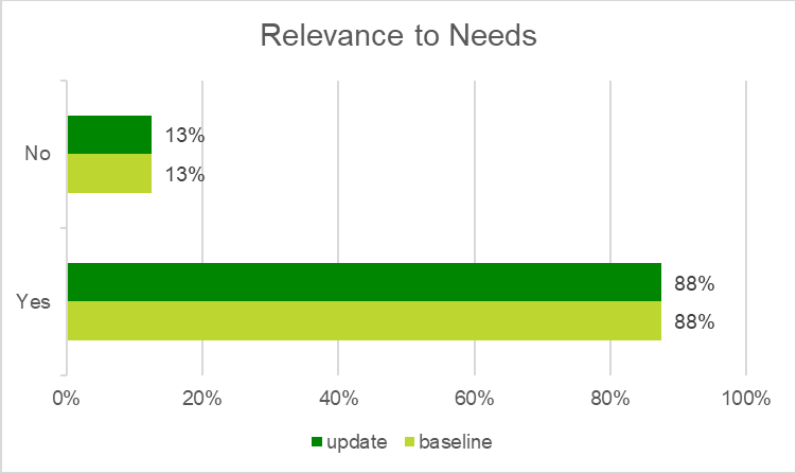
7.4.3 Analysis and interpretation of Green Portal Insights

Table 20. Interpretation of Results for Green Portal

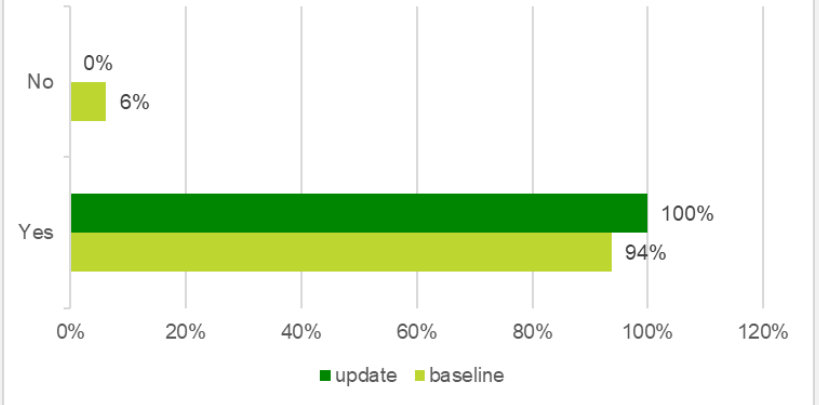
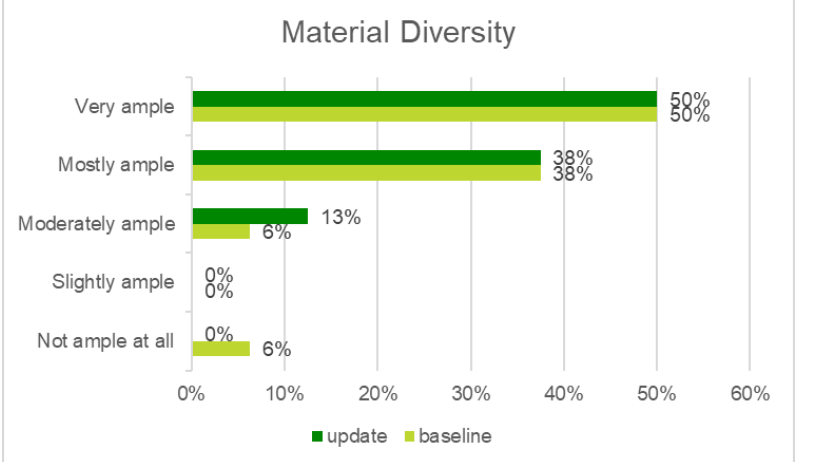
Objectives	Indicators	Metric Question																		
O2.1 User-friendly features with adequate language	Usability	<p>Percentage of users who found the Green Portal easy to navigate</p> <p><i>[How easily can you find the materials you need on the platform? Scale: Very difficult to Very easy]</i></p> <table border="1"> <caption>Usability Data</caption> <thead> <tr> <th>Difficulty Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very easy</td> <td>38%</td> <td>50%</td> </tr> <tr> <td>Easy</td> <td>25%</td> <td>19%</td> </tr> <tr> <td>Moderate</td> <td>38%</td> <td>31%</td> </tr> <tr> <td>Difficult</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Very difficult</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table> <p>The results showed a slight decline in perceived ease of use between the baseline and the update phases. Initially, 50% of respondents rated the platform as <i>very easy</i> to navigate, but this figure dropped to 38% in the update. Similarly, the percentage of users who found it <i>Easy</i> decreased from 19% to 25%. Meanwhile, those who described the experience as <i>Moderate</i> remained relatively steady, with a minor increase from 31% to 38%. Notably, no respondents rated the platform as <i>Difficult</i> or <i>very difficult</i> in either phase. Overall, while the platform continued to be generally accessible, the slight reduction in top-tier ease ratings suggested that recent updates or changes may have impacted user experience.</p>	Difficulty Level	Update (%)	Baseline (%)	Very easy	38%	50%	Easy	25%	19%	Moderate	38%	31%	Difficult	0%	0%	Very difficult	0%	0%
	Difficulty Level	Update (%)	Baseline (%)																	
Very easy	38%	50%																		
Easy	25%	19%																		
Moderate	38%	31%																		
Difficult	0%	0%																		
Very difficult	0%	0%																		
Language Appropriateness	<p>Percentage of users who found the language used in the materials appropriate for their level.</p> <p><i>[Do you find the language used in the materials suitable for your level of understanding? Scale: Not suitable to Highly suitable]</i></p>																			

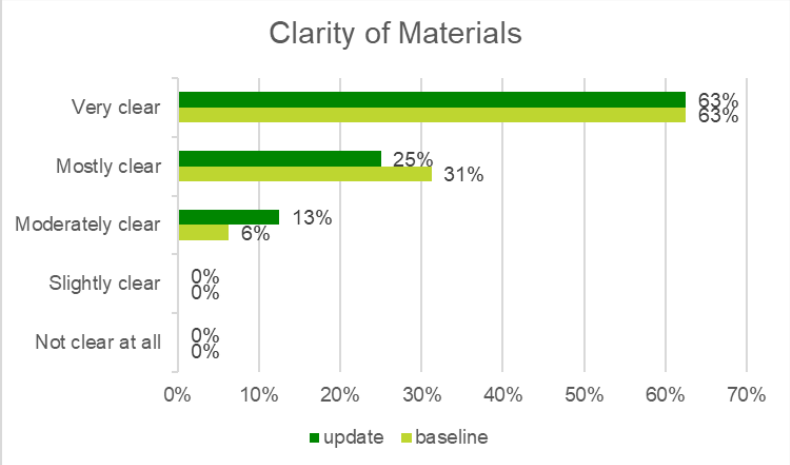
Objectives	Indicators	Metric Question																		
<p>O2.2 Improved RES social acceptance</p>		<p>Language Appropriateness</p>  <table border="1"> <caption>Language Appropriateness Data</caption> <thead> <tr> <th>Suitability Level</th> <th>update (%)</th> <th>baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very suitable</td> <td>38%</td> <td>56%</td> </tr> <tr> <td>Mostly suitable</td> <td>38%</td> <td>19%</td> </tr> <tr> <td>Moderately suitable</td> <td>25%</td> <td>25%</td> </tr> <tr> <td>Slightly suitable</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Not suitable at all</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table> <p>The results indicated a slight decline in overall satisfaction with the language suitability over time. Initially, a significant majority (56%) found the language to be <i>very suitable</i>, but this figure dropped to 38% in the update. The proportion of respondents who rated the materials as <i>mostly suitable</i> increased from 19% to 38%, suggesting that while users found the language generally appropriate, fewer consider it optimal. The share of those who found the language only <i>moderately suitable</i> remained consistent at 25%, and no participants rated the language as either <i>not suitable at all</i> or <i>slightly suitable</i> in either round. Overall, the findings suggested that while the materials remained broadly accessible, there was a slight downward trend in the perceived clarity or appropriateness of the language, which could indicate a need to revisit the tone or technical complexity of the content to ensure continued user engagement and comprehension.</p>	Suitability Level	update (%)	baseline (%)	Very suitable	38%	56%	Mostly suitable	38%	19%	Moderately suitable	25%	25%	Slightly suitable	0%	0%	Not suitable at all	0%	0%
		Suitability Level	update (%)	baseline (%)																
Very suitable	38%	56%																		
Mostly suitable	38%	19%																		
Moderately suitable	25%	25%																		
Slightly suitable	0%	0%																		
Not suitable at all	0%	0%																		
	<p>User Satisfaction</p>	<p>User satisfaction rate of the platform</p> <p>[How satisfied are you with the platform overall? Scale: Very dissatisfied to Very satisfied]</p>  <table border="1"> <caption>User Satisfaction Data</caption> <thead> <tr> <th>Satisfaction Level</th> <th>update (%)</th> <th>baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very Satisfied</td> <td>38%</td> <td>50%</td> </tr> <tr> <td>Satisfied</td> <td>50%</td> <td>44%</td> </tr> <tr> <td>Neutral</td> <td>13%</td> <td>6%</td> </tr> <tr> <td>Dissatisfied</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Very Dissatisfied</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Satisfaction Level	update (%)	baseline (%)	Very Satisfied	38%	50%	Satisfied	50%	44%	Neutral	13%	6%	Dissatisfied	0%	0%	Very Dissatisfied	0%	0%
Satisfaction Level	update (%)	baseline (%)																		
Very Satisfied	38%	50%																		
Satisfied	50%	44%																		
Neutral	13%	6%																		
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Very Dissatisfied	0%	0%																		

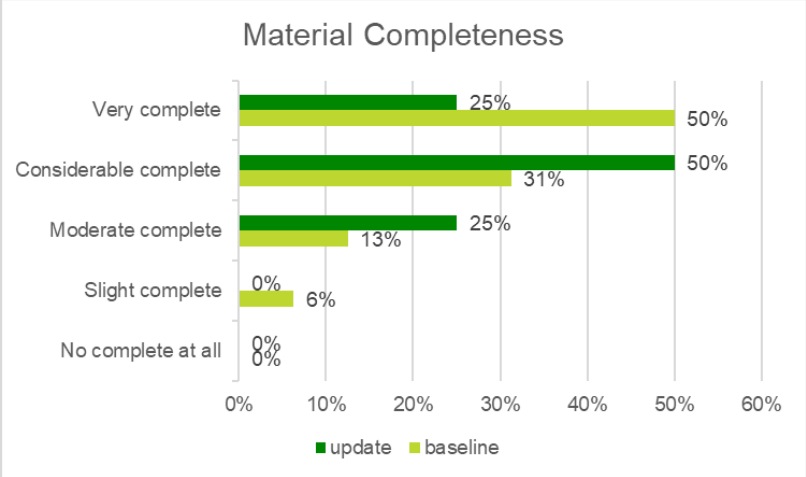
Objectives	Indicators	Metric Question																	
		<p>The responses indicated that while overall satisfaction remained high, there was a slight shift toward more moderate levels of approval. Initially, 50% of respondents reported being <i>very satisfied</i>, but this dropped to 38% in the update. Conversely, those who rated the platform as <i>satisfied</i> rose from 44% to 50%, suggesting that although users continue to view the platform positively, fewer now express the highest level of satisfaction. The proportion of <i>neutral</i> responses also increased slightly, from 6% to 13%, while no respondents indicated dissatisfaction in either round. These results suggested that while the platform maintained a strong level of user approval, the decline in peak satisfaction may point to evolving user expectations or areas where the platform could further improve its offerings or usability.</p>																	
	<p>Green Portal's usefulness</p>	<p>Percentage of users who found the Green Portal useful or very useful</p> <p>[How useful do you find the content concentrated in the Green Portal? Scale: Not useful to Very useful]</p>  <table border="1"> <caption>Green Portal usefulness data</caption> <thead> <tr> <th>Usefulness Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very useful</td> <td>50%</td> <td>56%</td> </tr> <tr> <td>Mostly useful</td> <td>38%</td> <td>31%</td> </tr> <tr> <td>Moderately useful</td> <td>13%</td> <td>13%</td> </tr> <tr> <td>Slightly useful</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Not useful at all</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table> <p>In response to the question <i>How useful do you find the content concentrated in the Green Portal?</i>, users generally expressed a high level of appreciation for the platform's informational value in the RES sector. A majority of respondents rated the content as either <i>very useful</i> or <i>mostly useful</i>, with 56% selecting <i>very useful</i> in the baseline, slightly decreasing to 50% in the update. Similarly, the most <i>useful</i> category saw a modest increase from 31% to 38%, indicating a continued positive perception, though with a small shift from the highest rating tier. The proportion of users who found the content only <i>moderately useful</i> remained stable at 13%, and no respondents rated the content as <i>slightly useful</i> or <i>not useful at all</i> in either round. Overall, the results suggest that the content of the Green Portal was regarded as highly valuable and relevant, although there may be</p>	Usefulness Category	Update (%)	Baseline (%)	Very useful	50%	56%	Mostly useful	38%	31%	Moderately useful	13%	13%	Slightly useful	0%	0%	Not useful at all	0%
Usefulness Category	Update (%)	Baseline (%)																	
Very useful	50%	56%																	
Mostly useful	38%	31%																	
Moderately useful	13%	13%																	
Slightly useful	0%	0%																	
Not useful at all	0%	0%																	

Objectives	Indicators	Metric Question									
		opportunities to further enhance its perceived usefulness to maintain or elevate satisfaction levels.									
O2.3 Meeting citizens' needs	Relevance to Needs	<p>Percentage of users who believed the platform met their specific needs</p> <p><i>[Does the platform address your specific needs in the field of RES? Scale: Yes, Maybe, No]</i></p>  <table border="1" data-bbox="608 510 1406 981"> <caption>Relevance to Needs Data</caption> <thead> <tr> <th>Response</th> <th>update</th> <th>baseline</th> </tr> </thead> <tbody> <tr> <td>No</td> <td>13%</td> <td>13%</td> </tr> <tr> <td>Yes</td> <td>88%</td> <td>88%</td> </tr> </tbody> </table> <p>When asked whether the Green Portal addresses their specific needs in the field of Renewable Energy Sources (RES), the vast majority of users responded <i>positively</i>. In both the baseline and the update, 88% of respondents indicated that the platform meets their specific needs, while only 13% felt it did <i>not</i>. These consistent results reflected a strong alignment between the platform’s content and functionalities and the expectations or requirements of its user base. This suggested that the Green Portal was effectively fulfilling its intended purpose as a resource hub in the RES sector, though the small percentage of unmet needs may point to areas for future content expansion or customisation.</p>	Response	update	baseline	No	13%	13%	Yes	88%	88%
	Response	update	baseline								
No	13%	13%									
Yes	88%	88%									
Content Relevance	<p>Average relevance rating of materials to users' interests</p> <p><i>[How relevant are the materials to your interests and needs? Scale: Not relevant to Highly relevant]</i></p>										

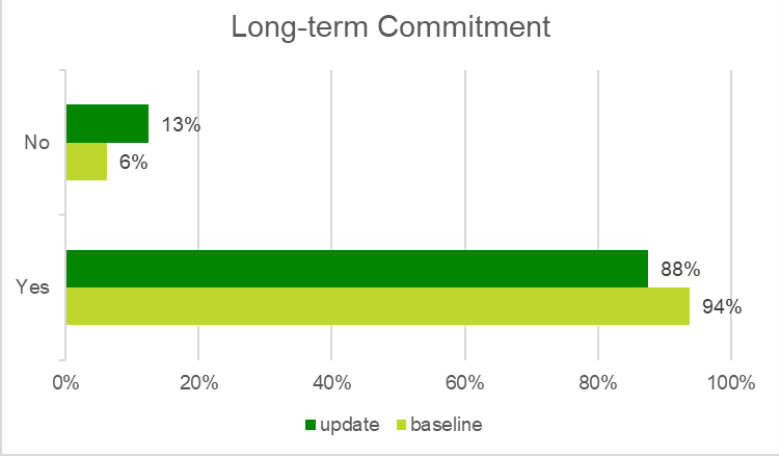
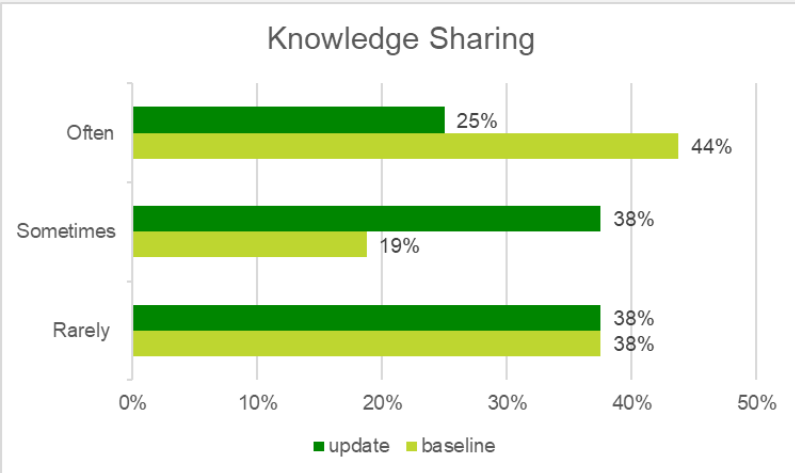
Objectives	Indicators	Metric Question																		
		<div data-bbox="608 226 1437 712"> <table border="1"> <caption>Content Relevance Data</caption> <thead> <tr> <th>Relevance Level</th> <th>update (%)</th> <th>baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Highly relevant</td> <td>38%</td> <td>56%</td> </tr> <tr> <td>Mostly relevant</td> <td>63%</td> <td>38%</td> </tr> <tr> <td>Moderately relevant</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Slightly relevant</td> <td>0%</td> <td>6%</td> </tr> <tr> <td>Not relevant at all</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table> </div> <p data-bbox="608 734 1437 1429">In response to the question <i>How relevant are the materials to your interests and needs?</i>, users generally expressed a strong sense of alignment between the content offered by the Green Portal and their personal or professional interests in the RES sector. At the baseline, 56% rated the materials as <i>highly relevant</i>, though this figure decreased to 38% in the update. Meanwhile, the proportion of respondents selecting <i>mostly relevant</i> increased from 38% to 63%, suggesting that while fewer users now view the materials as perfectly aligned with their needs, a larger group still found them broadly applicable and useful. Notably, no participants rated the materials as <i>moderately relevant</i> or <i>not relevant</i> at all in either phase, and the percentage of those who found the materials only <i>slightly</i> relevant dropped from 6% to 0%. Overall, the results indicated sustained relevance of the portal's content, with a slight shift toward more moderate—but still positive—perceptions, potentially reflecting evolving user expectations or changes in content emphasis.</p>	Relevance Level	update (%)	baseline (%)	Highly relevant	38%	56%	Mostly relevant	63%	38%	Moderately relevant	0%	0%	Slightly relevant	0%	6%	Not relevant at all	0%	0%
Relevance Level	update (%)	baseline (%)																		
Highly relevant	38%	56%																		
Mostly relevant	63%	38%																		
Moderately relevant	0%	0%																		
Slightly relevant	0%	6%																		
Not relevant at all	0%	0%																		
<p>O2.4 Materials for different levels</p>	<p>Material Adaptability</p>	<p>Percentage of users who found materials suitable for their level (beginner, intermediate, expert)</p> <p><i>[Do you find materials suitable for your level of expertise? Scale: Yes, Maybe, No]</i></p>																		

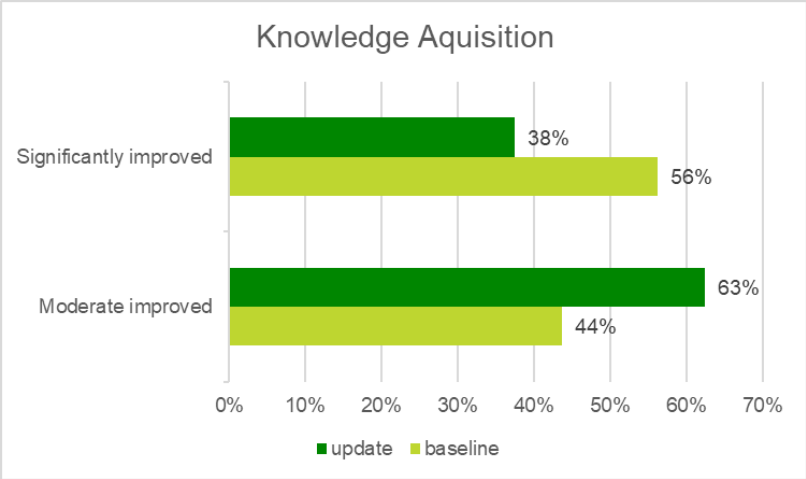
Objectives	Indicators	Metric Question																	
		<p data-bbox="869 241 1157 280" style="text-align: center;">Material Adaptability</p>  <table border="1" data-bbox="606 302 1428 705"> <thead> <tr> <th>Response</th> <th>update</th> <th>baseline</th> </tr> </thead> <tbody> <tr> <td>No</td> <td>0%</td> <td>6%</td> </tr> <tr> <td>Yes</td> <td>100%</td> <td>94%</td> </tr> </tbody> </table> <p data-bbox="603 728 1441 1187">The responses to the question <i>Do you find materials suitable for your level of expertise?</i> indicated a clear improvement in how well the Green Portal met the knowledge needs of its users in the RES sector. In the baseline assessment, 94% of respondents <i>affirmed</i> that the materials matched their expertise level, while only 6% did <i>not</i>. In the updated results, satisfaction rose to 100%, with all respondents indicating that the content was appropriate for their level of understanding. This positive shift suggested that the platform had either improved the clarity and technical depth of its materials or better aligned them with the target audience’s expertise over time, enhancing its overall effectiveness as a specialised knowledge resource.</p>	Response	update	baseline	No	0%	6%	Yes	100%	94%								
	Response	update	baseline																
No	0%	6%																	
Yes	100%	94%																	
Material Diversity	<p data-bbox="603 1227 1433 1265">Percentage of users who found the material diversity ample</p> <p data-bbox="603 1281 1433 1344"><i>[Do you believe that the material in the green portal is ample enough? Scale: Not at all to Very ample]</i></p> <p data-bbox="603 1359 1433 1422"><i>[If not ample, what topic is not addressed at all or is not sufficiently addressed? Open answer]</i></p> <p data-bbox="885 1456 1125 1494" style="text-align: center;">Material Diversity</p>  <table border="1" data-bbox="606 1444 1428 1904"> <thead> <tr> <th>Category</th> <th>update</th> <th>baseline</th> </tr> </thead> <tbody> <tr> <td>Very ample</td> <td>50%</td> <td>50%</td> </tr> <tr> <td>Mostly ample</td> <td>38%</td> <td>38%</td> </tr> <tr> <td>Moderately ample</td> <td>13%</td> <td>6%</td> </tr> <tr> <td>Slightly ample</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Not ample at all</td> <td>0%</td> <td>6%</td> </tr> </tbody> </table> <p data-bbox="603 1926 1441 2078">In response to the question <i>Do you believe that the material in the Green Portal is ample enough?</i>, users generally expressed a positive view regarding the breadth of content available. At both baseline and update stages, 50% of respondents</p>	Category	update	baseline	Very ample	50%	50%	Mostly ample	38%	38%	Moderately ample	13%	6%	Slightly ample	0%	0%	Not ample at all	0%	6%
Category	update	baseline																	
Very ample	50%	50%																	
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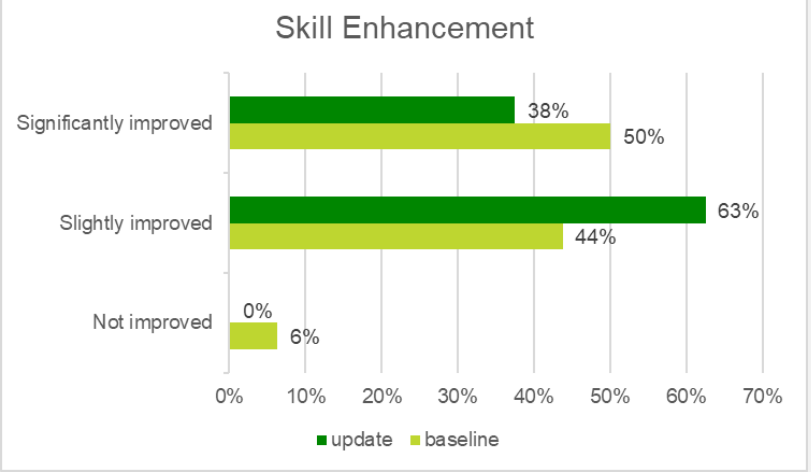
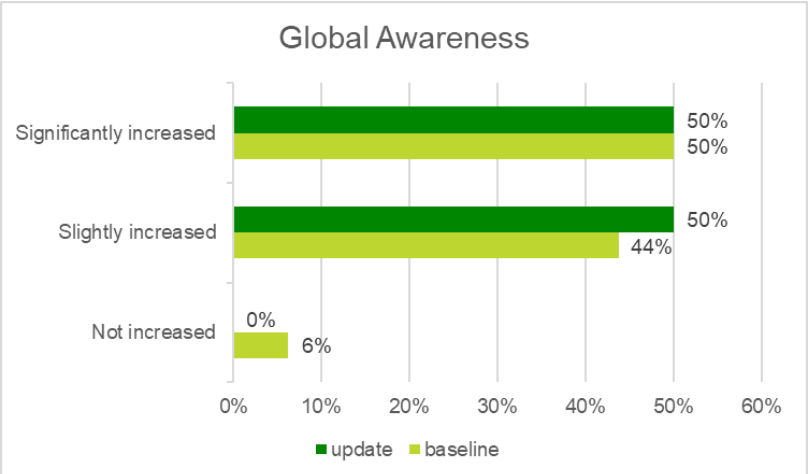
Objectives	Indicators	Metric Question																		
		<p>considered the material to be <i>very ample</i>, while 38% rated it as <i>mostly ample</i>, showing consistent satisfaction with the quantity and range of resources. A small proportion—6% at baseline and 13% in the update—found the material only <i>moderately ample</i>, suggesting that a few users may perceived room for content expansion in specific areas. Notably, the response <i>not ample at all</i> disappeared entirely in the update, indicating an improvement in perceptions over time. Overall, the results suggested that the Green Portal was largely meeting users' expectations regarding the volume of content, though further additions or diversification of materials could benefit users with more specialised or evolving needs.</p>																		
<p>O2.5 Material availability of adequate and clear information</p>	<p>Clarity of Materials</p>	<p>Percentage of users who found the materials clear and easy to understand.</p> <p><i>[Are the materials on the platform clear and easy to understand? Scale: Not clear to Very clear]</i></p>  <table border="1"> <caption>Clarity of Materials Data</caption> <thead> <tr> <th>Clarity Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very clear</td> <td>63%</td> <td>63%</td> </tr> <tr> <td>Mostly clear</td> <td>25%</td> <td>31%</td> </tr> <tr> <td>Moderately clear</td> <td>13%</td> <td>6%</td> </tr> <tr> <td>Slightly clear</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Not clear at all</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table> <p>In response to the question <i>Are the materials on the platform clear and easy to understand?</i>, the feedback reflected a consistently positive perception of the clarity of content provided by the Green Portal. In both the baseline and update assessments, 63% of respondents rated the materials as <i>Very clear</i>, indicating a strong majority who found the content well-articulated and accessible. A smaller percentage, 31% at baseline and 25% in the update, rated the materials as <i>mostly clear</i>, while only a minimal share (6% at baseline and 13% in the update) found them to be just <i>moderately clear</i>. Importantly, no respondents rated the materials as <i>slightly clear</i> or <i>not clear at all</i> in either round. These results suggested that the platform was largely successful in communicating information effectively, though the slight increase in moderate ratings may highlight the need for continued attention to clarity, particularly as new materials are added or content evolves.</p>	Clarity Level	Update (%)	Baseline (%)	Very clear	63%	63%	Mostly clear	25%	31%	Moderately clear	13%	6%	Slightly clear	0%	0%	Not clear at all	0%	0%
Clarity Level	Update (%)	Baseline (%)																		
Very clear	63%	63%																		
Mostly clear	25%	31%																		
Moderately clear	13%	6%																		
Slightly clear	0%	0%																		
Not clear at all	0%	0%																		

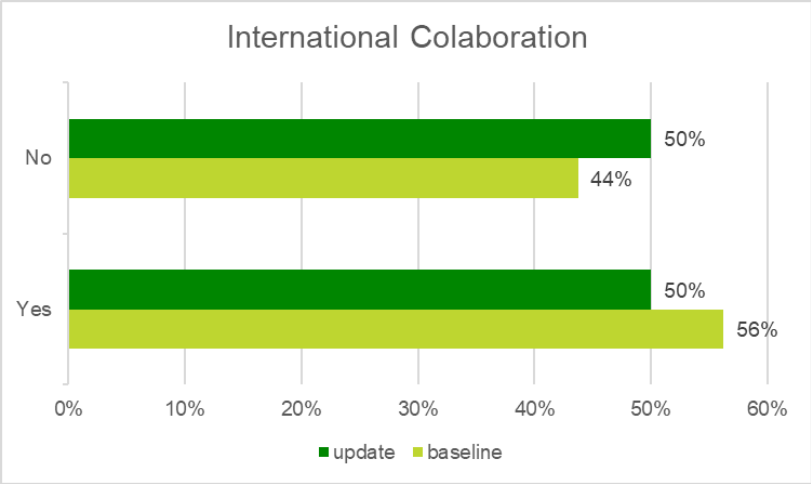
Objectives	Indicators	Metric Question																		
<p>O2.6 Daily behaviour, long-term choices, and</p>	<p>Material Completeness</p>	<p>Percentage of materials that was considered complete and comprehensive by users.</p> <p><i>[Do you find the materials on the platform complete in each topic? Scale: Not complete to Very complete]</i></p>  <table border="1" data-bbox="608 416 1417 891"> <caption>Material Completeness Data</caption> <thead> <tr> <th>Category</th> <th>update (%)</th> <th>baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very complete</td> <td>25%</td> <td>50%</td> </tr> <tr> <td>Considerable complete</td> <td>50%</td> <td>31%</td> </tr> <tr> <td>Moderate complete</td> <td>25%</td> <td>13%</td> </tr> <tr> <td>Slight complete</td> <td>0%</td> <td>6%</td> </tr> <tr> <td>No complete at all</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table> <p>The baseline results showed strong satisfaction, with 50% of respondents rating the materials as <i>Very complete</i> and 31% as <i>Considerably complete</i>. However, in the update, the percentage of users selecting <i>Very complete</i> declined to 25%, while those selecting <i>considerably complete</i> rose to 50%. This shift suggested that while users found the content largely comprehensive, fewer viewed it as fully exhaustive. Additionally, those rating the content as only <i>moderately complete</i> increased from 13% to 25%, and the <i>slightly complete</i> response, present in the baseline at 6%, disappeared entirely in the update. These trends indicated that although overall satisfaction with content completeness remains high, some users were beginning to perceive gaps or expect deeper coverage in certain areas.</p>	Category	update (%)	baseline (%)	Very complete	25%	50%	Considerable complete	50%	31%	Moderate complete	25%	13%	Slight complete	0%	6%	No complete at all	0%	0%
	Category	update (%)	baseline (%)																	
Very complete	25%	50%																		
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Slight complete	0%	6%																		
No complete at all	0%	0%																		
<p>O2.6 Daily behaviour, long-term choices, and</p>	<p>Behaviour Change</p>	<p>Percentage of users who reported changes in daily behaviour due to platform use.</p> <p><i>[How possible is it to make any changes in your daily behaviour as a result of using the platform? Scale: Not possible to Very Possible]</i></p>																		

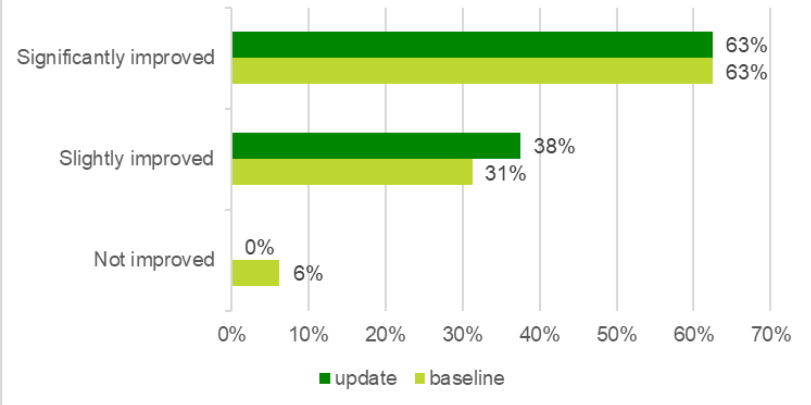
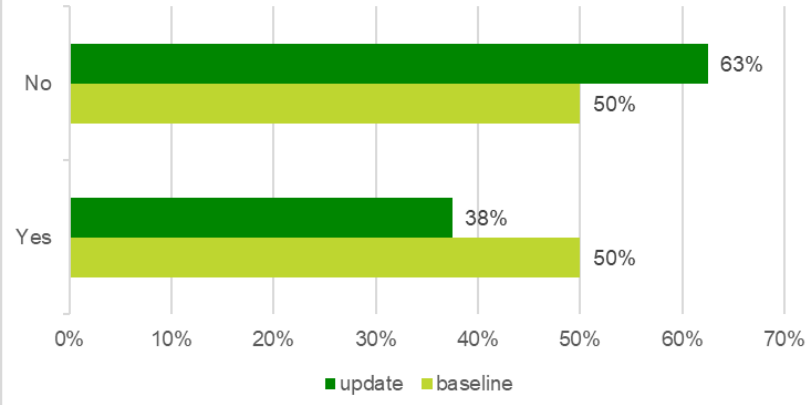
Objectives	Indicators	Metric Question																		
<p>levels of acceptance</p>		<div data-bbox="608 226 1430 712" data-label="Figure"> <table border="1"> <caption>Behaviour Change Data</caption> <thead> <tr> <th>Level</th> <th>update (%)</th> <th>baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very possible</td> <td>38%</td> <td>56%</td> </tr> <tr> <td>Considerable possible</td> <td>50%</td> <td>31%</td> </tr> <tr> <td>Moderate possible</td> <td>13%</td> <td>13%</td> </tr> <tr> <td>Slight possible</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>No possible at all</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table> </div> <p data-bbox="608 734 1430 1507">The question <i>How possible is it to make any changes in your daily behaviour as a result of using the platform?</i> aimed to assess the Green Portal’s influence on users' behaviour, particularly in relation to sustainable practices within the RES context. The responses suggested that the platform has a meaningful impact, although with a slight decline in perceived potential for behaviour change over time. In the baseline results, 56% of respondents found it <i>very possible</i> to change their daily behaviour based on the platform's content, but this dropped to 38% in the update. Conversely, the proportion of users selecting <i>considerably possible</i> rose from 31% to 50%, indicating that while fewer users now perceive the highest level of influence, more still acknowledge a strong potential for change. The <i>Moderately possible</i> rating remained consistent at 13%, and no respondents in either round felt that behaviour change was <i>Slightly possible</i> or <i>not possible at all</i>. Overall, the data suggested that the Green Portal continued to encourage behaviour change among its users, though the slight decrease in the highest rating may point to a need for more practical tools or motivational elements to further enhance its real-life impact.</p>	Level	update (%)	baseline (%)	Very possible	38%	56%	Considerable possible	50%	31%	Moderate possible	13%	13%	Slight possible	0%	0%	No possible at all	0%	0%
	Level	update (%)	baseline (%)																	
Very possible	38%	56%																		
Considerable possible	50%	31%																		
Moderate possible	13%	13%																		
Slight possible	0%	0%																		
No possible at all	0%	0%																		
<p>Long-term Commitment</p>	<p>Percentage of users committed to long-term engagement on the Green Portal</p> <p><i>[Do you plan to continue engaging with RES practices of the Portal in the long term? Scale: Yes, Maybe, No]</i></p>																			

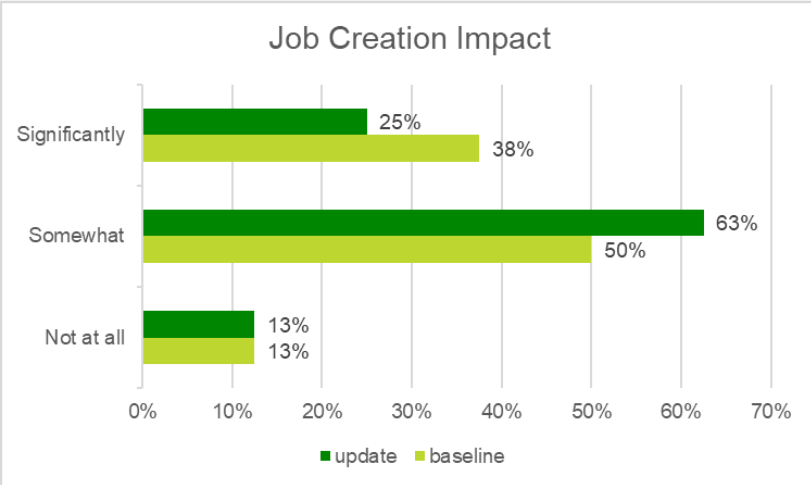
Objectives	Indicators	Metric Question												
		<p style="text-align: center;">Long-term Commitment</p>  <table border="1" data-bbox="608 235 1390 689"> <thead> <tr> <th>Response</th> <th>update</th> <th>baseline</th> </tr> </thead> <tbody> <tr> <td>No</td> <td>13%</td> <td>6%</td> </tr> <tr> <td>Yes</td> <td>88%</td> <td>94%</td> </tr> </tbody> </table> <p>When asked about their intention to continue engaging with the RES practices offered by the Green Portal in the long term, the vast majority of users responded positively. At baseline, 94% expressed plans to maintain their engagement, while this slightly decreased to 88% in the update. Conversely, the percentage of users who do not plan to continue increased modestly from 6% to 13%. These results indicated a strong overall commitment to the platform and its resources, suggesting that most users found lasting value in the Green Portal. The slight decline in long-term engagement intention may reflected emerging challenges or evolving needs that the platform could address to sustain and grow its user base.</p>	Response	update	baseline	No	13%	6%	Yes	88%	94%			
Response	update	baseline												
No	13%	6%												
Yes	88%	94%												
<p>O2.7 Enhanced knowledge disseminatio n</p>	<p>Knowledge Sharing</p>	<p>Frequency of users sharing platform materials with others.</p> <p><i>[How often do you share materials from the platform with others? Scale: Rarely, Sometimes, Often]</i></p> <p><i>If you often share Green Portal materials with others, what is the category /material you most frequently share with others? (multiple choice on types of material)</i></p> <p style="text-align: center;">Knowledge Sharing</p>  <table border="1" data-bbox="608 1451 1406 1921"> <thead> <tr> <th>Frequency</th> <th>update</th> <th>baseline</th> </tr> </thead> <tbody> <tr> <td>Often</td> <td>25%</td> <td>44%</td> </tr> <tr> <td>Sometimes</td> <td>38%</td> <td>19%</td> </tr> <tr> <td>Rarely</td> <td>38%</td> <td>38%</td> </tr> </tbody> </table> <p>Regarding the frequency with which users share materials from the Green Portal with others, the responses revealed varied sharing habits. At both the baseline and update stages, 38% of</p>	Frequency	update	baseline	Often	25%	44%	Sometimes	38%	19%	Rarely	38%	38%
Frequency	update	baseline												
Often	25%	44%												
Sometimes	38%	19%												
Rarely	38%	38%												

Objectives	Indicators	Metric Question								
		<p>users reported sharing materials <i>rarely</i>, indicating a consistent group that infrequently disseminated content. The proportion of users who share <i>sometimes</i> increased from 19% at baseline to 38% in the update, suggesting a growing tendency among some users to pass along information. Conversely, those who share <i>often</i> decreased from 44% to 25%, showing a reduction in frequent sharing activity. Overall, while sharing remained a common behaviour, the shift indicated a possible change in user engagement or external factors influencing how often materials were distributed within their networks.</p>								
	<p>Knowledge Acquisition</p>	<p>Improvement in users' knowledge of RES topics</p> <p><i>[Do you feel that your knowledge of RES has improved since using the platform? Scale: Not improved, Moderate improved, Significantly improved]</i></p>  <table border="1"> <caption>Knowledge Acquisition Data</caption> <thead> <tr> <th>Improvement Level</th> <th>update (%)</th> <th>baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Significantly improved</td> <td>38%</td> <td>56%</td> </tr> <tr> <td>Moderate improved</td> <td>63%</td> <td>44%</td> </tr> </tbody> </table> <p>Users' perceptions of how their knowledge of Renewable Energy Sources (RES) has improved since using the Green Portal showed a positive trend, though with some shifts in the degree of improvement reported. At baseline, 56% of respondents indicated their knowledge had <i>significantly improved</i>, while 44% felt it had <i>moderately improved</i>. In the update, the balance shifted, with 63% reporting <i>Moderate improvement</i> and 38% <i>Significant improvement</i>. This suggested that while users generally acknowledged the platform had enhanced their understanding of RES, fewer perceived the improvement as highly significant, possibly reflecting evolving expectations of initial learning gains. Nonetheless, the majority recognised meaningful knowledge growth attributable to the platform.</p>	Improvement Level	update (%)	baseline (%)	Significantly improved	38%	56%	Moderate improved	63%
Improvement Level	update (%)	baseline (%)								
Significantly improved	38%	56%								
Moderate improved	63%	44%								
<p>O2.8 Educational empowerment</p>	<p>Skill Enhancement</p>	<p>Percentage of users who reported improved skills related to RES</p> <p><i>[Have your skills related to RES been improved through the platform? Scale: Not improved / Slightly improved / Significantly improved]</i></p>								

Objectives	Indicators	Metric Question												
		<p style="text-align: center;">Skill Enhancement</p>  <table border="1" data-bbox="608 235 1422 705"> <caption>Skill Enhancement Data</caption> <thead> <tr> <th>Category</th> <th>update (%)</th> <th>baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Significantly improved</td> <td>38%</td> <td>50%</td> </tr> <tr> <td>Slightly improved</td> <td>63%</td> <td>44%</td> </tr> <tr> <td>Not improved</td> <td>0%</td> <td>6%</td> </tr> </tbody> </table> <p>Users' feedback on whether their skills related to Renewable Energy Sources (RES) have improved through the Green Portal indicated a generally positive impact, with some changes between the baseline and update. Initially, 50% of respondents felt their skills had <i>significantly improved</i>, while 44% reported <i>slightly improved</i>, and a small 6% felt <i>not improved</i>. In the update, the proportion of those experiencing <i>Significant improvement</i> decreased to 38%, while those reporting <i>slightly improved</i> rose to 63%. Importantly, no respondents in the update reported any improvement. These results suggested that most users perceived a beneficial effect of the platform on their RES skills, although the extent of significant advancement appeared to have lessened slightly, possibly reflecting more gradual or incremental skill development over time.</p>	Category	update (%)	baseline (%)	Significantly improved	38%	50%	Slightly improved	63%	44%	Not improved	0%	6%
Category	update (%)	baseline (%)												
Significantly improved	38%	50%												
Slightly improved	63%	44%												
Not improved	0%	6%												
<p>O2.9 Global Learning</p>	<p>Global Awareness</p>	<p>Percentage of users who reported an increased awareness of global RES challenges.</p> <p><i>[Has your awareness of global RES challenges been increased? Scale: Not increased / Slightly increased / Significantly increased]</i></p>  <table border="1" data-bbox="608 1473 1422 1944"> <caption>Global Awareness Data</caption> <thead> <tr> <th>Category</th> <th>update (%)</th> <th>baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Significantly increased</td> <td>50%</td> <td>50%</td> </tr> <tr> <td>Slightly increased</td> <td>50%</td> <td>44%</td> </tr> <tr> <td>Not increased</td> <td>0%</td> <td>6%</td> </tr> </tbody> </table> <p>Responses to the question about increased awareness of global Renewable Energy Sources (RES) challenges showed that the</p>	Category	update (%)	baseline (%)	Significantly increased	50%	50%	Slightly increased	50%	44%	Not increased	0%	6%
Category	update (%)	baseline (%)												
Significantly increased	50%	50%												
Slightly increased	50%	44%												
Not increased	0%	6%												

Objectives	Indicators	Metric Question								
		<p>Green Portal had positively contributed to users' understanding. At baseline, half of the respondents (50%) reported a significant increase in awareness, and 44% experienced a Slight increase. In the update, the proportion of users noting a significant increase remained steady at 50%, while those reporting a Slight increase rose slightly to 50%. Importantly, no respondents indicated that their awareness had not increased in the update, compared to 6% at baseline. This consistency suggested that the platform effectively raises users' understanding of global RES challenges, maintaining a balanced mix of moderate and strong awareness gains among its audience.</p>								
	International Collaboration	<p>A number of users engaged in international collaborative efforts related to RES.</p> <p><i>[Are you involved in international RES initiatives as a result of the platform? Scale: Yes, Maybe No]</i></p>  <table border="1" data-bbox="608 857 1422 1339"> <caption>International Collaboration Data</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>No</td> <td>50%</td> <td>44%</td> </tr> <tr> <td>Yes</td> <td>50%</td> <td>56%</td> </tr> </tbody> </table> <p>Regarding involvement in international Renewable Energy Sources (RES) initiatives as a result of using the Green Portal, responses were evenly split. At baseline, 56% of users reported that the platform had led them to participate in such initiatives, while 44% had not. In the update, these figures balanced out evenly, with 50% of respondents indicating involvement and 50% not. This suggested that while the platform has successfully encouraged engagement in international RES activities for about half of its users, there remained significant potential to increase this impact and further motivated users to participate in collaborative efforts beyond the platform.</p>	Response	Update (%)	Baseline (%)	No	50%	44%	Yes	50%
Response	Update (%)	Baseline (%)								
No	50%	44%								
Yes	50%	56%								
O2.10 Reduced information barriers	Accessibility Perception	<p>Percentage of users who acknowledged that the platform offers them improved accessibility to RES information.</p> <p><i>[Has the platform improved your access to RES information? Scale: Not improved / Slightly improved / Significantly improved]</i></p>								

Objectives	Indicators	Metric Question												
		<p data-bbox="852 241 1174 280">Accessibility Perception</p>  <table border="1" data-bbox="608 302 1422 705"> <thead> <tr> <th>Category</th> <th>update</th> <th>baseline</th> </tr> </thead> <tbody> <tr> <td>Significantly improved</td> <td>63%</td> <td>63%</td> </tr> <tr> <td>Slightly improved</td> <td>38%</td> <td>31%</td> </tr> <tr> <td>Not improved</td> <td>0%</td> <td>6%</td> </tr> </tbody> </table> <p data-bbox="603 728 1437 1189">Users' feedback on whether the Green Portal had improved their access to Renewable Energy Sources (RES) information reflects a strong positive impact. At baseline, 63% of respondents reported a <i>significant improvement</i> in their access to RES information, a figure that remained stable at 63% in the update. Additionally, those reporting a <i>slight improvement</i> increased slightly from 31% to 38%, while the small percentage of users who felt their access had <i>not improved</i> at baseline (6%) dropped to zero in the update. These results highlighted the platform's effectiveness in enhancing users' ability to obtain RES information, contributing to greater knowledge accessibility and resource availability over time.</p>	Category	update	baseline	Significantly improved	63%	63%	Slightly improved	38%	31%	Not improved	0%	6%
	Category	update	baseline											
Significantly improved	63%	63%												
Slightly improved	38%	31%												
Not improved	0%	6%												
Information Reach	<p data-bbox="603 1227 1433 1301">Number of users who reported sharing platform materials with underserved communities.</p> <p data-bbox="603 1321 1433 1384"><i>[Have you shared platform materials with underserved communities? Scale: Yes, Maybe, No]</i></p> <p data-bbox="887 1420 1155 1458">Information Reach</p>  <table border="1" data-bbox="608 1480 1422 1883"> <thead> <tr> <th>Category</th> <th>update</th> <th>baseline</th> </tr> </thead> <tbody> <tr> <td>No</td> <td>63%</td> <td>50%</td> </tr> <tr> <td>Yes</td> <td>38%</td> <td>50%</td> </tr> </tbody> </table> <p data-bbox="603 1912 1437 2065">When asked whether they have shared materials from the Green Portal with underserved communities, responses showed a slight decrease in this kind of outreach over time. At baseline, half of the respondents (50%) reported sharing</p>	Category	update	baseline	No	63%	50%	Yes	38%	50%				
Category	update	baseline												
No	63%	50%												
Yes	38%	50%												

Objectives	Indicators	Metric Question												
		<p>materials with underserved groups, while the other half did not. In the update, the percentage of users sharing with these communities dropped to 38%, with 63% indicating they had not shared materials. This shift suggested a reduced level of engagement in outreach to underserved audiences, highlighting an opportunity for the platform to encourage and facilitate greater dissemination of its resources to broader, potentially underserved groups in the RES sector.</p>												
<p>O2.11 Promotion of green jobs</p>	<p>Job Creation Impact</p>	<p>Percentage of users who believed the platform contributed to job creation in the RES sector.</p> <p><i>[Do you think the platform has contributed or can contribute to job creation in the RES sector? Scale: Not at all, Somewhat, significantly]</i></p>  <table border="1" data-bbox="608 741 1422 1223"> <caption>Job Creation Impact Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Significantly</td> <td>25%</td> <td>38%</td> </tr> <tr> <td>Somewhat</td> <td>63%</td> <td>50%</td> </tr> <tr> <td>Not at all</td> <td>13%</td> <td>13%</td> </tr> </tbody> </table> <p>Regarding the platform’s contribution to job creation in the RES sector, the responses indicated a generally positive but cautious outlook. At baseline, 38% of users believed the Green Portal had <i>significantly</i> contributed to job creation, while 50% felt it had contributed <i>somewhat</i>, and 13% saw <i>no contribution</i>. In the update, the perception of <i>Significant</i> contribution decreased to 25%, whereas those who viewed the platform’s impact as <i>somewhat</i> increased to 63%. The percentage of respondents seeing <i>no contribution</i> remained steady at 13%. These results suggest that while most users acknowledge the platform’s potential role in supporting job creation in the RES sector, fewer were confident in its strong impact, highlighting a need to perhaps better showcase or enhance its direct contributions to employment opportunities.</p>	Category	Update (%)	Baseline (%)	Significantly	25%	38%	Somewhat	63%	50%	Not at all	13%	13%
	Category	Update (%)	Baseline (%)											
Significantly	25%	38%												
Somewhat	63%	50%												
Not at all	13%	13%												
<p>Job Seeker Satisfaction</p>	<p>Satisfaction level of users who planned green jobs through the materials of the platform.</p> <p><i>[How satisfied are you with the green material you found on the platform in terms of getting you ready for your green job? Scale: Very dissatisfied to Very satisfied]</i></p>													

Objectives	Indicators	Metric Question																		
		<div data-bbox="608 226 1398 696" data-label="Figure"> <table border="1"> <caption>Job Seeker Satisfaction Data</caption> <thead> <tr> <th>Satisfaction Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very Satisfied</td> <td>50%</td> <td>50%</td> </tr> <tr> <td>Satisfied</td> <td>25%</td> <td>19%</td> </tr> <tr> <td>Neutral</td> <td>25%</td> <td>25%</td> </tr> <tr> <td>Dissatisfied</td> <td>0%</td> <td>6%</td> </tr> <tr> <td>Very Dissatisfied</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table> </div> <p data-bbox="608 719 1444 1256">Users' satisfaction with the green materials on the platform in terms of preparing them for green jobs reflected generally positive views, with some variation over time. At baseline, half of respondents (50%) reported being <i>very satisfied</i>, and 19% were <i>Satisfied</i>, indicating strong confidence in the platform's readiness support. In the update, the <i>very satisfied</i> group remained steady at 50%, while the <i>Satisfied</i> category increased slightly to 25%. The proportion of <i>Neutral</i> responses stayed consistent at 25%, and the small share of <i>Dissatisfied</i> users at baseline (6%) disappeared in the update. No respondents reported being <i>very dissatisfied</i> at either stage. Overall, these results suggested that the Green Portal effectively equipped users with knowledge and resources for green job readiness, maintaining solid satisfaction levels.</p>	Satisfaction Level	Update (%)	Baseline (%)	Very Satisfied	50%	50%	Satisfied	25%	19%	Neutral	25%	25%	Dissatisfied	0%	6%	Very Dissatisfied	0%	0%
Satisfaction Level	Update (%)	Baseline (%)																		
Very Satisfied	50%	50%																		
Satisfied	25%	19%																		
Neutral	25%	25%																		
Dissatisfied	0%	6%																		
Very Dissatisfied	0%	0%																		
<p data-bbox="165 1581 344 1693">O2.12 Measurable engagement</p>	<p data-bbox="389 1599 564 1671">Platform Engagement</p>	<p data-bbox="608 1294 1334 1328">Number of hours or sessions spent on the platform.</p> <p data-bbox="608 1346 1430 1406"><i>[How many minutes or sessions do you spend on the platform per month? Number]</i></p> <p data-bbox="608 1429 1444 1693">Based on the provided data about users' time spent on the platform per month, it appeared that engagement varies but generally included moderate to substantial usage. Some users spend shorter durations, such as 30 minutes or have multiple sessions under one hour (e.g., 5 sessions of less than 1 hour). Others engage for longer periods, ranging from 5 to 6 hours per month.</p> <p data-bbox="608 1715 1444 1980">This suggested that the Green Portal accommodated different user needs and availability, supporting both brief, focused visits as well as more extended exploration of materials. The variation in session length and frequency indicated flexibility in how users interact with the platform, which can be beneficial for catering to diverse working styles and information needs within the RES sector.</p>																		

Objectives	Indicators	Metric Question
	Material Utilisation	<p>Number of materials accessed compared to the total available</p> <p><i>[How many available materials do you typically access as a user of the platform per session? Number]</i></p> <p>Based on the data about how many materials users typically accessed per session on the Green Portal, responses showed a range of usage patterns:</p> <ul style="list-style-type: none"> • Some users tended to access a small number of materials per session, typically around 1 to 3 items. • Others reported accessing between 5 and 10 materials per session, indicating more extensive exploration. • A few responses mentioned <i>many</i> or <i>too much</i>, suggesting that some users browsed a large volume of content in each visit. • The variability in numbers, from as few as 1 or 2 to as many as 10 or more materials, highlighted diverse user engagement styles—some prefer focused, selective use, while others conduct broader research sessions. <p>Overall, this variety reflected the platform’s ability to serve both quick reference needs and deeper, more comprehensive information gathering, supporting different approaches to learning and working within the RES field.</p>

7.4.4 Summary of Green Portal Insights

The Green Portal demonstrated strong positive feedback across various dimensions related to its role as a knowledge platform for Renewable Energy Sources (RES). Users generally found it easy to locate materials and consider the language used suitable for their understanding, which contributes to high overall satisfaction with the platform. The content was widely seen as useful, relevant, and appropriate for different levels of expertise, with many users indicating that the materials were ample and clear.

Users also recognise the completeness of the platform’s resources, though some express a desire for deeper coverage in specific topics. The platform positively influenced users’ daily behaviours, with a majority indicating it is possible to make meaningful changes based on the information accessed. Long-term engagement intentions remained high, signalling sustained interest and value. Sharing of materials varied, with a tendency toward less frequent often sharing but more sometimes sharing, suggesting evolving patterns of information dissemination.

Most users reported improvements in their knowledge, skills, and awareness of global RES challenges due to the platform, although the extent of significant improvements in skills appeared to have softened over time. Involvement in international RES initiatives was split evenly, indicating room for growth in fostering active participation. Access to RES information has improved significantly for most users, though sharing with underserved communities has declined, highlighting an area for enhanced outreach.

Regarding the platform’s impact on the RES job market, users generally saw it as contributing somewhat to job creation, although fewer believed in a significant effect. Satisfaction with the platform’s ability to prepare users for green jobs remained high. User engagement with the platform varied in duration and depth, ranging from brief sessions to several hours monthly, and the number of materials accessed per session differs widely, reflecting diverse user needs and habits. Overall, the Green Portal was well-regarded as an effective, flexible, and impactful tool within the RES community, with opportunities for further growth in outreach and content depth.

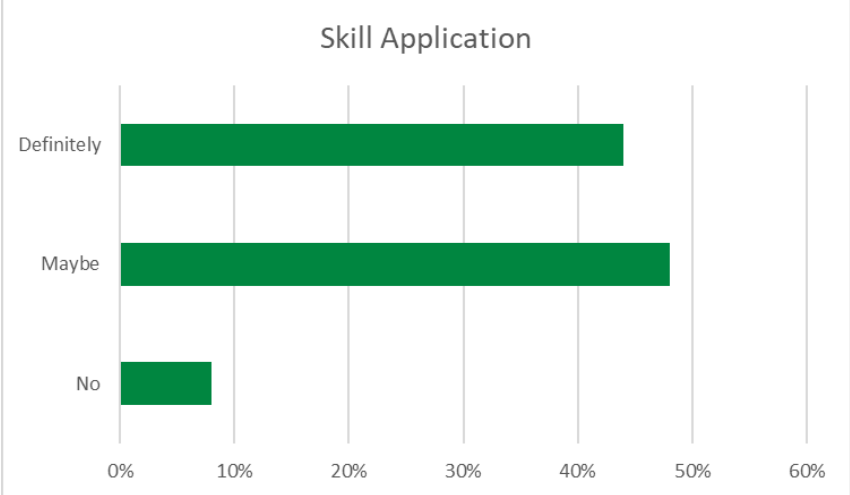
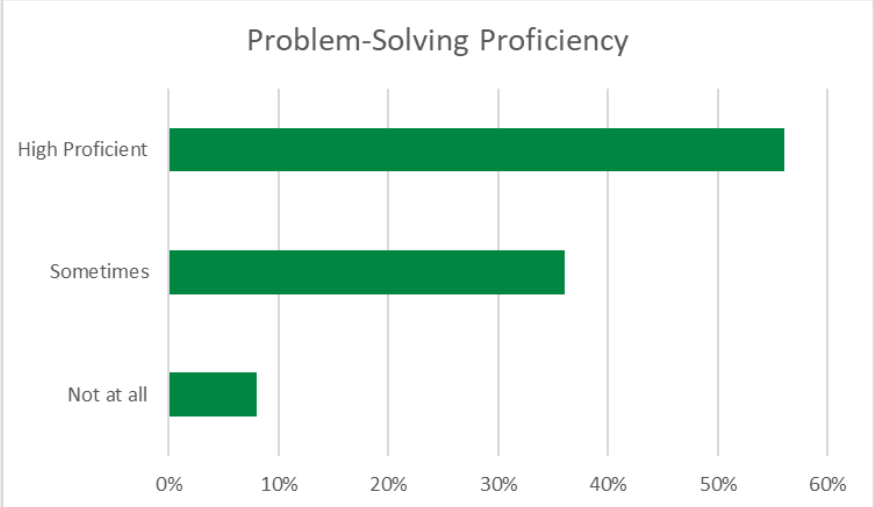
7.5 Vocational Educational Training

The following subsection presents and interprets the key results and insights gathered from the Vocational Educational Training (VET) Programme activities within the SKILLBILL project.

7.5.1 Analysis and interpretation of VET Insights

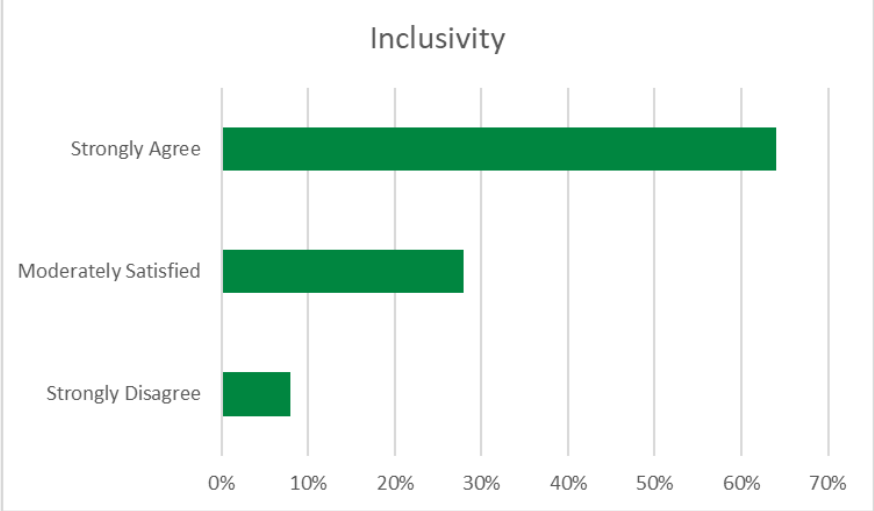
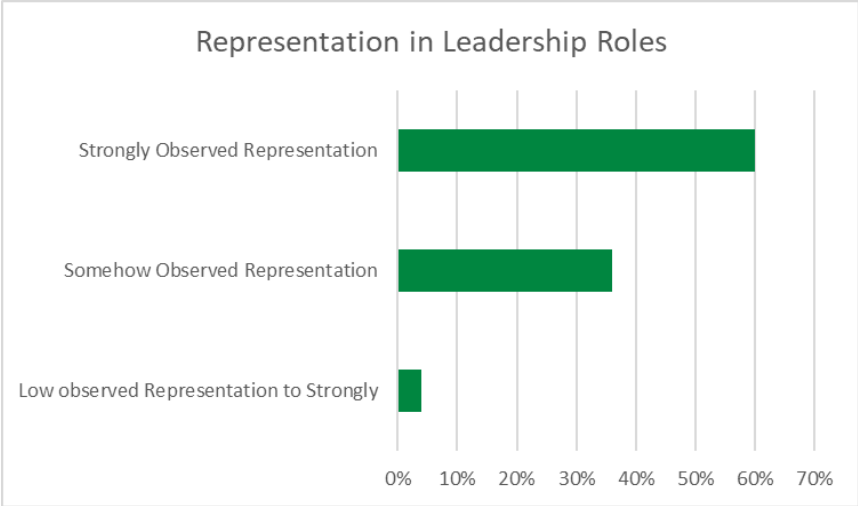
Table 21. Interpretation of Results for VET

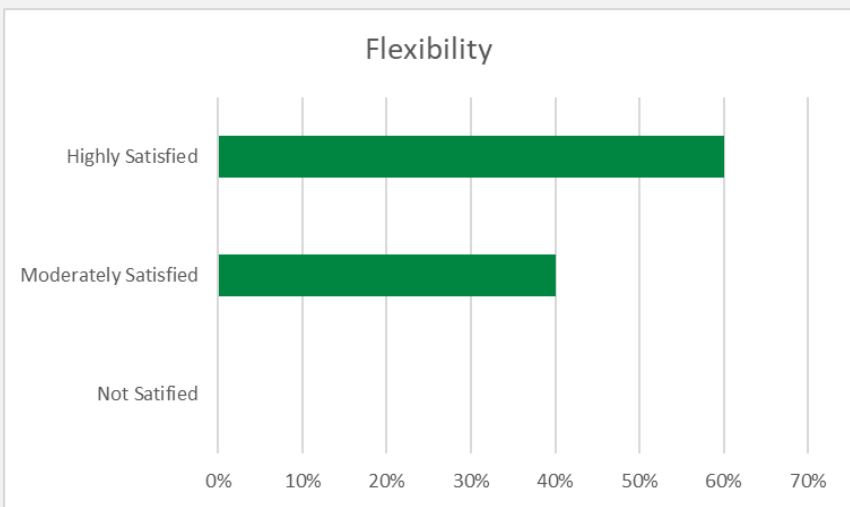
Objectives	Indicators	Question								
<p>O3.1. Increased skills (acquisition of skills)</p>	<p>Knowledge Gain</p>	<p>Percentage of increase in knowledge/skills post-programme. <i>[Did you acquire new knowledge and skills related to RES through this programme? Scale: no knowledge at all to Strongly]</i></p> <div data-bbox="555 1048 1423 1554"> <table border="1"> <caption>Knowledge Gain Data</caption> <thead> <tr> <th>Level of Knowledge Gain</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Strong Knowledge</td> <td>63%</td> </tr> <tr> <td>Moderate</td> <td>33%</td> </tr> <tr> <td>Not at all</td> <td>4%</td> </tr> </tbody> </table> </div> <p>The results of the social impact assessment indicated that the vocational education and training programme had a positive impact on participants' knowledge and skills related to Renewable Energy Sources (RES). A strong majority (63%) of respondents reported that they acquired <i>strong knowledge</i> through the programme, while an additional 33% indicated a <i>moderate</i> level of knowledge gained. Only a small percentage (4%) stated that they did <i>not acquire any</i> new knowledge or skills. These findings suggested that the programme was largely successful in enhancing participants' understanding and competencies in the field of RES.</p>	Level of Knowledge Gain	Percentage	Strong Knowledge	63%	Moderate	33%	Not at all	4%
Level of Knowledge Gain	Percentage									
Strong Knowledge	63%									
Moderate	33%									
Not at all	4%									

Objectives	Indicators	Question								
	Skill Application	<p>Percentage of students expressing an improvement in problem-solving proficiency in the field of RES</p> <p><i>[Are you applying skills and knowledge related to RES in your professional or academic life? Scale Not at All to Always]</i></p>  <table border="1"> <caption>Skill Application Data</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Definitely</td> <td>44%</td> </tr> <tr> <td>Maybe</td> <td>48%</td> </tr> <tr> <td>No</td> <td>8%</td> </tr> </tbody> </table> <p>The assessment shows that the majority of participants believe they were likely to apply the skills and knowledge gained from the vocational education and training (VET) programme in their professional lives. Specifically, 44% of respondents stated they would <i>definitely</i> apply what they learned, while another 48% answered <i>maybe</i>, indicating potential for practical use. Only 8% responded <i>no</i>, suggesting they do not plan to use the acquired knowledge. Overall, the results reflected a strong potential for the real-world impact of the VET programme in professional settings.</p>	Response	Percentage	Definitely	44%	Maybe	48%	No	8%
	Response	Percentage								
Definitely	44%									
Maybe	48%									
No	8%									
Problem-Solving Proficiency	<p>Percentage of students expressing an improvement in problem-solving proficiency in the field of RES</p> <p><i>[Do you feel proficient in solving real-world problems related to renewable energy sources (RES)? Scale: Not at All to Highly proficient]</i></p>  <table border="1"> <caption>Problem-Solving Proficiency Data</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>High Proficient</td> <td>56%</td> </tr> <tr> <td>Sometimes</td> <td>36%</td> </tr> <tr> <td>Not at all</td> <td>8%</td> </tr> </tbody> </table>	Response	Percentage	High Proficient	56%	Sometimes	36%	Not at all	8%	
Response	Percentage									
High Proficient	56%									
Sometimes	36%									
Not at all	8%									

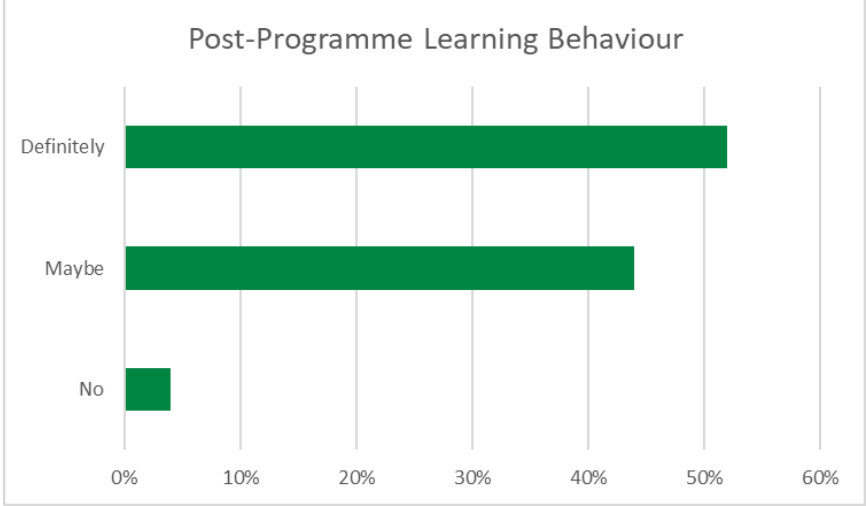
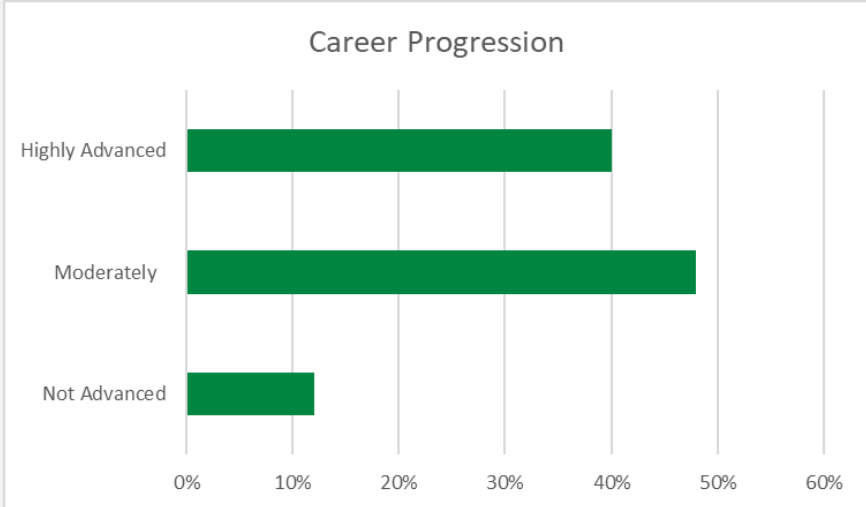
Objectives	Indicators	Question							
		<p>The findings suggested that the VET programme effectively increased participants' confidence and proficiency in solving real-world problems related to Renewable Energy Sources (RES). More than half (56%) of the respondents felt <i>highly proficient</i> after completing the programme, while 36% said they <i>sometimes</i> feel proficient. Only 8% stated they do <i>not feel proficient at all</i>. These results indicated that the training had a strong positive impact on participants' practical problem-solving abilities in the field of RES.</p>							
	<p>Perceived Learning Enhancement</p>	<p>Percentage of students who perceived an enhancement in their overall learning experience due to the integration of Extended/Augmented Reality (XR/AR) technology.</p> <p><i>[To what extent do you believe the integration of Extended / Augmented Reality (XR/AR) technology enhances the overall learning experience in this programme? Scale: Not at all to Extremely]</i></p> <div data-bbox="550 806 1436 1332" data-label="Figure"> <table border="1"> <caption>Perceived Learning Enhancement Data</caption> <thead> <tr> <th>Level of Enhancement</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Extremely</td> <td>48%</td> </tr> <tr> <td>Somehow</td> <td>40%</td> </tr> <tr> <td>Not at all</td> <td>12%</td> </tr> </tbody> </table> </div> <p>The responses indicated that the integration of XR/AR technology had a generally positive impact on participants' learning experience in the programme. Nearly half (48%) of the participants felt that XR/AR <i>extremely enhanced</i> their learning, while 40% believed it <i>somehow enhanced</i> it. A small portion (12%) felt that XR/AR did <i>not enhance</i> their experience at all. These results suggest that the use of XR/AR was largely effective (88%) and well-received, contributing positively to the overall educational impact of the programme.</p>	Level of Enhancement	Percentage	Extremely	48%	Somehow	40%	Not at all
Level of Enhancement	Percentage								
Extremely	48%								
Somehow	40%								
Not at all	12%								
<p>O3.3. Maximisation of talent</p>	<p>Talent Development</p>	<p>Percentage of students who felt their talents had been maximised.</p> <p><i>[Do you believe that an education programme in RES will enhance your talent and potential in the sector? Scale: Not at All to Completely]</i></p>							

Objectives	Indicators	Question								
		<div data-bbox="552 226 1401 719"> <table border="1"> <caption>Talent Development</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Completely</td> <td>48%</td> </tr> <tr> <td>Somehow</td> <td>44%</td> </tr> <tr> <td>Not at all</td> <td>8%</td> </tr> </tbody> </table> </div> <p data-bbox="552 741 1433 1048">The results showed that nearly half of the participants (48%) felt that their <i>talents and potential were completely maximised</i> during the programme, while 44% believed this was <i>somewhat</i> the case. Only 8% felt that their potential was <i>not maximised at all</i>. These responses suggested that the programme was successful in helping most participants grow and make good use of their abilities, contributing positively to their personal and professional development.</p>	Response	Percentage	Completely	48%	Somehow	44%	Not at all	8%
		Response	Percentage							
Completely	48%									
Somehow	44%									
Not at all	8%									
<p data-bbox="357 1525 496 1599">Innovation Output</p>	<p data-bbox="552 1088 1433 1162">Percentage of students contributing to innovative projects or outputs as a result of the programme.</p> <p data-bbox="552 1178 1433 1240"><i>[Are you contributing to innovative projects or outputs in the field of renewable energy sources (RES)? Scale: Not at all to Always]</i></p> <div data-bbox="552 1256 1417 1760"> <table border="1"> <caption>Innovation Output?</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Always</td> <td>36%</td> </tr> <tr> <td>Sometimes</td> <td>64%</td> </tr> <tr> <td>Not at all</td> <td>0%</td> </tr> </tbody> </table> </div> <p data-bbox="552 1787 1433 2049">The responses indicated that a majority of participants saw themselves contributing to innovation in the field of Renewable Energy Sources (RES) after completing the programme. Specifically, 64% said they <i>might</i> actively contribute to innovative projects, while 36% stated they <i>definitely will</i>. Importantly, <i>none</i> of the participants said they would <i>not</i> contribute at all. These results reflected a strong sense of motivation and potential among</p>	Response	Percentage	Always	36%	Sometimes	64%	Not at all	0%	
Response	Percentage									
Always	36%									
Sometimes	64%									
Not at all	0%									

Objectives	Indicators	Question
<p>O3.4 Equal access to education</p>		<p>participants to apply their new skills in meaningful, forward-thinking ways within the RES sector.</p>
	<p>Inclusivity</p>	<p>Percentage of students from diverse backgrounds.</p> <p><i>[Do you agree that the programme provides equal access and opportunities for students from various backgrounds? Scale: Strongly Disagree to Strongly Agree]</i></p>  <p>The results showed that the majority of participants (64%) <i>strongly agree</i> that the programme provided equal access and opportunities for students from diverse backgrounds. Another 28% were <i>moderately satisfied</i>, suggesting they generally felt inclusion was achieved. Only 8% <i>strongly disagreed</i>, indicating a perception of unequal access by a small minority. Overall, the findings suggested that the programme was largely successful in promoting equity and inclusiveness among its participants.</p>
	<p>Re- presentation in Leadership Roles</p>	<p>Percentage of students from diverse backgrounds in leadership or influential roles within the programme.</p> <p><i>[Do you observe representation from individuals of diverse backgrounds in leadership or influential roles within the programme? Scale: Low observed Representation to Strongly Observed Representation]</i></p> 

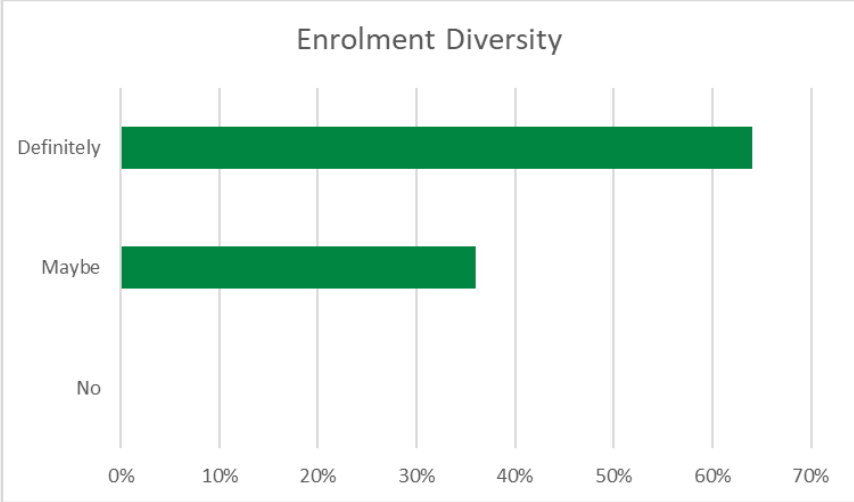
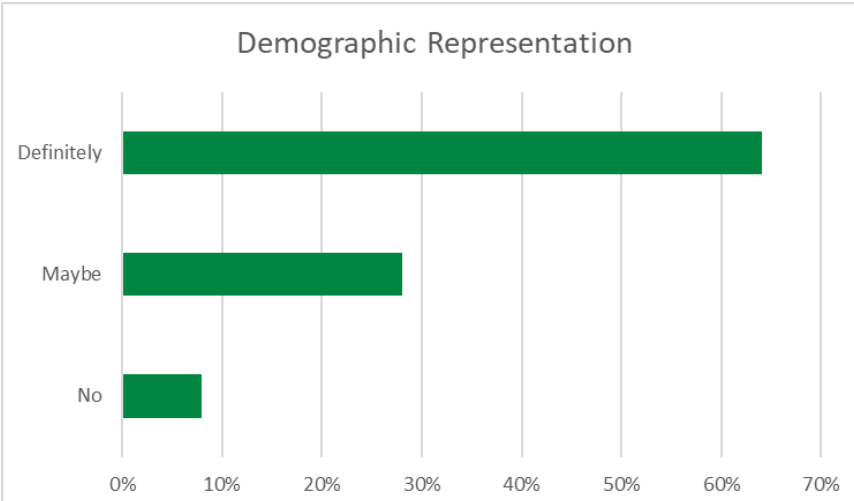
Objectives	Indicators	Question								
		<p>The findings suggested that most participants observed a <i>strong representation</i> of individuals from diverse backgrounds in leadership or influential roles within the programme. Specifically, 60% of respondents reported <i>strongly observed representation</i>, while 36% noted <i>some</i> level of representation. Only 4% felt there was <i>low representation</i>. These results indicated that the programme made significant efforts to ensure diversity and inclusion in key roles, which was recognised by the majority of participants.</p>								
	Flexibility	<p>Percentage of students satisfied with the flexibility of courses <i>[Are you satisfied with the flexibility of the VET programme? Scale: Not Satisfied to Highly Satisfied]</i></p>  <table border="1" data-bbox="550 694 1404 1198"> <caption>Flexibility Satisfaction Data</caption> <thead> <tr> <th>Satisfaction Level</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Highly Satisfied</td> <td>60%</td> </tr> <tr> <td>Moderately Satisfied</td> <td>40%</td> </tr> <tr> <td>Not Satisfied</td> <td>0%</td> </tr> </tbody> </table> <p>The results showed a high level of satisfaction with the flexibility of the VET programme. A majority of participants (60%) reported being <i>highly satisfied</i>, while 40% were <i>moderately satisfied</i>. Notably, <i>no participants</i> expressed dissatisfaction. This suggested that the programme was well-structured in terms of flexibility, effectively meeting the diverse needs and schedules of its participants.</p>	Satisfaction Level	Percentage	Highly Satisfied	60%	Moderately Satisfied	40%	Not Satisfied	0%
	Satisfaction Level	Percentage								
Highly Satisfied	60%									
Moderately Satisfied	40%									
Not Satisfied	0%									
Environment	<p>Percentage of students satisfied with the environmental aspects of the programme <i>[Do you feel that the course attributes to environmental considerations? Scale: No to very much to indeed]</i></p>									

Objectives	Indicators	Question								
		<div data-bbox="550 224 1364 694"> <table border="1"> <caption>Environment</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Indeed</td> <td>84%</td> </tr> <tr> <td>Somehow</td> <td>16%</td> </tr> <tr> <td>Not very much</td> <td>0%</td> </tr> </tbody> </table> </div> <p data-bbox="550 716 1436 1019">The results clearly indicated that the VET programme placed a strong emphasis on environmental considerations. A large majority of participants (84%) responded <i>indeed</i>, confirming that they felt environmental issues were meaningfully addressed. Another 16% felt this was <i>somewhat</i> the case, while <i>no participants</i> responded negatively. This highlighted the programme's clear commitment to sustainability and its successful integration of environmental topics into the training.</p>	Response	Percentage	Indeed	84%	Somehow	16%	Not very much	0%
Response	Percentage									
Indeed	84%									
Somehow	16%									
Not very much	0%									
<p data-bbox="159 1489 335 1601">O3.6 Continuous learning</p>	<p data-bbox="351 1489 518 1601">Willingness to Continue Learning</p>	<p data-bbox="550 1064 1300 1097">Percentage of students interested in further learning.</p> <p data-bbox="550 1108 1436 1176"><i>[Are you interested in pursuing further education or training in the field of RES? Scale: No to Definitely]</i></p> <div data-bbox="550 1198 1420 1702"> <table border="1"> <caption>Willingness to Continue Learning</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Definitely</td> <td>56%</td> </tr> <tr> <td>Maybe</td> <td>36%</td> </tr> <tr> <td>No</td> <td>8%</td> </tr> </tbody> </table> </div> <p data-bbox="550 1724 1436 2027">The responses showed a strong interest among participants in continuing their education or training in the field of Renewable Energy Sources (RES). More than half (56%) said they would <i>definitely</i> pursue further learning, while 36% answered <i>maybe</i>, indicating openness to the idea. Only 8% stated they are <i>not</i> interested. Overall, these results suggested that the programme successfully inspired many participants to deepen their knowledge and skills in RES.</p>	Response	Percentage	Definitely	56%	Maybe	36%	No	8%
Response	Percentage									
Definitely	56%									
Maybe	36%									
No	8%									

Objectives	Indicators	Question								
	Post-Programme Learning Behaviour	<p>Percentage of students engaging in post-programme learning activities.</p> <p><i>[After completing the Course, will you actively seek out additional learning opportunities or programmes related to renewable energy sources (RES) and the skills? Scale: Not at All to Definitely]</i></p>  <table border="1"> <caption>Post-Programme Learning Behaviour</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Definitely</td> <td>52%</td> </tr> <tr> <td>Maybe</td> <td>44%</td> </tr> <tr> <td>No</td> <td>4%</td> </tr> </tbody> </table> <p>The results indicated that most participants were motivated to continue learning after completing the VET programme. Specifically, 52% said they will <i>definitely</i> seek out additional learning opportunities related to renewable energy sources (RES) and the skills they gained, while 44% answered <i>maybe</i>, showing a strong potential interest. Only a small portion (4%) said they would <i>not</i> pursue further learning. This suggested the programme had encouraged ongoing professional development and lifelong learning in the RES field.</p>	Response	Percentage	Definitely	52%	Maybe	44%	No	4%
Response	Percentage									
Definitely	52%									
Maybe	44%									
No	4%									
O3.7 Career path (workforce enhancement)	Career Progression	<p>Percentage of students who had advanced in their careers.</p> <p><i>[Do you believe that your career has been advanced or improved by completing the Course? Scale: Not Advanced to Highly Advanced]</i></p>  <table border="1"> <caption>Career Progression</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Highly Advanced</td> <td>40%</td> </tr> <tr> <td>Moderately</td> <td>48%</td> </tr> <tr> <td>Not Advanced</td> <td>12%</td> </tr> </tbody> </table>	Response	Percentage	Highly Advanced	40%	Moderately	48%	Not Advanced	12%
Response	Percentage									
Highly Advanced	40%									
Moderately	48%									
Not Advanced	12%									

Objectives	Indicators	Question								
		<p>The responses showed that many participants believe the VET programme positively impacted their career advancement. Specifically, 40% feel their career would be <i>highly advanced</i> as a result of completing the programme, and 48% believe it would be <i>moderately advanced</i>. Only 12% think their career would <i>not</i> advance. Overall, these results suggested that the programme was seen as valuable for professional growth and improving career prospects.</p>								
	<p>Promotion Opportunities</p>	<p>Percentage of students who had been offered or received promotions in their current jobs since completing the programme.</p> <p><i>[Have you been offered or received any promotions or career advancement opportunities in your current job since completing the programme? Scale: No to Maybe]</i></p> <div data-bbox="552 808 1417 1317" data-label="Figure"> <table border="1"> <caption>Promotion Opportunities</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Definitely</td> <td>28%</td> </tr> <tr> <td>Maybe</td> <td>44%</td> </tr> <tr> <td>No</td> <td>28%</td> </tr> </tbody> </table> </div> <p>The results showed mixed expectations regarding career advancement opportunities after completing the programme. About 28% of participants believed they <i>definitely</i> received promotions or advancement, while 44% were uncertain and answered <i>maybe</i>. Meanwhile, 28% did not expect to receive any promotions. This suggested that while some participants felt optimistic about career growth, others were less certain or did not anticipate immediate changes in their current jobs.</p>	Response	Percentage	Definitely	28%	Maybe	44%	No	28%
	Response	Percentage								
Definitely	28%									
Maybe	44%									
No	28%									
<p>Connection with real market</p>	<p>Percentage of students & Professors/trainers that were satisfied by the relation of VET's content with the real-life needs</p> <p><i>[How satisfied are you by the relation of courses content to real-life/real market needs? Scale: Very dissatisfied to Very satisfied]</i></p>									

Objectives	Indicators	Question								
		<p style="text-align: center;">Connection with real market</p> <table border="1"> <caption>Connection with real market - Satisfaction Levels</caption> <thead> <tr> <th>Satisfaction Level</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Highly Satisfied</td> <td>46%</td> </tr> <tr> <td>Moderately Satisfied</td> <td>50%</td> </tr> <tr> <td>Not Satisfied</td> <td>4%</td> </tr> </tbody> </table> <p>The responses indicated a generally high level of satisfaction with how well the VET programme content related to real-life and market needs. Nearly half of the participants (46%) were highly satisfied, and 50% were moderately satisfied. Only a small portion (4%) expressed dissatisfaction. These results suggested that the programme effectively aligned its training with practical, real-world demands.</p>	Satisfaction Level	Percentage	Highly Satisfied	46%	Moderately Satisfied	50%	Not Satisfied	4%
Satisfaction Level	Percentage									
Highly Satisfied	46%									
Moderately Satisfied	50%									
Not Satisfied	4%									
<p>O3.8 New jobs acquisition, against unemployment</p>	<p>Employment Rate</p>	<p>Percentage of previously unemployed students who found a job.</p> <p><i>[Do you feel that this Programme will play a significant role in getting employed? Scale: No to Definitely]</i></p> <table border="1"> <caption>Employment Rate - Response Distribution</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Definitely</td> <td>40%</td> </tr> <tr> <td>Maybe</td> <td>44%</td> </tr> <tr> <td>No</td> <td>16%</td> </tr> </tbody> </table> <p>The results showed that many participants believed the VET programme helped them find employment. Specifically, 40% felt the programme <i>definitely</i> played a significant role in getting employed, while 44% answered <i>maybe</i>, showing cautious optimism. Meanwhile, 16% did not think it had a significant impact. Overall, these findings suggested that the programme was viewed as a valuable asset for improving employment prospects, though some participants remained uncertain.</p>	Response	Percentage	Definitely	40%	Maybe	44%	No	16%
Response	Percentage									
Definitely	40%									
Maybe	44%									
No	16%									

Objectives	Indicators	Question
<p>O3.9. Enrolment (total rates/gender/age)</p>	<p>Enrolment Diversity</p>	<p>Percentage of students from different genders and age groups. <i>[Do you agree that the programme is accessible to individuals of all genders and age groups? Scale: Strongly Disagree to Strongly Agree]</i></p>  <p>The results indicated that most participants agreed the VET programme was accessible to individuals of all genders and age groups. Specifically, 64% <i>definitely</i> agreed, while 36% answered <i>maybe</i>, showing some uncertainty. No participants disagreed. This suggested that the programme was generally seen as inclusive and welcoming to diverse participants across different genders and ages.</p>
	<p>Demographic Representation</p>	<p>Percentage distribution of students across different sexes and age groups in the programme. <i>[Do you believe the programme effectively caters to a diverse student population in terms of gender and age? Scale: No to Definitely]</i></p>  <p>The responses showed that the majority of participants believed the programme effectively catered to a diverse student population in terms of gender and age. Specifically, 64% <i>definitely</i> agreed with this, while 28% answered <i>maybe</i>, indicating some uncertainty. Only</p>

Objectives	Indicators	Question								
		<p>8% disagreed. Overall, these results suggested that the programme was generally successful in addressing the needs of a diverse group of students.</p>								
	<p>Accessibility Perception</p>	<p>Percentage of students who perceive the programme as accessible regardless of background.</p> <p><i>[Do you agree that the programme is accessible to individuals from various backgrounds, considering factors such as socioeconomic status, educational background, and cultural differences? Scale: No to Definitely]</i></p> <div data-bbox="552 577 1401 1070"> <table border="1"> <caption>Accessibility Perception Data</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Definitely</td> <td>60%</td> </tr> <tr> <td>Maybe</td> <td>36%</td> </tr> <tr> <td>No</td> <td>4%</td> </tr> </tbody> </table> </div> <p>The results indicated that most participants agreed that the programme was accessible to individuals from various backgrounds, including socioeconomic status, educational background, and cultural differences. Specifically, 60% <i>definitely</i> agreed, and 36% answered <i>maybe</i>, showing some uncertainty. Only 4% disagreed. This suggested the programme was generally seen as inclusive and accessible to a wide range of learners.</p>	Response	Percentage	Definitely	60%	Maybe	36%	No	4%
Response	Percentage									
Definitely	60%									
Maybe	36%									
No	4%									
<p>O3.10 Collaboration between organisations</p>	<p>Collaboration Effectiveness</p>	<p>The measure of collaboration effectiveness among universities</p> <p><i>[Has the collaboration between VET organisations enhanced the quality of the VET Programme? Scale: Not Enhanced to Highly Enhanced]</i></p> <div data-bbox="552 1532 1430 2047"> <table border="1"> <caption>Collaboration Effectiveness Data</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Highly Enhanced</td> <td>68%</td> </tr> <tr> <td>Moderately Enhanced</td> <td>28%</td> </tr> <tr> <td>Not Enhanced</td> <td>4%</td> </tr> </tbody> </table> </div>	Response	Percentage	Highly Enhanced	68%	Moderately Enhanced	28%	Not Enhanced	4%
Response	Percentage									
Highly Enhanced	68%									
Moderately Enhanced	28%									
Not Enhanced	4%									

Objectives	Indicators	Question								
		<p>The results showed that collaboration between VET organisations had largely enhanced the quality of the programme. A strong majority of participants (68%) believed the quality was <i>highly enhanced</i>, while 28% felt it was <i>moderately enhanced</i>. Only 4% thought the collaboration did <i>not</i> improve the programme. These findings suggested that partnerships and cooperation between organisations played an important role in strengthening the training offered.</p> <p><i>[Do you think the collaboration between VET organisations would enhance the impact of the programme? Scale: Not Enhanced to Highly Enhanced]</i></p> <div data-bbox="552 685 1441 1205" style="border: 1px solid #ccc; padding: 10px;"> <p style="text-align: center;">Collaboration Effectiveness</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <caption>Collaboration Effectiveness Data</caption> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Highly Enhanced</td> <td>56%</td> </tr> <tr> <td>Moderately Enhanced</td> <td>44%</td> </tr> <tr> <td>Not Enhanced</td> <td>0%</td> </tr> </tbody> </table> </div> <p>The responses indicated strong confidence that collaboration between VET organisations would enhance the impact of the programme. Specifically, 56% of participants believe collaboration would <i>highly enhance</i> the programme’s impact, while 44% thought it would <i>moderately enhance</i> it. No one felt that collaboration would <i>enhance</i> the impact. These results highlighted the importance of cooperation between organisations to maximise the programme’s effectiveness and reach.</p>	Category	Percentage	Highly Enhanced	56%	Moderately Enhanced	44%	Not Enhanced	0%
	Category	Percentage								
Highly Enhanced	56%									
Moderately Enhanced	44%									
Not Enhanced	0%									
Knowledge Exchange Effectiveness	<p>Percentage of students who believed the collaboration between VET organisations has enhanced knowledge exchange.</p> <p><i>[Do you think the collaboration between organisations has effectively facilitated knowledge in the programme? Scale Not at All to Extremely]</i></p>									

Objectives	Indicators	Question								
		<div data-bbox="552 230 1425 734" data-label="Figure"> <table border="1"> <caption>Knowledge Exchange Effectiveness</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Definitely</td> <td>60%</td> </tr> <tr> <td>Somehow</td> <td>40%</td> </tr> <tr> <td>Not at all</td> <td>0%</td> </tr> </tbody> </table> </div> <p data-bbox="552 757 1425 1025">The results showed that most participants believed collaboration between VET organisations had effectively facilitated knowledge sharing within the programme. Specifically, 60% responded <i>definitely</i>, and 40% answered <i>somehow</i>. No participants felt that collaboration did <i>not</i> facilitate knowledge at all. This suggested that the partnership between organisations played a key role in enhancing the learning experience and knowledge transfer.</p> <p data-bbox="552 1099 1425 1160"><i>[Do you think the collaboration between VET Organisations effectively enriched your learning experience in the programme? Scale: Not at All to Extremely]</i></p>	Response	Percentage	Definitely	60%	Somehow	40%	Not at all	0%
		Response	Percentage							
Definitely	60%									
Somehow	40%									
Not at all	0%									
<div data-bbox="552 1182 1393 1664" data-label="Figure"> <table border="1"> <caption>Knowledge Exchange Effectiveness</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Definitely</td> <td>68%</td> </tr> <tr> <td>Somehow</td> <td>32%</td> </tr> <tr> <td>Not at all</td> <td>0%</td> </tr> </tbody> </table> </div> <p data-bbox="552 1697 1425 1966">The responses indicated that collaboration between VET organisations had significantly enriched participants' learning experiences. A strong majority (68%) felt it <i>definitely</i> enriched their learning, while 32% believed it <i>somehow</i> did. No participants felt that collaboration did <i>not</i> enrich their experience. These findings highlighted the positive role of organisational collaboration in enhancing the overall quality of the programme.</p>	Response	Percentage	Definitely	68%	Somehow	32%	Not at all	0%		
Response	Percentage									
Definitely	68%									
Somehow	32%									
Not at all	0%									

7.5.2 Summary of VET Insights

The VET programme has been successful in helping participants gain strong knowledge and skills related to renewable energy sources. Many respondents reported feeling more proficient in solving real-world problems after completing the training, indicating the programme's practical effectiveness.

Participants also showed high motivation to apply the skills and knowledge they acquired in their professional lives. A significant number expressed interest in continuing their education and pursuing further training in the field, demonstrating the programme's ability to inspire ongoing learning and development.

Innovative tools like Virtual Reality were found to significantly enhance (88%) the learning experience, making the training more engaging and effective for many learners.

The programme was widely perceived as inclusive and accessible, catering well to individuals of different genders, ages, socioeconomic backgrounds, and cultures. There was also strong recognition of diverse representation in leadership and influential roles, reflecting a commitment to equity and diversity.

In terms of career development, most participants expect the programme to support their advancement, though expectations about receiving promotions are more varied. Overall, the content was considered relevant and aligned with real-life and market needs, ensuring that the skills taught are practical and valuable.

Collaboration between VET organisations was seen as a major factor in enhancing the quality of the programme, facilitating knowledge sharing, and enriching the overall learning experience. Additionally, the programme placed a clear emphasis on environmental sustainability, which was appreciated by the participants.

While some uncertainty remained regarding direct career outcomes such as promotions, the overall social impact of the VET programme was positive, reflecting successful knowledge transfer, inclusivity, motivation for professional growth, and strong organisational cooperation.

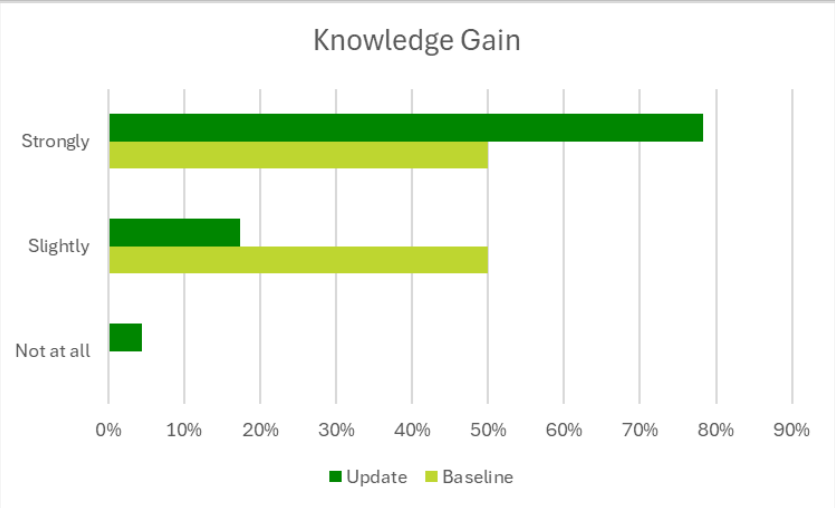
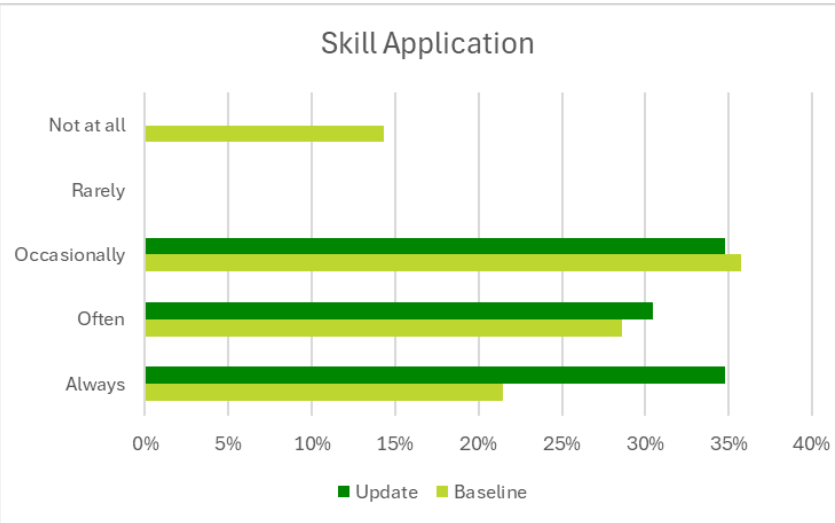
7.6 European Specialisation School

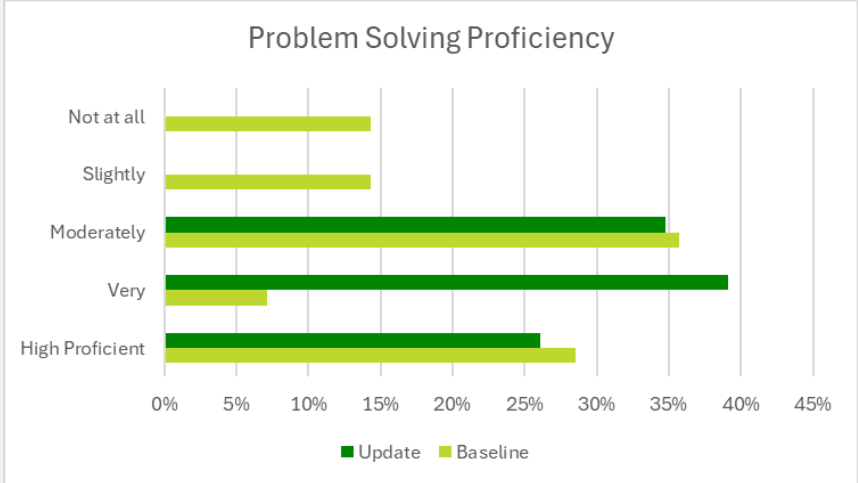
The following subsection presents and interprets the key results and insights gathered from the European Specialisation School (ESP) activities within the SKILLBILL project.

7.6.1 Analysis and interpretation of ESP Insights

Table 22. Interpretation of Results for ESP

Objectives	Indicators	Question/Analysis
O3.1. Increased skills	Knowledge Gain	Percentage of increase in knowledge/skills post-programme. <i>[Do you have knowledge and skills related to RES? Scale: no knowledge at all to Strongly]</i>

Objectives	Indicators	Question/Analysis																	
<p>(acquisition of skills)</p>		<p style="text-align: center;">Knowledge Gain</p>  <table border="1"> <caption>Knowledge Gain Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly</td> <td>78</td> <td>50</td> </tr> <tr> <td>Slightly</td> <td>17</td> <td>50</td> </tr> <tr> <td>Not at all</td> <td>4</td> <td>0</td> </tr> </tbody> </table> <p>The comparison between baseline and update results showed a significant improvement in participants' knowledge and skills related to Renewable Energy Sources (RES). Initially, 50% of respondents rated their knowledge as <i>slightly</i> and 50% as <i>strongly</i>, with no one selecting <i>not at all</i>. After the intervention (e.g., participation in the ESP), the proportion of those who <i>strongly</i> identified with having RES knowledge increased substantially from 50% to 78%. Meanwhile, those reporting only <i>slight</i> knowledge dropped from 50% to 17%, and one participant (4%) reported having <i>no</i> knowledge at all. Overall, the shift suggested that the programme had a positive impact on enhancing participants' competencies in renewable energy, with a marked increase in strong knowledge and a reduction in low or moderate awareness.</p>	Category	Update (%)	Baseline (%)	Strongly	78	50	Slightly	17	50	Not at all	4	0					
	Category	Update (%)	Baseline (%)																
Strongly	78	50																	
Slightly	17	50																	
Not at all	4	0																	
<p>Skill Application</p>	<p>Percentage of students expressing an improvement in problem-solving proficiency in the field of RES</p> <p><i>[Are you applying skills and knowledge related to RES in your professional or academic life? Scale Not at All to Always]</i></p> <p style="text-align: center;">Skill Application</p>  <table border="1"> <caption>Skill Application Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Not at all</td> <td>0</td> <td>14</td> </tr> <tr> <td>Rarely</td> <td>0</td> <td>0</td> </tr> <tr> <td>Occasionally</td> <td>35</td> <td>36</td> </tr> <tr> <td>Often</td> <td>30</td> <td>28</td> </tr> <tr> <td>Always</td> <td>35</td> <td>21</td> </tr> </tbody> </table> <p>The data revealed a positive shift in the application of Renewable Energy Sources (RES) knowledge and skills in participants'</p>	Category	Update (%)	Baseline (%)	Not at all	0	14	Rarely	0	0	Occasionally	35	36	Often	30	28	Always	35	21
Category	Update (%)	Baseline (%)																	
Not at all	0	14																	
Rarely	0	0																	
Occasionally	35	36																	
Often	30	28																	
Always	35	21																	

Objectives	Indicators	Question/Analysis																	
		<p>professional or academic lives. At baseline, 14% of respondents indicated they were <i>not at all</i> applying RES knowledge, but this dropped to 0% in the follow-up, showing full engagement at some level. The percentage of participants who <i>always</i> apply RES knowledge increased from 21% to 35%, and those who <i>often</i> do so remained relatively stable (29% to 30%). While the proportion of those applying their knowledge <i>occasionally</i> stayed consistent (36% to 35%), the complete absence of <i>rarely</i> and <i>not at all</i> responses in the update suggested an overall improvement. These findings indicated that, following the programme, more participants were actively integrating RES knowledge into their work or studies, demonstrating a positive social and professional impact.</p>																	
	<p>Problem-Solving Proficiency</p>	<p>Percentage of students expressing an improvement in problem-solving proficiency in the field of RES</p> <p><i>[Do you feel proficient in solving real-world problems related to renewable energy sources (RES)? Scale: Not at All to Highly proficient]</i></p>  <table border="1"> <caption>Problem Solving Proficiency Data</caption> <thead> <tr> <th>Proficiency Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Not at all</td> <td>0%</td> <td>14%</td> </tr> <tr> <td>Slightly</td> <td>0%</td> <td>14%</td> </tr> <tr> <td>Moderately</td> <td>36%</td> <td>35%</td> </tr> <tr> <td>Very</td> <td>39%</td> <td>7%</td> </tr> <tr> <td>High Proficient</td> <td>26%</td> <td>29%</td> </tr> </tbody> </table> <p>The results showed a clear improvement in participants' confidence and perceived proficiency in addressing real-world problems related to Renewable Energy Sources (RES). Initially, 28% of respondents rated themselves as either <i>slightly</i> or <i>not at all</i> proficient. After the programme, these categories dropped to 0%, indicating that all participants felt at least <i>moderately</i> capable. The percentage of those who felt <i>very proficient</i> rose sharply from 7% to 39%, and those identifying as <i>moderately proficient</i> remained stable (36% to 35%). Although the proportion of <i>highly Proficient</i> responses slightly decreased from 29% to 26%, this was likely due to a shift of some participants into the <i>very</i> category. Overall, the data suggested a strong positive impact of the programme in building participants' ability to tackle real-world RES challenges with greater confidence and skill.</p>	Proficiency Level	Update (%)	Baseline (%)	Not at all	0%	14%	Slightly	0%	14%	Moderately	36%	35%	Very	39%	7%	High Proficient	26%
Proficiency Level	Update (%)	Baseline (%)																	
Not at all	0%	14%																	
Slightly	0%	14%																	
Moderately	36%	35%																	
Very	39%	7%																	
High Proficient	26%	29%																	
<p>O3.2. Innovation</p>	<p>Use and Satisfaction</p>	<p>Percentage of students using XR/AR and their satisfaction level.</p>																	

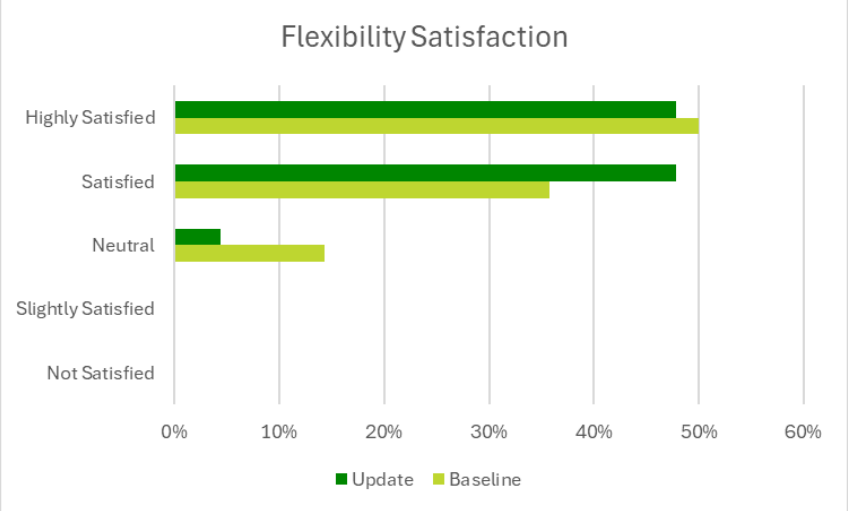
Objectives	Indicators	Question/Analysis									
<p>method, use of Virtual and Augmented Reality in educational programme</p>	<p>with XR/AR Technology</p>	<p><i>[Have you used XR/AR technology during learning programme? If yes, how satisfied were you with its effectiveness in enhancing your learning experience? Scale: Not Satisfied to Highly Satisfied]</i></p> <div data-bbox="552 338 1430 831" style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p style="text-align: center;">Use and Satisfaction with VR Technology</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <caption>Data for Use and Satisfaction with VR Technology</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>No</td> <td>57</td> <td>57</td> </tr> <tr> <td>Yes</td> <td>43</td> <td>43</td> </tr> </tbody> </table> </div> <p>The data showed that there was no change in the use of Extended/Augmented Reality (XR/AR) technology during the learning programme between the baseline and the update. At both points, 43% of respondents reported <i>having used</i> XR/AR, while 57% <i>had not</i>.</p> <p>Among the participants who used XR/AR during the learning programme, the majority found it to be a positive experience. One-third (33%) reported being <i>highly satisfied</i>, while another 25% were <i>satisfied</i>. A smaller portion (25%) felt <i>neutral</i>, and only 17% were <i>not satisfied</i> with its effectiveness. These results suggest that while XR/AR was not used by all participants, those who did use it generally found it beneficial in enhancing their learning experience. This indicates potential value in expanding the use of XR/AR tools, provided their implementation is further improved to increase satisfaction levels.</p>	Response	Update (%)	Baseline (%)	No	57	57	Yes	43	43
	Response	Update (%)	Baseline (%)								
No	57	57									
Yes	43	43									
<p>Perceived Learning Enhancement</p>	<p>Percentage of students who perceived an enhancement in their overall learning experience due to the integration of XR/AR technology.</p> <p><i>[To what extent do you believe the integration of Extended/Augmented Reality (XR/AR) technology enhances the overall learning experience in this programme? Scale: Not at all to Extremely]</i></p>										

Objectives	Indicators	Question/Analysis																		
		<div data-bbox="555 226 1409 752" data-label="Figure"> <table border="1"> <caption>Perceived Learning Enhancement Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Extremely</td> <td>13</td> <td>14</td> </tr> <tr> <td>Very Much</td> <td>13</td> <td>43</td> </tr> <tr> <td>Moderately</td> <td>30</td> <td>43</td> </tr> <tr> <td>Slightly</td> <td>0</td> <td>0</td> </tr> <tr> <td>Not at all</td> <td>43</td> <td>0</td> </tr> </tbody> </table> </div> <p data-bbox="555 779 1441 1160">The data shows a noticeable decline in participants' belief that XR/AR technology enhances the overall learning experience. At baseline, a majority held a positive view: 43% believed it enhanced learning <i>very much</i>, and 14% <i>extremely</i>. However, after the programme, only 13% remained in each of those two categories. The belief that XR/AR enhanced learning decreased by approximately 31% from the baseline. 43% of participants stated that XR/AR did <i>not at all</i> enhance their learning, compared to none at baseline. The percentage of those selecting <i>moderately</i> decreased slightly from 43% to 30%.</p> <p data-bbox="555 1182 1441 1444">This shift suggested that after experiencing the actual integration of XR/AR in the programme, participants became more critical or less convinced of its value. It may reflect limitations in how XR/AR was implemented, such as quality, relevance, or accessibility. These findings highlight the need to reassess how XR/AR is used in the programme to better align with learners' expectations and enhance its perceived effectiveness.</p>	Category	Update (%)	Baseline (%)	Extremely	13	14	Very Much	13	43	Moderately	30	43	Slightly	0	0	Not at all	43	0
Category	Update (%)	Baseline (%)																		
Extremely	13	14																		
Very Much	13	43																		
Moderately	30	43																		
Slightly	0	0																		
Not at all	43	0																		
<p>O3.3. Maximisation of talent</p>	<p>Talent Development</p>	<p>Percentage of students who felt their talents had been maximised.</p> <p><i>[Do you believe that an education programme in RES will enhance your talent and potential in the sector? Scale: Not at All to Completely]</i></p>																		

Objectives	Indicators	Question/Analysis																		
		<div data-bbox="552 226 1414 741" style="text-align: center;"> <p>Talent Development</p> <table border="1" style="margin: 0 auto;"> <caption>Talent Development Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Completely</td> <td>17</td> <td>71</td> </tr> <tr> <td>Very Much</td> <td>43</td> <td>14</td> </tr> <tr> <td>Somewhat</td> <td>35</td> <td>14</td> </tr> <tr> <td>Slightly</td> <td>4</td> <td>0</td> </tr> <tr> <td>Not at all</td> <td>0</td> <td>0</td> </tr> </tbody> </table> </div> <p>The results revealed a shift in how participants perceive the impact of the education programme on enhancing their talent and potential in the Renewable Energy Sources (RES) sector. At baseline, a strong majority (71%) believed the programme would <i>completely</i> enhance their potential. However, this dropped significantly to 17% after the programme. Meanwhile, the proportion of those selecting <i>very much</i> increased from 14% to 43%, and <i>somewhat</i> rose from 14% to 35%. One respondent (4%) selected <i>slightly</i>, and none selected <i>not at all</i>.</p> <p>This shift suggested that while participants saw value in the programme, their expectations were adjusted after experiencing it. Rather than seeing the programme as fully transformative, more viewed it as a meaningful but partial contributor to their development. This could indicate a need to better align programme content with participants' career goals or to strengthen the practical and professional impact of the training.</p>	Category	Update (%)	Baseline (%)	Completely	17	71	Very Much	43	14	Somewhat	35	14	Slightly	4	0	Not at all	0	0
	Category	Update (%)	Baseline (%)																	
Completely	17	71																		
Very Much	43	14																		
Somewhat	35	14																		
Slightly	4	0																		
Not at all	0	0																		
<p>Innovation Output</p>	<p>Percentage of students contributing to innovative projects or outputs as a result of the programme.</p> <p><i>[Are you contributing to innovative projects or outputs in the field of renewable energy sources (RES)? Scale: Not at all to Always]</i></p>																			

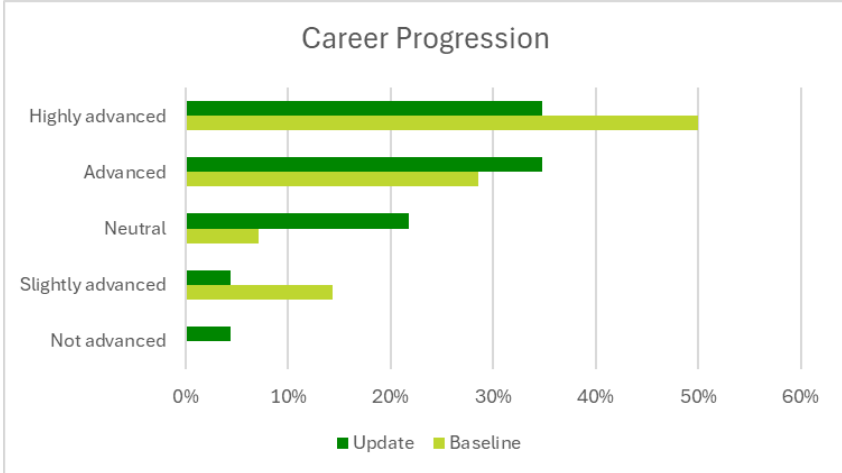
Objectives	Indicators	Question/Analysis																		
		<div data-bbox="555 226 1420 745" data-label="Figure"> <table border="1"> <caption>Innovation Output Data</caption> <thead> <tr> <th>Frequency</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Always</td> <td>30</td> <td>21</td> </tr> <tr> <td>Often</td> <td>17</td> <td>14</td> </tr> <tr> <td>Occasionally</td> <td>39</td> <td>50</td> </tr> <tr> <td>Rarely</td> <td>4</td> <td>6</td> </tr> <tr> <td>Not at all</td> <td>8</td> <td>7</td> </tr> </tbody> </table> </div> <p data-bbox="555 770 1420 1115">The results indicated a moderate but positive shift in participants' engagement with innovative projects in the field of Renewable Energy Sources (RES). The percentage of those who <i>always</i> contribute rose from 21% to 30%, and those who do so <i>often</i> increased slightly from 14% to 17%. Meanwhile, those contributing only <i>occasionally</i> decreased from 50% to 39%, suggesting some participants moved into more active roles. Responses in the <i>not at all</i> and <i>rarely</i> categories remained low, with only minor increases or stability.</p> <p data-bbox="555 1137 1420 1323">Overall, these findings suggested that the programme helped some participants become more actively involved in innovation within the RES sector. While most contributed only occasionally, the increase in more frequent engagement was a positive sign of growing practical involvement and potential long-term impact.</p>	Frequency	Update (%)	Baseline (%)	Always	30	21	Often	17	14	Occasionally	39	50	Rarely	4	6	Not at all	8	7
Frequency	Update (%)	Baseline (%)																		
Always	30	21																		
Often	17	14																		
Occasionally	39	50																		
Rarely	4	6																		
Not at all	8	7																		
<p data-bbox="164 1637 330 1742">O3.4 Equal access to education</p>	<p data-bbox="357 1675 488 1709">Inclusivity</p>	<p data-bbox="555 1361 1262 1395">Percentage of students from diverse backgrounds.</p> <p data-bbox="555 1417 1420 1473">[Do you agree that the programme provides equal access and opportunities for students from various backgrounds? Scale: Strongly Disagree to Strongly Agree]</p> <div data-bbox="555 1496 1420 2018" data-label="Figure"> <table border="1"> <caption>Inclusivity Data</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly agree</td> <td>74</td> <td>36</td> </tr> <tr> <td>Agree</td> <td>26</td> <td>50</td> </tr> <tr> <td>Neutral</td> <td>0</td> <td>14</td> </tr> <tr> <td>Disagree</td> <td>0</td> <td>0</td> </tr> <tr> <td>Strongly disagree</td> <td>0</td> <td>0</td> </tr> </tbody> </table> </div>	Response	Update (%)	Baseline (%)	Strongly agree	74	36	Agree	26	50	Neutral	0	14	Disagree	0	0	Strongly disagree	0	0
Response	Update (%)	Baseline (%)																		
Strongly agree	74	36																		
Agree	26	50																		
Neutral	0	14																		
Disagree	0	0																		
Strongly disagree	0	0																		

Objectives	Indicators	Question/Analysis														
		<p>The results showed a strong positive shift in participants' perception of the programme's inclusivity and fairness. At baseline, 50% <i>agreed</i> and 36% <i>strongly agreed</i> that the programme provided equal access and opportunities for students from diverse backgrounds. Following the programme, the percentage of <i>strongly agree</i> responses more than doubled to 74%, while <i>agree</i> responses decreased to 26%, indicating that many participants moved from general agreement to stronger endorsement. Additionally, no participants selected <i>neutral</i>, <i>disagree</i>, or <i>strongly disagree</i> in the follow-up, suggesting a unified and strengthened perception of the programme's commitment to equity.</p> <p>Overall, these results reflected a highly positive social impact in terms of inclusiveness, suggesting that participants felt the programme successfully supported students from different backgrounds.</p>														
	<p>Re- presentation in Leadership Roles</p>	<p>Percentage of students from diverse backgrounds in leadership or influential roles within the programme.</p> <p><i>[Do you observe representation from individuals of diverse backgrounds in leadership or influential roles within the programme? Scale: Highly observed representation to Strongly Observed]</i></p> <div data-bbox="552 1059 1409 1574"> <table border="1"> <caption>Representation in Leadership Roles</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Observed</td> <td>61</td> <td>36</td> </tr> <tr> <td>Neutral</td> <td>17</td> <td>43</td> </tr> <tr> <td>Some Representation observed</td> <td>22</td> <td>14</td> </tr> <tr> <td>Highly Observed Representation</td> <td>7</td> <td>0</td> </tr> </tbody> </table> </div> <p>The results indicated a positive shift in the perception of diverse representation in leadership or influential roles within the programme. At baseline, 36% of participants <i>strongly observed</i> diversity in leadership, which increased significantly to 61% in the update. Those who <i>observed some</i> representation also increased from 14% to 22%. Meanwhile, <i>neutral</i> responses decreased from 43% to 17%, and no participants rated <i>highly observed</i> representation in the update compared to 7% at baseline, possibly due to differences in interpretation of that category.</p> <p>Overall, the data suggested that participants increasingly recognise and appreciate the presence of individuals from diverse</p>	Category	Update (%)	Baseline (%)	Strongly Observed	61	36	Neutral	17	43	Some Representation observed	22	14	Highly Observed Representation	7
Category	Update (%)	Baseline (%)														
Strongly Observed	61	36														
Neutral	17	43														
Some Representation observed	22	14														
Highly Observed Representation	7	0														

Objectives	Indicators	Question/Analysis																		
		backgrounds in key roles within the programme, reflecting progress toward inclusivity in leadership.																		
<p>O3.5. Flexibility, and greener aspects of the educational programme</p>	Flexibility Satisfaction	<p>Percentage of students satisfied with programme flexibility.</p> <p><i>[Are you satisfied with the flexibility of the Courses? Scale: Not Satisfied to Highly Satisfied]</i></p>  <table border="1"> <caption>Flexibility Satisfaction Data</caption> <thead> <tr> <th>Satisfaction Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Highly Satisfied</td> <td>48</td> <td>50</td> </tr> <tr> <td>Satisfied</td> <td>48</td> <td>36</td> </tr> <tr> <td>Neutral</td> <td>4</td> <td>14</td> </tr> <tr> <td>Slightly Satisfied</td> <td>0</td> <td>0</td> </tr> <tr> <td>Not Satisfied</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>The results showed overall high satisfaction with the flexibility of the programme, which remained strong from baseline to update. At both points, no participants reported being unsatisfied. While the percentage of <i>highly satisfied</i> respondents slightly decreased from 50% to 48%, the proportion of those who were <i>satisfied</i> increased from 36% to 48%. Neutral responses also dropped from 14% to 4%. This indicated that more participants moved from neutral to positive satisfaction, maintaining an overall positive view of the programme’s flexibility.</p>	Satisfaction Level	Update (%)	Baseline (%)	Highly Satisfied	48	50	Satisfied	48	36	Neutral	4	14	Slightly Satisfied	0	0	Not Satisfied	0	0
	Satisfaction Level	Update (%)	Baseline (%)																	
Highly Satisfied	48	50																		
Satisfied	48	36																		
Neutral	4	14																		
Slightly Satisfied	0	0																		
Not Satisfied	0	0																		
Environment	<p>Percentage of students satisfied with environmental aspects of the programme</p> <p><i>[Do you feel that the programme attributes to environmental considerations? Scale: No to very much indeed]</i></p>																			

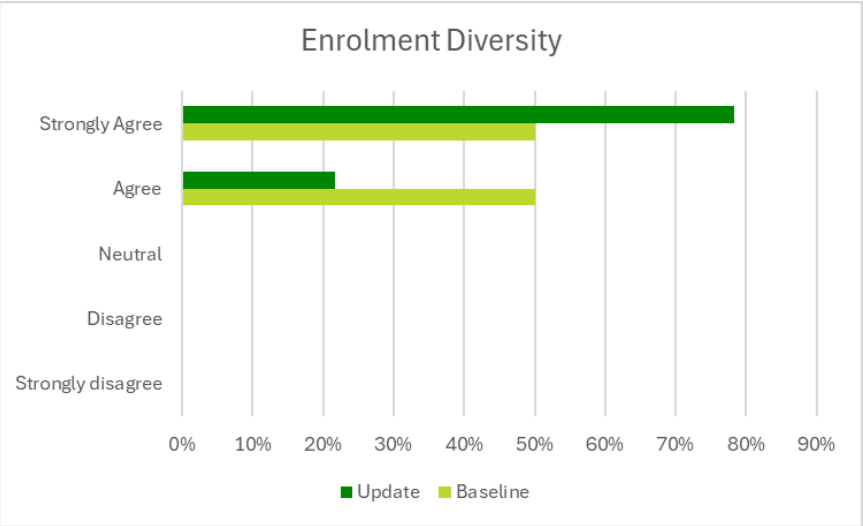
Objectives	Indicators	Question/Analysis																		
		<div data-bbox="552 230 1409 741"> <table border="1"> <caption>Environment</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very Much</td> <td>43</td> <td>64</td> </tr> <tr> <td>Yes</td> <td>52</td> <td>36</td> </tr> <tr> <td>Neutral</td> <td>4</td> <td>0</td> </tr> <tr> <td>Partially</td> <td>0</td> <td>0</td> </tr> <tr> <td>No</td> <td>0</td> <td>0</td> </tr> </tbody> </table> </div> <p data-bbox="552 768 1430 1106">The responses indicated that participants strongly recognised the programme’s contribution to environmental considerations. At baseline, all respondents viewed the programme positively, with 64% saying <i>very much</i> and 36% saying <i>yes</i>. In the update, a slight shift occurred with 52% responding <i>yes</i> and 43% <i>very much</i>, while only one participant (4%) remained neutral. No one responded with <i>no</i> or <i>partially</i> at either time. This suggested consistent and strong awareness that the programme addressed environmental issues, highlighting its relevance to sustainability goals.</p>	Response	Update (%)	Baseline (%)	Very Much	43	64	Yes	52	36	Neutral	4	0	Partially	0	0	No	0	0
Response	Update (%)	Baseline (%)																		
Very Much	43	64																		
Yes	52	36																		
Neutral	4	0																		
Partially	0	0																		
No	0	0																		
<p data-bbox="164 1552 331 1659">O3.6 Continuous learning</p>	<p data-bbox="355 1552 512 1659">Willingness to Continue Learning</p>	<p data-bbox="552 1149 1294 1182">Percentage of students interested in further learning.</p> <p data-bbox="552 1202 1430 1292"><i>[What led you in pursuing an educational programme in RES? Scale: Interested in life-long learning, get specialised in RES, network with experts/professors, required in job position (multiple answers)]</i></p> <div data-bbox="552 1312 1401 1787"> <table border="1"> <caption>Willingness to Continue Learning</caption> <thead> <tr> <th>Motivation</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Required in job position</td> <td>0</td> <td>7</td> </tr> <tr> <td>Network with experts / professors</td> <td>0</td> <td>0</td> </tr> <tr> <td>Get specialised in RES</td> <td>0</td> <td>36</td> </tr> <tr> <td>Interest in life-long learning</td> <td>0</td> <td>57</td> </tr> </tbody> </table> </div> <p data-bbox="552 1812 1430 2074">At baseline, the main motivation for enrolling in the Renewable Energy Sources (RES) programme was a strong <i>interest in life-long learning</i>, cited by 57% of participants. Another significant reason was the desire to <i>get specialise in RES</i>, which motivated 36%. Only a small number (7%) pursued the programme because it was <i>required in their job position</i>, and no one indicated networking with experts or professors as a reason at that time. These motivations</p>	Motivation	Update (%)	Baseline (%)	Required in job position	0	7	Network with experts / professors	0	0	Get specialised in RES	0	36	Interest in life-long learning	0	57			
Motivation	Update (%)	Baseline (%)																		
Required in job position	0	7																		
Network with experts / professors	0	0																		
Get specialised in RES	0	36																		
Interest in life-long learning	0	57																		

Objectives	Indicators	Question/Analysis																	
		<p>suggested that the programme primarily attracted learners driven by personal and professional development goals related to renewable energy knowledge.</p>																	
	<p>Post-Programme Learning Behaviour</p>	<p>Percentage of students engaging in post-programme learning activities.</p> <p><i>[After completing the Course, will you actively seek out additional learning opportunities or programmes related to renewable energy sources (RES) and the skills? Scale: Not at All to Always, Please note down a few: Open answer]</i></p> <div data-bbox="552 577 1441 1048" style="border: 1px solid #ccc; padding: 10px;"> <p style="text-align: center;">Post Programme Learning Behaviour</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th>Frequency</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Always</td> <td>70</td> <td>64</td> </tr> <tr> <td>Often</td> <td>22</td> <td>7</td> </tr> <tr> <td>Occasionally</td> <td>9</td> <td>29</td> </tr> <tr> <td>Rarely</td> <td>0</td> <td>0</td> </tr> <tr> <td>Not at all</td> <td>0</td> <td>0</td> </tr> </tbody> </table> </div> <p>The data showed a strong commitment among participants to continue learning about Renewable Energy Sources (RES) after completing the ESP. At baseline, 64% of respondents said they would <i>always</i> seek additional learning opportunities, which increased to 70% in the update. Those who said <i>often</i> rose from 7% to 22%, while <i>occasionally</i> decreased from 29% to 9%. No participants selected <i>rarely</i> or <i>not at all</i> at either time. This demonstrated a clear and growing enthusiasm for ongoing professional development in RES, reflecting the programme’s success in motivating lifelong learning.</p> <p><i>[Please note down a few]</i></p> <p>Students plan to apply the skills and knowledge gained from this programme to promote the development and use of renewable energy sources (RES) in developing countries like Somalia, which is rich in RES potential but currently underutilises it. They were particularly interested in contributing through research and practical projects that address local energy challenges, such as solar energy, green hydrogen, and energy storage solutions. To deepen their expertise, they aimed to pursue a PhD in renewable energy or related fields, alongside professional certifications like Certified Renewable Energy Professional (REP) and NABCEP PV Installer. They also intended to continue learning through online courses, workshops, and international conferences such as Intersolar and IRENA assemblies. Joining professional organisations like IEEE</p>	Frequency	Update (%)	Baseline (%)	Always	70	64	Often	22	7	Occasionally	9	29	Rarely	0	0	Not at all	0
Frequency	Update (%)	Baseline (%)																	
Always	70	64																	
Often	22	7																	
Occasionally	9	29																	
Rarely	0	0																	
Not at all	0	0																	

Objectives	Indicators	Question/Analysis																		
		<p>Smart Grid and the International Solar Energy Society helped them stay connected with the latest developments. They were motivated to engage in innovative projects, research collaborations, and capacity-building initiatives that support sustainable energy transitions in underserved regions. Additionally, they planned to explore fellowships and scholarship opportunities like Chevening, Fulbright, DAAD, and Erasmus to further enhance their knowledge and networks. Overall, they were committed to ongoing professional development and lifelong learning to contribute meaningfully to the RES sector, especially focusing on technologies and solutions that can have a real impact in developing countries.</p>																		
<p>O3.7 Career path (workforce enhancement)</p>	<p>Career Progression</p>	<p>Percentage of students who had advanced in their careers.</p> <p><i>[Do you believe that your career has been advanced or improved by completing the Course? Scale: Not Advanced to Highly Advanced]</i></p>  <table border="1"> <caption>Career Progression Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Highly advanced</td> <td>35</td> <td>50</td> </tr> <tr> <td>Advanced</td> <td>35</td> <td>29</td> </tr> <tr> <td>Neutral</td> <td>22</td> <td>7</td> </tr> <tr> <td>Slightly advanced</td> <td>4</td> <td>14</td> </tr> <tr> <td>Not advanced</td> <td>4</td> <td>0</td> </tr> </tbody> </table> <p>The results indicated a mixed but generally positive view on how the programme impacts career advancement. At baseline, 50% of participants felt their career would be <i>highly advanced</i>, but this decreased to 35% in the update. Those who felt their career would be <i>advanced</i> increased slightly from 29% to 35%. The proportion of <i>neutral</i> responses grew from 7% to 22%, while those who felt <i>not advanced</i> or <i>slightly advanced</i> remained low, each around 4%. This shift suggested some participants became more cautious or realistic about immediate career impacts after completing the programme, though most still see a positive benefit.</p>	Category	Update (%)	Baseline (%)	Highly advanced	35	50	Advanced	35	29	Neutral	22	7	Slightly advanced	4	14	Not advanced	4	0
	Category	Update (%)	Baseline (%)																	
Highly advanced	35	50																		
Advanced	35	29																		
Neutral	22	7																		
Slightly advanced	4	14																		
Not advanced	4	0																		
<p>Promotion Opportunities</p>	<p>Percentage of students who had been offered or received promotions in their current jobs since completing the programme.</p> <p><i>[Have you been offered or received any promotions or career advancement opportunities in your current job since completing the programme? Scale: No Opportunities/ No Change to Significantly Advanced]</i></p>																			

Objectives	Indicators	Question/Analysis															
		<div data-bbox="550 224 1412 873" style="border: 1px solid #ccc; padding: 10px;"> <p style="text-align: center;">Promotion Opportunities</p> <table border="1" style="margin-top: 10px; width: 100%; border-collapse: collapse;"> <caption>Promotion Opportunities Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Significantly advanced</td> <td>13%</td> <td>29%</td> </tr> <tr> <td>Moderately advanced</td> <td>17%</td> <td>43%</td> </tr> <tr> <td>Slightly advanced</td> <td>9%</td> <td>29%</td> </tr> <tr> <td>No opportunities/No change</td> <td>61%</td> <td>0%</td> </tr> </tbody> </table> </div> <p>The data revealed a significant shift in participants' expectations about the programme leading to promotions or career advancement in their current jobs. At baseline, none expected <i>no opportunities</i> or <i>no change</i>, but in the update, a majority (61%) reported <i>no opportunities/no change</i>. The percentage of those expecting <i>slightly advanced</i> opportunities decreased from 29% to 9%, while those expecting <i>moderately</i> or <i>significantly advanced</i> opportunities also declined, from 43% to 17% and 29% to 13%, respectively. This suggests that after completing the programme, many participants tempered their expectations about immediate career advancement or promotion within their current roles, possibly reflecting workplace realities or organisational constraints.</p>	Category	Update (%)	Baseline (%)	Significantly advanced	13%	29%	Moderately advanced	17%	43%	Slightly advanced	9%	29%	No opportunities/No change	61%	0%
	Category	Update (%)	Baseline (%)														
Significantly advanced	13%	29%															
Moderately advanced	17%	43%															
Slightly advanced	9%	29%															
No opportunities/No change	61%	0%															
<p>Connection with real market</p>	<p>Percentage of students & Professors/trainers who were satisfied with the relationship between the programme's content the real-life needs</p> <p><i>[How satisfied are you with the relation of Programme's content to real-life/real market needs? Scale: Very dissatisfied to Very satisfied]</i></p>																

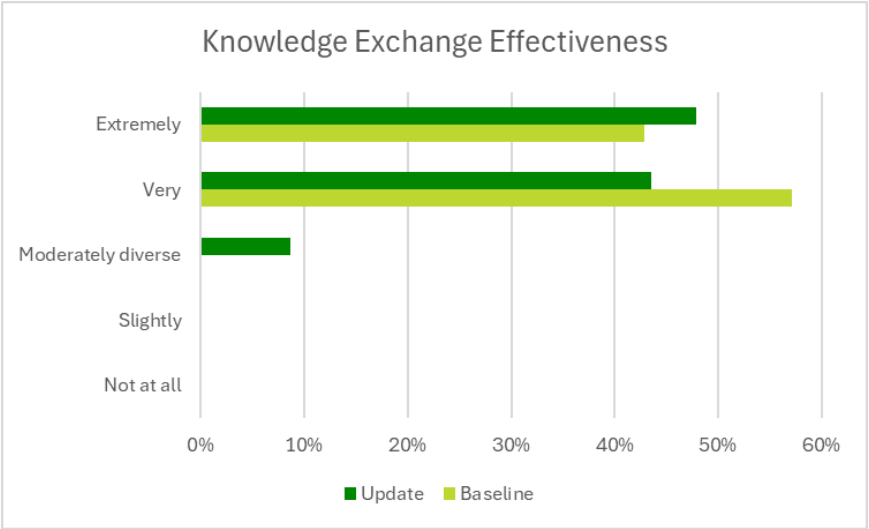
Objectives	Indicators	Question/Analysis																		
		<div data-bbox="550 224 1428 683"> <table border="1"> <caption>Connection to Real Market</caption> <thead> <tr> <th>Satisfaction Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very Satisfied</td> <td>26%</td> <td>43%</td> </tr> <tr> <td>Satisfied</td> <td>52%</td> <td>36%</td> </tr> <tr> <td>Moderate</td> <td>22%</td> <td>21%</td> </tr> <tr> <td>Slightly dissatisfied</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Very dissatisfied</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table> </div> <p data-bbox="550 705 1436 1131">The results showed generally positive satisfaction with how well the content relates to real-life and market needs. At baseline, 43% of participants were <i>very satisfied</i>, and 36% were <i>satisfied</i>. In the update, the proportion of <i>satisfied</i> participants increased to 52%, while those <i>very satisfied</i> decreased to 26%. The share of respondents with a <i>moderate</i> level of satisfaction remained fairly stable (21% to 22%). No participants reported dissatisfaction at either time. This suggested that while strong satisfaction persists, some participants felt the programme could better align with practical or market demands, signalling room for further improvement.</p>	Satisfaction Level	Update (%)	Baseline (%)	Very Satisfied	26%	43%	Satisfied	52%	36%	Moderate	22%	21%	Slightly dissatisfied	0%	0%	Very dissatisfied	0%	0%
Satisfaction Level	Update (%)	Baseline (%)																		
Very Satisfied	26%	43%																		
Satisfied	52%	36%																		
Moderate	22%	21%																		
Slightly dissatisfied	0%	0%																		
Very dissatisfied	0%	0%																		
<p data-bbox="159 1489 335 1713">O3.8 New jobs acquisition, against unemployment</p>	<p data-bbox="351 1568 526 1646">Employment Rate</p>	<p data-bbox="550 1164 1436 1243">Percentage of previously unemployed students who found a job.</p> <p data-bbox="550 1254 1436 1332"><i>[Do you feel that this Programme will play a significant role in getting employed? Scale: No to Yes]</i></p> <div data-bbox="550 1344 1428 1803"> <table border="1"> <caption>Employment Rate</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>30%</td> <td>57%</td> </tr> <tr> <td>Neutral</td> <td>39%</td> <td>29%</td> </tr> <tr> <td>Partially</td> <td>26%</td> <td>14%</td> </tr> <tr> <td>No improvement</td> <td>4%</td> <td>0%</td> </tr> </tbody> </table> </div> <p data-bbox="550 1825 1436 2049">The data showed a cautious outlook on the programme’s impact on employment. At baseline, 57% of participants believed the programme would <i>help them get employed</i>, but this decreased to 30% in the update. The number of <i>neutral</i> responses increased from 29% to 39%, and those who felt the programme would <i>partially</i> help rose from 14% to 26%. A small percentage (4%) indicated <i>no</i></p>	Response	Update (%)	Baseline (%)	Yes	30%	57%	Neutral	39%	29%	Partially	26%	14%	No improvement	4%	0%			
Response	Update (%)	Baseline (%)																		
Yes	30%	57%																		
Neutral	39%	29%																		
Partially	26%	14%																		
No improvement	4%	0%																		

Objectives	Indicators	Question/Analysis																		
		<p><i>improvement</i> in employment prospects after completing the programme. This suggested that while some still see the programme as valuable for employment, many have tempered their expectations and are uncertain about its direct impact on their job opportunities.</p>																		
<p>O3.9. Enrolment (total rates/ gender/ age)</p>	<p>Enrolment Diversity</p>	<p>Percentage of students from different genders and age groups. <i>[Do you agree that the programme is accessible to individuals of all genders and age groups? Scale: Strongly Disagree to Strongly Agree]</i></p>  <table border="1"> <caption>Enrolment Diversity Data</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>78</td> <td>50</td> </tr> <tr> <td>Agree</td> <td>22</td> <td>50</td> </tr> <tr> <td>Neutral</td> <td>0</td> <td>0</td> </tr> <tr> <td>Disagree</td> <td>0</td> <td>0</td> </tr> <tr> <td>Strongly disagree</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>The results showed a strong and growing consensus that the programme was accessible to individuals of all genders and age groups. At baseline, the responses were evenly split, with 50% <i>agreeing</i> and 50% <i>strongly agreeing</i>. In the update, the number of participants who <i>strongly agreed</i> increased significantly to 78%, while those who simply <i>agreed</i> decreased to 22%. No participants expressed disagreement or neutrality at either time. This indicated increasing confidence that the programme provides equal access and opportunities regardless of gender or age.</p>	Response	Update (%)	Baseline (%)	Strongly Agree	78	50	Agree	22	50	Neutral	0	0	Disagree	0	0	Strongly disagree	0	0
	Response	Update (%)	Baseline (%)																	
Strongly Agree	78	50																		
Agree	22	50																		
Neutral	0	0																		
Disagree	0	0																		
Strongly disagree	0	0																		
<p>Demographic Re-presentation</p>	<p>Percentage distribution of students across different gender and age groups in the programme. <i>[Do you believe the programme effectively caters to a diverse student population in terms of gender and age? Scale: Not at All to Extremely]</i></p>																			

Objectives	Indicators	Question/Analysis																		
		<div data-bbox="555 226 1433 741" style="border: 1px solid #ccc; padding: 10px;"> <h3 style="text-align: center;">Demographic Representation</h3> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <caption>Demographic Representation Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Extremely</td> <td>52%</td> <td>36%</td> </tr> <tr> <td>Very</td> <td>43%</td> <td>57%</td> </tr> <tr> <td>Moderately</td> <td>5%</td> <td>7%</td> </tr> <tr> <td>Slightly diverse</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Not at all</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table> </div> <p data-bbox="555 768 1433 1144">The responses indicated that participants generally believed the programme effectively served a diverse student population in terms of gender and age. At baseline, 57% rated the programme as catering <i>very well</i> to diversity, and 36% rated it <i>extremely well</i>. In the update, the perception of <i>extreme</i> effectiveness increased to 52%, while those rating it as <i>very</i> decreased to 43%. Only a small minority felt the programme was <i>moderately</i> effective, and no participants rated it as <i>slightly</i> or <i>not at all</i> diverse. Overall, this showed a positive and slightly improving view of the programme’s inclusivity.</p>	Category	Update (%)	Baseline (%)	Extremely	52%	36%	Very	43%	57%	Moderately	5%	7%	Slightly diverse	0%	0%	Not at all	0%	0%
	Category	Update (%)	Baseline (%)																	
Extremely	52%	36%																		
Very	43%	57%																		
Moderately	5%	7%																		
Slightly diverse	0%	0%																		
Not at all	0%	0%																		
<p data-bbox="357 1574 523 1641">Accessibility Perception</p>	<p data-bbox="555 1189 1433 1256">Percentage of students who perceive the programme as accessible regardless of background.</p> <p data-bbox="555 1279 1433 1368"><i>[Do you agree that the programme is accessible to individuals from various backgrounds, considering factors such as socioeconomic status, educational background, and cultural differences? Scale: Strongly Disagree to Strongly Agree]</i></p> <div data-bbox="555 1391 1377 1951" style="border: 1px solid #ccc; padding: 10px;"> <h3 style="text-align: center;">Accessibility Perception</h3> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <caption>Accessibility Perception Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly agree</td> <td>70%</td> <td>50%</td> </tr> <tr> <td>Agree</td> <td>26%</td> <td>43%</td> </tr> <tr> <td>Neutral</td> <td>5%</td> <td>7%</td> </tr> <tr> <td>Disagree</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Strongly disagree</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table> </div> <p data-bbox="555 1973 1433 2040">The data reflected a strong belief that the programme was accessible to individuals from various backgrounds, including</p>	Category	Update (%)	Baseline (%)	Strongly agree	70%	50%	Agree	26%	43%	Neutral	5%	7%	Disagree	0%	0%	Strongly disagree	0%	0%	
Category	Update (%)	Baseline (%)																		
Strongly agree	70%	50%																		
Agree	26%	43%																		
Neutral	5%	7%																		
Disagree	0%	0%																		
Strongly disagree	0%	0%																		

Objectives	Indicators	Question/Analysis																		
		<p>socioeconomic status, educational background, and cultural differences. At baseline, half of the participants <i>strongly agreed</i> and 43% <i>agreed</i> that the programme provides such accessibility. In the update, the proportion of <i>strongly agree</i> responses increased notably to 70%, while those who <i>agree</i> decreased to 26%. Only a small fraction remained neutral, and no one expressed disagreement at either time. This indicated growing confidence that the programme effectively supports inclusivity and equal access for diverse student groups.</p>																		
<p>O3.10 Collaboration between organisations</p>	<p>Collaboration Effectiveness</p>	<p>The measure of collaboration effectiveness among universities</p> <p><i>[Has the collaboration between universities enhanced the quality of the Programme? Scale: Not Enhanced to Highly Enhanced]</i></p> <div data-bbox="555 741 1430 1339"> <table border="1"> <caption>Collaboration Effectiveness (quality)</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Highly Enhanced</td> <td>57</td> <td>64</td> </tr> <tr> <td>Enhanced</td> <td>39</td> <td>29</td> </tr> <tr> <td>Neutral</td> <td>5</td> <td>7</td> </tr> <tr> <td>Slightly Enhanced</td> <td>0</td> <td>0</td> </tr> <tr> <td>Not Enhanced</td> <td>0</td> <td>0</td> </tr> </tbody> </table> </div> <p>The results showed a strong positive perception of the collaboration between universities in enhancing the quality of the programme. At baseline, 64% of participants felt the collaboration <i>highly enhanced</i> the programme, and 29% believed it <i>enhanced</i> it. In the update, while the percentage who felt it <i>highly enhanced</i> the programme slightly decreased to 57%, those who felt it <i>enhanced</i> the programme increased to 39%. Only a small number remained neutral, and no participants felt that the collaboration did not enhance the quality. Overall, this indicates that participants consistently recognised the value of inter-university collaboration in improving the programme.</p> <p><i>[Do you think the collaboration between universities would enhance the impact of the programme? Scale: Not Enhanced to Highly Enhanced]</i></p>	Category	Update (%)	Baseline (%)	Highly Enhanced	57	64	Enhanced	39	29	Neutral	5	7	Slightly Enhanced	0	0	Not Enhanced	0	0
Category	Update (%)	Baseline (%)																		
Highly Enhanced	57	64																		
Enhanced	39	29																		
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Objectives	Indicators	Question/Analysis																		
		<div data-bbox="555 230 1401 734"> <table border="1"> <caption>Collaboration Effectiveness (impact)</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Highly Enhanced</td> <td>52</td> <td>50</td> </tr> <tr> <td>Enhanced</td> <td>35</td> <td>43</td> </tr> <tr> <td>Neutral</td> <td>13</td> <td>0</td> </tr> <tr> <td>Slightly Enhanced</td> <td>0</td> <td>0</td> </tr> <tr> <td>Not enhanced</td> <td>0</td> <td>7</td> </tr> </tbody> </table> </div> <p data-bbox="555 757 1433 1137">The data showed that most participants perceived university collaboration as positively enhancing the impact of the programme. At baseline, 50% believed the collaboration <i>highly enhanced</i> the programme’s impact, and 43% felt it <i>enhanced</i> it. In the update, the proportion who felt it <i>highly enhanced</i> increased slightly to 52%, while those who felt it <i>enhanced</i> decreased to 35%. A small number (13%) responded <i>neutral</i>, and no participants felt that the collaboration was <i>not enhanced</i>. This indicated a strong and stable recognition of the positive role that collaboration between universities played in increasing the programme’s overall impact.</p>	Category	Update (%)	Baseline (%)	Highly Enhanced	52	50	Enhanced	35	43	Neutral	13	0	Slightly Enhanced	0	0	Not enhanced	0	7
	Category	Update (%)	Baseline (%)																	
Highly Enhanced	52	50																		
Enhanced	35	43																		
Neutral	13	0																		
Slightly Enhanced	0	0																		
Not enhanced	0	7																		
Knowledge Exchange Effectiveness	<div data-bbox="555 1182 1433 1249"> <p>Percentage of students who believed the collaboration between universities has enhanced knowledge exchange.</p> </div> <div data-bbox="555 1272 1433 1339"> <p><i>[Do you think the collaboration between universities has effectively facilitated knowledge in the programme? Scale Not at All to Extremely]</i></p> </div> <div data-bbox="555 1350 1417 1865"> <table border="1"> <caption>Knowledge Exchange Effectiveness</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Extremely</td> <td>44</td> <td>36</td> </tr> <tr> <td>Very</td> <td>44</td> <td>57</td> </tr> <tr> <td>Moderately diverse</td> <td>13</td> <td>7</td> </tr> <tr> <td>Slightly</td> <td>0</td> <td>0</td> </tr> <tr> <td>Not at all</td> <td>0</td> <td>0</td> </tr> </tbody> </table> </div> <p data-bbox="555 1899 1433 2040">The results indicated that participants generally believe the collaboration between universities effectively facilitated knowledge sharing in the programme. At baseline, 57% rated this facilitation as <i>very effective</i>, and 36% rated it <i>extremely effective</i>. In the update,</p>	Category	Update (%)	Baseline (%)	Extremely	44	36	Very	44	57	Moderately diverse	13	7	Slightly	0	0	Not at all	0	0	
Category	Update (%)	Baseline (%)																		
Extremely	44	36																		
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Moderately diverse	13	7																		
Slightly	0	0																		
Not at all	0	0																		

Objectives	Indicators	Question/Analysis																		
		<p>the percentage of participants rating it as <i>extremely</i> effective increased to 43%, while those rating it as <i>very</i> effective decreased slightly to 43%. A small minority felt the collaboration was <i>moderately</i> effective, increasing from 7% to 13%. No participants rated the collaboration as <i>slightly</i> or <i>not at all</i> effective. Overall, this reflected a strong and positive perception of collaboration as a key factor in enhancing knowledge exchange.</p> <p><i>[Do you think the collaboration between universities effectively enriched your learning experience in the programme? Scale: Not at All to Extremely]</i></p>  <table border="1"> <caption>Knowledge Exchange Effectiveness Data</caption> <thead> <tr> <th>Effectiveness Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Extremely</td> <td>48</td> <td>43</td> </tr> <tr> <td>Very</td> <td>43</td> <td>57</td> </tr> <tr> <td>Moderately diverse</td> <td>9</td> <td>7</td> </tr> <tr> <td>Slightly</td> <td>0</td> <td>0</td> </tr> <tr> <td>Not at all</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>The data showed that participants generally felt that collaboration between universities enriched their learning experience in the programme. At baseline, 57% rated this enrichment as <i>very</i> strong, and 43% rated it <i>extremely</i> strong. In the update, those rating it as <i>extremely</i> enriching increased to 48%, while those rating it as <i>very</i> enriching decreased slightly to 43%. A small number (9%) felt the enrichment was <i>moderate</i>. No participants rated it as <i>slightly</i> or <i>not at all</i> enriching. Overall, this indicated a consistently positive perception that inter-university collaboration significantly enhances the learning experience.</p>	Effectiveness Level	Update (%)	Baseline (%)	Extremely	48	43	Very	43	57	Moderately diverse	9	7	Slightly	0	0	Not at all	0	0
Effectiveness Level	Update (%)	Baseline (%)																		
Extremely	48	43																		
Very	43	57																		
Moderately diverse	9	7																		
Slightly	0	0																		
Not at all	0	0																		

7.6.2 Summary of ESP Insights

The assessment revealed a positive impact of the ESP programme on participants’ knowledge and skills related to Renewable Energy Sources (RES). Many reported significant growth in their understanding and an increased ability to apply these skills in professional and academic settings. Alongside this, participants’ confidence in solving real-world RES problems has improved, with fewer reporting low proficiency after completing the programme.

The use of XR/AR technology during learning remained steady (participants engaging with it). However, satisfaction with XR/AR’s effectiveness was mixed, ranging from neutral to highly satisfied responses. Notably, **the perception that XR/AR enhances the overall learning experience**

decreased by 31% (from 57% to 26%) in the update, indicating room for further exploration on how XR/AR can better support learning.

Regarding career outcomes, most participants believed the ESP programme helped advance their careers and talents within the RES sector. Despite this, fewer participants felt the programme directly translated into promotion or advancement opportunities in their current jobs, with a majority reporting no change. Confidence in the programme's role in securing employment showed some uncertainty, suggesting that while knowledge growth was evident, employment pathways might require additional support.

Inclusivity and accessibility emerged as key strengths of the programme. Participants widely agreed that the programme is accessible and supportive of individuals from diverse genders, ages, socioeconomic statuses, educational backgrounds, and cultures. Representation of diverse groups in leadership roles was increasingly observed, and the programme was perceived as effectively catering to a broad student population.

Satisfaction with the flexibility of the ESP programme was high, and most participants acknowledged its positive contribution to environmental considerations, highlighting its alignment with sustainability goals. Motivations for enrolling centred on lifelong learning and specialisation in RES, with many expressing intentions to continue their education through advanced degrees, professional certifications, workshops, and other development opportunities.

Collaboration between universities was consistently valued, with participants recognising its role in enhancing the quality, impact, knowledge exchange, and overall enrichment of their learning experience. This collaboration was seen as a major strength of the programme, contributing significantly to its success.

Finally, the content of the ESP's programme was generally seen as well-aligned with real-world and market needs, though some participants suggested there is potential to improve this alignment further.

7.7 Gender Aspects in STEM

The following subsection presents and interprets the key results and insights gathered from the assessment of Gender Aspects in STEM as per activities within the SKILLBILL project.

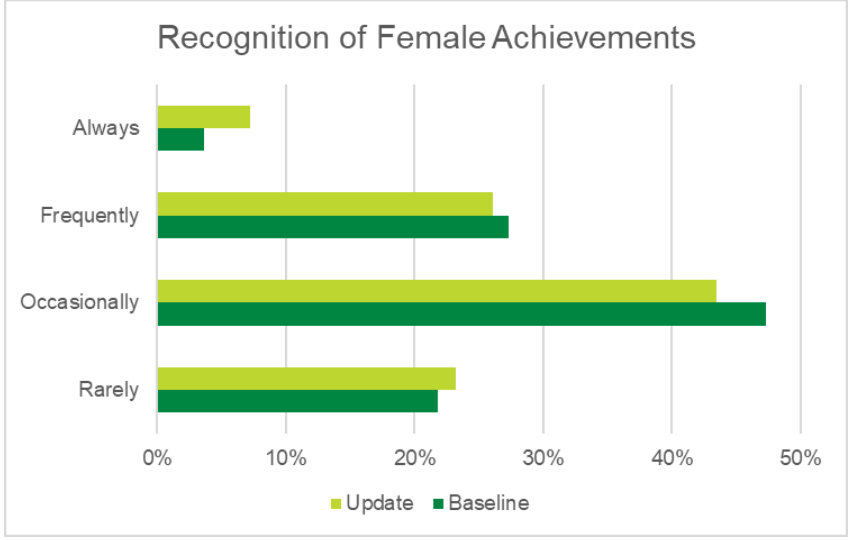
7.7.1 Analysis and interpretation of the gender aspect in STEM

Table 23. Interpretation of Results for gender aspect in RES

Objective	Indicators	Question/Analysis
O5.1 Understanding of women's and men's behaviour and attitudes.	Representation in Decision-Making	<p>Percentage increase in the representation of women in decision-making roles within renewable energy organisations.</p> <p><i>[How often do you see women represented in leadership roles within renewable energy organisations? Scale: Rarely to Always]</i></p>

Objective	Indicators	Question/Analysis																																	
		<div data-bbox="574 224 1420 728"> <table border="1"> <caption>Representation in Decision-Making (Frequency)</caption> <thead> <tr> <th>Frequency</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Always</td> <td>18%</td> <td>7%</td> </tr> <tr> <td>Frequently</td> <td>23%</td> <td>20%</td> </tr> <tr> <td>Occasionally</td> <td>34%</td> <td>56%</td> </tr> <tr> <td>Rarely</td> <td>25%</td> <td>16%</td> </tr> </tbody> </table> </div> <p data-bbox="574 750 1436 1444"> As part of assessing the gender impact of project activities, including working groups, the green portal, VET courses, and ESP design courses, we examined changes in perceptions of women in leadership roles within renewable energy organisations. The data showed a positive shift in visibility and representation. At baseline, only 7% of respondents reported that they <i>always</i> saw women in leadership roles, and 20% said they saw them <i>frequently</i>. Following the project activities, these numbers increased to 18% and 23%, respectively, indicating a growing perception of gender inclusivity. Meanwhile, the percentage of respondents who <i>rarely</i> observed women in such roles decreased from 16% to 25%, and those selecting <i>occasionally</i> also dropped from 56% to 34%. Thus, the percentage of respondents who did not observe women's representation in decision-making decreased by approximately 13%. This suggests that the project has contributed to raising awareness and possibly supporting greater visibility of women in leadership positions in the STEM and renewable energy sectors. </p> <p data-bbox="574 1467 1436 1523"> [A woman in a leadership role is better than a man. Scale: Strongly disagree to Strongly agree] </p> <div data-bbox="574 1545 1420 2049"> <table border="1"> <caption>Representation in Decision-Making (Agreement)</caption> <thead> <tr> <th>Agreement</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>8%</td> <td>7%</td> </tr> <tr> <td>Agree</td> <td>14%</td> <td>6%</td> </tr> <tr> <td>Neutral</td> <td>51%</td> <td>56%</td> </tr> <tr> <td>Disagree</td> <td>16%</td> <td>15%</td> </tr> <tr> <td>Strongly Disagree</td> <td>13%</td> <td>16%</td> </tr> </tbody> </table> </div>	Frequency	Update (%)	Baseline (%)	Always	18%	7%	Frequently	23%	20%	Occasionally	34%	56%	Rarely	25%	16%	Agreement	Update (%)	Baseline (%)	Strongly Agree	8%	7%	Agree	14%	6%	Neutral	51%	56%	Disagree	16%	15%	Strongly Disagree	13%	16%
Frequency	Update (%)	Baseline (%)																																	
Always	18%	7%																																	
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Strongly Agree	8%	7%																																	
Agree	14%	6%																																	
Neutral	51%	56%																																	
Disagree	16%	15%																																	
Strongly Disagree	13%	16%																																	

Objective	Indicators	Question/Analysis																		
		<p>In addition to measuring visibility, it was assessed attitudes toward women in leadership roles, particularly the perception that a woman in a leadership position is better than a man. The majority of respondents at both the baseline (56%) and the update (51%) remained <i>neutral</i>, indicating that many participants do not view leadership effectiveness as strongly gendered. Notably, there was a slight increase in agreement with the statement: those who <i>agreed</i> rose from 5% to 13%, and <i>strongly agree</i> responses remained steady at 7%. Meanwhile, those who <i>disagree</i> or <i>strongly disagree</i> with the statement remained relatively stable, with a small decrease in strong disagreement (from 16% to 13%). Overall, while neutrality dominated, there was a modest shift toward more positive views about women in leadership, suggesting that the project may be gradually influencing perceptions of gender capabilities in STEM leadership.</p> <p>[A man in a leadership role is better than a woman. Scale: Strongly disagree to Strongly agree]</p> <div data-bbox="576 954 1414 1451" data-label="Figure"> <table border="1"> <caption>Representation in Decision-Making</caption> <thead> <tr> <th>Response</th> <th>Baseline (%)</th> <th>Update (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>7</td> <td>7</td> </tr> <tr> <td>Agree</td> <td>5</td> <td>13</td> </tr> <tr> <td>Neutral</td> <td>56</td> <td>49</td> </tr> <tr> <td>Disagree</td> <td>15</td> <td>26</td> </tr> <tr> <td>Strongly Disagree</td> <td>16</td> <td>13</td> </tr> </tbody> </table> </div> <p>To further explore gender perceptions, examined agreement with the statement that <i>a man in a leadership role is better than a woman</i>. The results showed a continued shift away from this traditional gender bias. At baseline, 25% of respondents <i>strongly disagreed</i> with the statement, which decreased to 16% at the update, while those who <i>disagreed</i> rose from 15% to 26%. Although the overall disagreement increased, the decline in strong disagreement reflected a softening rather than a rejection of the bias. The proportion of <i>neutral</i> responses remained nearly constant (51% to 49%), indicating that a significant share of participants held no strong opinion on gender differences in leadership effectiveness. Agreement with the statement remained low and largely unchanged (around 4–5%), suggesting that overt gender bias in favour of men was not widely endorsed but persisted to a small extent. Overall, the data pointed to a gradual</p>	Response	Baseline (%)	Update (%)	Strongly Agree	7	7	Agree	5	13	Neutral	56	49	Disagree	15	26	Strongly Disagree	16	13
		Response	Baseline (%)	Update (%)																
Strongly Agree	7	7																		
Agree	5	13																		
Neutral	56	49																		
Disagree	15	26																		
Strongly Disagree	16	13																		

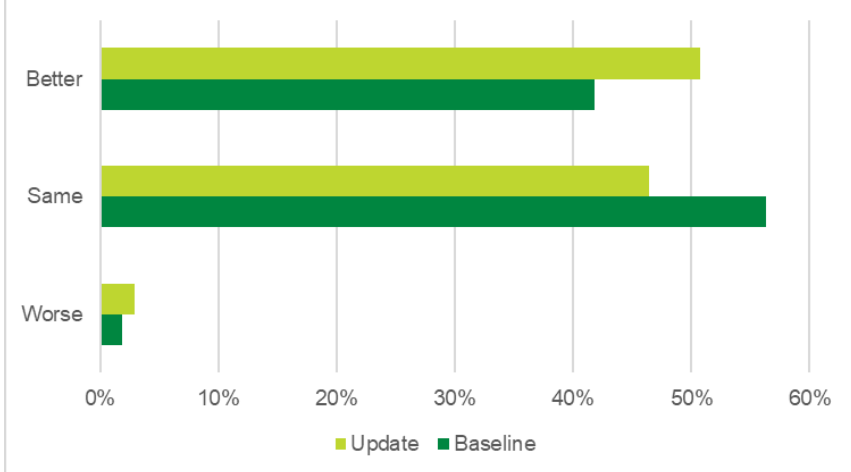
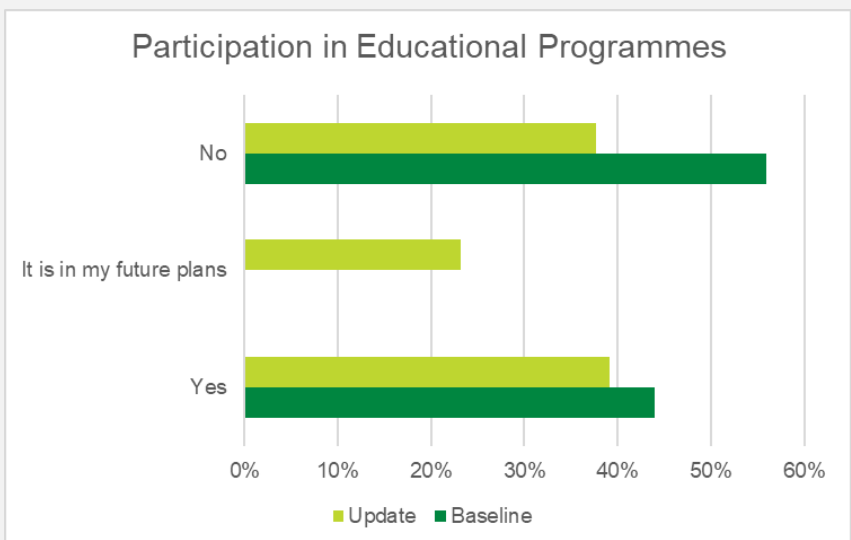
Objective	Indicators	Question/Analysis															
		movement toward more gender-equitable views, aligned with the goals of fostering inclusivity through the project’s educational and collaborative activities.															
O5.2 Women encouragement	Recognition of Female Achievements	<p>Percentage increase in the recognition of achievements by women in renewable energy.</p> <p><i>[How often do you come across instances where the achievements of women in renewable energy are acknowledged? Scale: Rarely to Always]</i></p>  <table border="1"> <caption>Recognition of Female Achievements Data</caption> <thead> <tr> <th>Frequency</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Always</td> <td>7%</td> <td>4%</td> </tr> <tr> <td>Frequently</td> <td>26%</td> <td>27%</td> </tr> <tr> <td>Occasionally</td> <td>43%</td> <td>47%</td> </tr> <tr> <td>Rarely</td> <td>23%</td> <td>22%</td> </tr> </tbody> </table> <p>As part of assessing gender impact, we also looked at how often participants observe the acknowledgement of women’s achievements in the renewable energy sector. The results showed relatively modest change. At baseline, 4% of respondents reported that women’s achievements were <i>always</i> acknowledged, increasing slightly to 7% after project activities. Those who selected <i>frequently</i> remained stable (27% to 26%). Meanwhile, the percentage of respondents who <i>occasionally</i> observed such recognition decreased slightly (from 47% to 43%), and those who <i>rarely</i> observed it rose slightly (from 22% to 23%). These results suggested that while there was a small increase in the perception of consistent recognition, visibility, and acknowledgement of women’s contributions in the sector remain limited. This highlighted the ongoing need for targeted actions to elevate and celebrate women’s achievements in STEM and renewable energy fields, something the project may continue to influence positively over time.</p>	Frequency	Update (%)	Baseline (%)	Always	7%	4%	Frequently	26%	27%	Occasionally	43%	47%	Rarely	23%	22%
	Frequency	Update (%)	Baseline (%)														
Always	7%	4%															
Frequently	26%	27%															
Occasionally	43%	47%															
Rarely	23%	22%															
Participation in Networking Events	<p>Percentage of women participating in networking events within the renewable energy sector.</p> <p><i>[Have you attended any networking events specifically focused on encouraging women in the renewable energy sector? Scale: Yes/No]</i></p>																

Objective	Indicators	Question/Analysis												
		<div data-bbox="576 226 1398 775" style="border: 1px solid #ccc; padding: 10px; margin-bottom: 10px;"> <p style="text-align: center;">Participation in Networking Events</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <caption>Data for Participation in Networking Events</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>No</td> <td>46</td> <td>40</td> </tr> <tr> <td>Maybe</td> <td>7</td> <td>15</td> </tr> <tr> <td>Yes</td> <td>46</td> <td>45</td> </tr> </tbody> </table> </div> <p>To assess exposure to gender-focused opportunities, stakeholders were asked whether they had attended networking events specifically aimed at encouraging women in the renewable energy sector. The results indicated only a slight change over time. The proportion of participants who responded <i>yes</i> increased marginally from 45% to 46%, suggesting stable engagement levels. However, the percentage of <i>no</i> responses also increased from 40% to 46%, while <i>maybe</i> responses declined from 15% to 7%, implying that more participants provided definitive answers in the update. Despite the minimal growth in confirmed participation, nearly half of the respondents reported not having attended such events. This highlighted a continued opportunity—and need—for increasing access to and awareness of gender-focused networking initiatives within the sector, which can help foster professional growth, mentorship, and visibility for women in renewable energy.</p>	Response	Update (%)	Baseline (%)	No	46	40	Maybe	7	15	Yes	46	45
Response	Update (%)	Baseline (%)												
No	46	40												
Maybe	7	15												
Yes	46	45												
<p>O5.3 Women's effort for</p>	<p>Participation in Gender Equality Initiatives</p>	<p>Percentage of participants actively engaged in initiatives promoting equal opportunities for women.</p> <p><i>[Have you actively participated in any initiative aimed at achieving gender equality in the renewable energy sector? Scale: Yes/No. If yes, please name any: open answer]</i></p>												

Objective	Indicators	Question/Analysis																	
<p>equal results</p>		<div data-bbox="574 224 1388 739"> <table border="1"> <caption>Equality Initiatives Data</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>No</td> <td>49</td> <td>53</td> </tr> <tr> <td>Maybe</td> <td>15</td> <td>16</td> </tr> <tr> <td>Yes</td> <td>37</td> <td>31</td> </tr> </tbody> </table> </div> <p data-bbox="574 761 1436 1220"> Participation in initiatives aimed at achieving gender equality in the renewable energy sector showed a slight improvement over time. At baseline, 31% of respondents reported active involvement in such initiatives, increasing to 37% at the time of the update. The percentage of respondents who answered <i>maybe</i> remained relatively stable, changing from 16% to 15%. Meanwhile, those who had not participated in any gender equality initiatives decreased from 53% to 49%. These findings indicated a modest increase in engagement with gender-focused actions, though a significant portion of respondents still reported no involvement, suggesting continued potential for awareness-raising and capacity-building in this area. </p>	Response	Update (%)	Baseline (%)	No	49	53	Maybe	15	16	Yes	37	31					
	Response	Update (%)	Baseline (%)																
No	49	53																	
Maybe	15	16																	
Yes	37	31																	
<p>Balanced Career Advancement Progress</p>	<div data-bbox="574 1254 1436 1332"> <p>Increase in the percentage of women progressing in their renewable energy careers.</p> </div> <div data-bbox="574 1344 1436 1444"> <p><i>[Do you feel that there are equal opportunities for career advancement for both men and women in the renewable energy sector? Scale: Strongly Disagree to Strongly Agree]</i></p> </div> <div data-bbox="574 1456 1412 1960"> <table border="1"> <caption>Balanced Career Data</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>16</td> <td>14</td> </tr> <tr> <td>Agree</td> <td>23</td> <td>27</td> </tr> <tr> <td>Neutral</td> <td>26</td> <td>22</td> </tr> <tr> <td>Disagree</td> <td>26</td> <td>27</td> </tr> <tr> <td>Strongly Disagree</td> <td>9</td> <td>9</td> </tr> </tbody> </table> </div> <p data-bbox="574 1982 1436 2049"> Perceptions regarding equal opportunities for career advancement between men and women in the renewable energy </p>	Response	Update (%)	Baseline (%)	Strongly Agree	16	14	Agree	23	27	Neutral	26	22	Disagree	26	27	Strongly Disagree	9	9
Response	Update (%)	Baseline (%)																	
Strongly Agree	16	14																	
Agree	23	27																	
Neutral	26	22																	
Disagree	26	27																	
Strongly Disagree	9	9																	

Objective	Indicators	Question/Analysis																		
		<p>sector showed minimal change. The percentage of respondents who <i>strongly disagreed</i> with the existence of equal opportunities remained consistent at 9%. Those who <i>disagreed</i> slightly decreased from 27% to 26%. Neutral responses increased from 22% to 26%, suggesting a shift toward uncertainty or ambivalence. Agreement with the statement declined slightly, with <i>agree</i> responses decreasing from 27% to 23%, while <i>strongly agree</i> responses increased marginally from 15% to 16%. Overall, the data reflected a relatively stable perception landscape, with a slight movement away from strong opinions and a moderate rise in neutrality, indicating that equal career advancement opportunities continued to be a concern or remained unclear for many participants.</p> <p><i>[In the working context, you have lived in circumstances in which you have been paid less for your gender. Scale: Strongly Disagree to Strongly Agree]</i></p> <div data-bbox="576 878 1414 1375" data-label="Figure"> <table border="1"> <caption>Balanced Career</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>10</td> <td>15</td> </tr> <tr> <td>Agree</td> <td>14</td> <td>15</td> </tr> <tr> <td>Neutral</td> <td>19</td> <td>29</td> </tr> <tr> <td>Disagree</td> <td>29</td> <td>16</td> </tr> <tr> <td>Strongly Disagree</td> <td>28</td> <td>25</td> </tr> </tbody> </table> </div> <p>Responses regarding experiences of gender-based pay inequality in the workplace showed a shift toward disagreement with the statement. At baseline, 25% of respondents <i>strongly disagreed</i> that they had been paid less due to their gender, increasing to 28% at the time of the update. <i>Disagree</i> responses saw a more notable increase, from 16% to 29%, suggesting a growing perception of fairer pay practices. Meanwhile, <i>neutral</i> responses decreased from 29% to 19%, indicating that fewer respondents remained uncertain about the issue. Agreement levels declined slightly, with <i>agree</i> responses dropping from 15% to 14%, and <i>strongly agree</i> responses from 15% to 10%. Overall, the data suggested a gradual improvement in perceptions or experiences related to gender-based pay disparity, with more respondents reporting that they had not encountered such inequality in their professional context.</p>	Response	Update (%)	Baseline (%)	Strongly Agree	10	15	Agree	14	15	Neutral	19	29	Disagree	29	16	Strongly Disagree	28	25
Response	Update (%)	Baseline (%)																		
Strongly Agree	10	15																		
Agree	14	15																		
Neutral	19	29																		
Disagree	29	16																		
Strongly Disagree	28	25																		

Objective	Indicators	Question/Analysis																		
		<p>[In the working context, you have faced discrimination for your gender. Scale: Strongly Disagree to Strongly Agree]</p> <div data-bbox="576 304 1422 808"> <table border="1"> <caption>Balanced Career</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>12%</td> <td>9%</td> </tr> <tr> <td>Agree</td> <td>20%</td> <td>20%</td> </tr> <tr> <td>Neutral</td> <td>22%</td> <td>22%</td> </tr> <tr> <td>Disagree</td> <td>14%</td> <td>20%</td> </tr> <tr> <td>Strongly Disagree</td> <td>32%</td> <td>29%</td> </tr> </tbody> </table> </div> <p>Perceptions of gender-based discrimination in the workplace showed a mixed pattern. The percentage of respondents who <i>strongly disagreed</i> with having experienced such discrimination increased from 29% at baseline to 32% at the time of the update, suggesting a slight improvement in perceived equality. However, <i>disagree</i> responses declined from 20% to 14%, indicating that fewer respondents rejected the idea of having faced discrimination. <i>Neutral</i> responses remained stable at 22%, reflecting continued uncertainty or ambivalence among a portion of participants. The proportion of respondents who <i>agreed</i> with having faced gender-based discrimination remained constant at 20%, while those who <i>strongly agreed</i> increased from 9% to 12%. These results indicated that although some progress may have been perceived, experiences of discrimination persisted for a notable share of respondents, highlighting the need for continued attention to gender equality in professional environments.</p>	Response	Update (%)	Baseline (%)	Strongly Agree	12%	9%	Agree	20%	20%	Neutral	22%	22%	Disagree	14%	20%	Strongly Disagree	32%	29%
	Response	Update (%)	Baseline (%)																	
Strongly Agree	12%	9%																		
Agree	20%	20%																		
Neutral	22%	22%																		
Disagree	14%	20%																		
Strongly Disagree	32%	29%																		
<p>Work-Life Balance Perception</p>	<p>Change in perception regarding work-life balance for women in renewable energy.</p> <p>[How do you believe SKILLBILL has contributed to work-life balance for women compared to a year ago?? Scale: Worse to Better]</p>																			

Objective	Indicators	Question/Analysis
		<p style="text-align: center;">Work-Life Balance Perception</p>  <p>Perceptions of SKILLBILL’s contribution to improving work-life balance for women showed a positive trend over time. At baseline, 42% of respondents indicated that the situation was <i>better</i> compared to the previous year, which increased to 51% in the update. The proportion of those who believed the situation remained the <i>same</i> decreased from 56% to 46%, suggesting that more respondents perceived progress. Only a small percentage rated the situation as <i>worse</i>, rising slightly from 2% to 3%. Overall, the data reflected a growing recognition of SKILLBILL’s positive influence on supporting work-life balance for women within the project’s context.</p>
<p>O5.4 Equal access to education</p>	<p>Participation in Educational Programmes</p>	<p>Percentage of women enrolled in renewable energy education programmes.</p> <p><i>[Are you currently enrolled in any educational programmes related to renewable energy? Scale: Yes/No]</i></p> <p style="text-align: center;">Participation in Educational Programmes</p>  <p>Enrolment in educational programs related to renewable energy showed some shifts over time. The percentage of respondents</p>

Objective	Indicators	Question/Analysis															
Objective		<p>currently enrolled decreased slightly from 44% at baseline to 39% at the update. Conversely, those who indicated that enrolment in such programs was part of their <i>future plans</i> increased notably from 0% to 23%, reflecting growing interest or intention to pursue education in the field. The proportion of respondents not enrolled in any related educational program decreased from 56% to 38%. These changes suggested a positive trend toward greater engagement with renewable energy education, either through current participation or planned future involvement.</p>															
	Access to Training Resources	<p>Availability and accessibility of training resources for women in renewable energy</p> <p><i>[How easily can you access training resources specifically designed for women in the renewable energy sector? Scale: Very Difficult to Very Easy]</i></p> <div style="text-align: center;"> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <caption>Access Training Resources Data</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very Easy</td> <td>9</td> <td>11</td> </tr> <tr> <td>Easy</td> <td>32</td> <td>24</td> </tr> <tr> <td>Difficult</td> <td>46</td> <td>45</td> </tr> <tr> <td>Very Difficult</td> <td>13</td> <td>20</td> </tr> </tbody> </table> </div> <p>Access to training resources specifically designed for women in the renewable energy sector showed some changes over the assessment period. The percentage of respondents who found access <i>very difficult</i> decreased from 20% at baseline to 13% at the update, indicating a slight improvement. Those who reported access as <i>difficult</i> remained relatively stable, moving marginally from 45% to 46%. Meanwhile, the share of respondents who found access <i>easy</i> increased from 24% to 32%, suggesting that more women experienced better availability or usability of these resources. The percentage indicating <i>very easy</i> access decreased slightly from 11% to 9%. Overall, the data pointed to a modest improvement in ease of access to women-focused training resources within the renewable energy sector, though difficulties remained common for a significant portion of respondents.</p>	Category	Update (%)	Baseline (%)	Very Easy	9	11	Easy	32	24	Difficult	46	45	Very Difficult	13	20
	Category	Update (%)	Baseline (%)														
Very Easy	9	11															
Easy	32	24															
Difficult	46	45															
Very Difficult	13	20															
Access to Professional Development Opportunities	<p>Percentage of women with access to professional development opportunities in renewable energy.</p>																

Objective	Indicators	Question/Analysis									
		<p data-bbox="576 230 1430 315">[Have you had access to professional development opportunities (e.g., workshops, seminars) focused on renewable energy in the past year? Scale: Yes/No]</p> <div data-bbox="576 338 1430 846"> <table border="1" data-bbox="576 338 1430 846"> <caption>Access to Professional Development Opportunities</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>No</td> <td>25</td> <td>29</td> </tr> <tr> <td>Yes</td> <td>75</td> <td>71</td> </tr> </tbody> </table> </div> <p data-bbox="576 869 1430 1211">Access to professional development opportunities, such as workshops and seminars focused on renewable energy, showed a slight increase over the assessment period. At baseline, 71% of respondents reported <i>having</i> access to such opportunities, which increased to 75% at the update. Conversely, the percentage of respondents <i>without</i> access decreased from 29% to 25%. These findings suggested a modest improvement in the availability or awareness of professional development options within the sector during the past year.</p>	Response	Update (%)	Baseline (%)	No	25	29	Yes	75	71
Response	Update (%)	Baseline (%)									
No	25	29									
Yes	75	71									

7.7.2 Summary of gender aspect in STEM

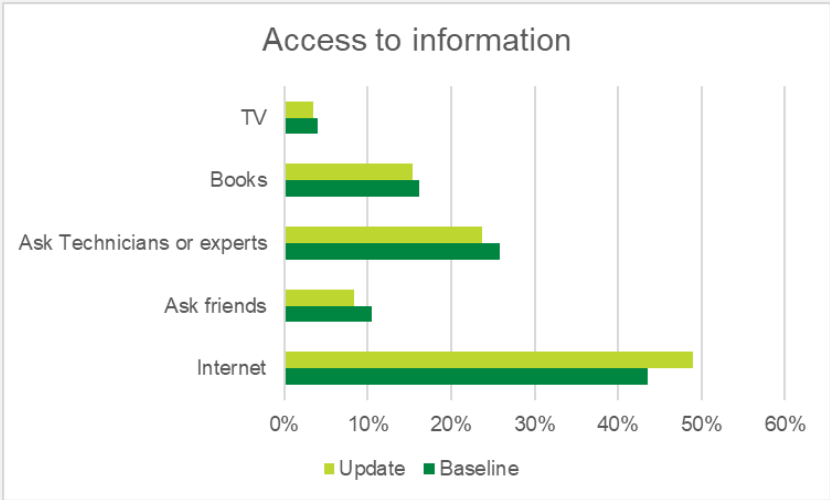
The data revealed a notable **decrease in the non - visibility of women in leadership roles within the renewable energy sector (13%)**, with perceptions of women frequently or always holding leadership positions rising. Positive attitudes toward women leaders also grew, as agreement that women make better leaders increased, signalling a gradual shift in traditional leadership stereotypes. However, uncertainty about equal career advancement opportunities persisted, with neutral responses rising, indicating ongoing challenges in achieving perceived equality. Perceptions of pay fairness improved, as disagreement with experiencing gender-based pay inequality increased. Experiences with gender-based discrimination presented a mixed picture: while more respondents strongly disagreed with facing discrimination, the percentage who strongly agreed also grew, highlighting that discrimination remained a concern for a considerable group. The SKILLBILL project contributed positively to work-life balance for women, with some reporting improvement. Interest in renewable energy education grew as well, with future plans to enrol rising, despite a slight drop in current enrolment. Access to women-focused training resources improved, as the share of respondents finding access easy increased and difficulties decreased, though challenges remain for many. Finally, access to professional development opportunities such as workshops and seminars showed steady growth, reflecting expanding opportunities for learning and growth in the sector.

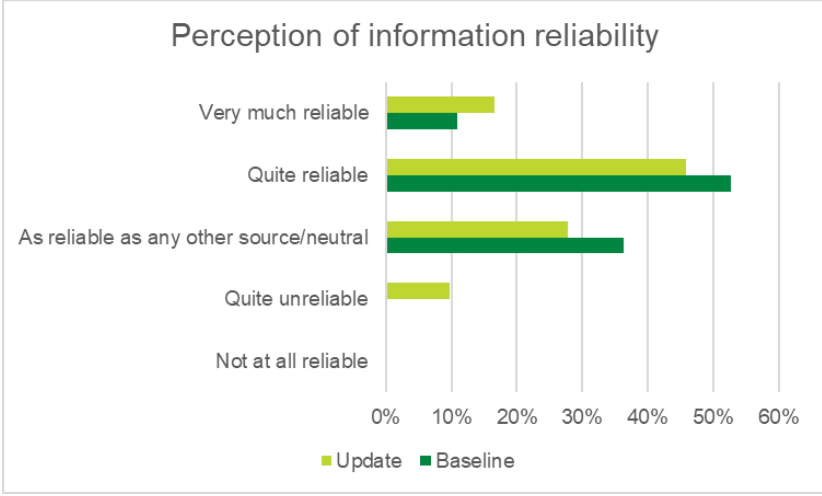
7.8 Awareness of RES

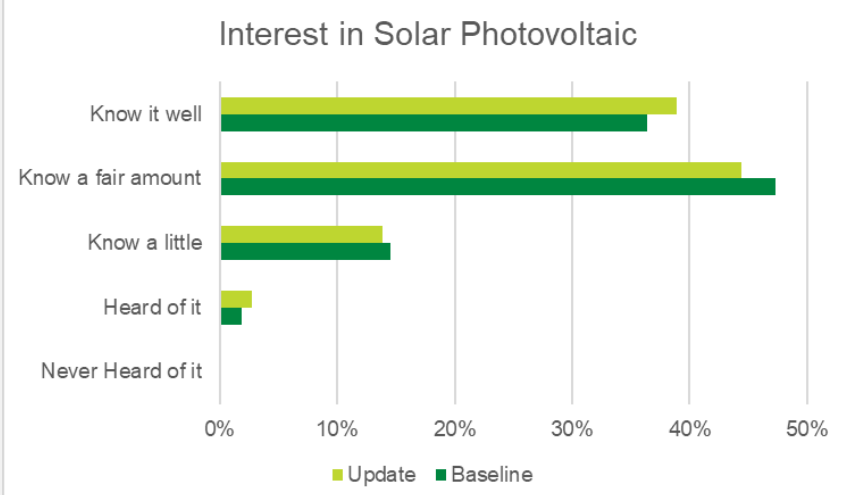
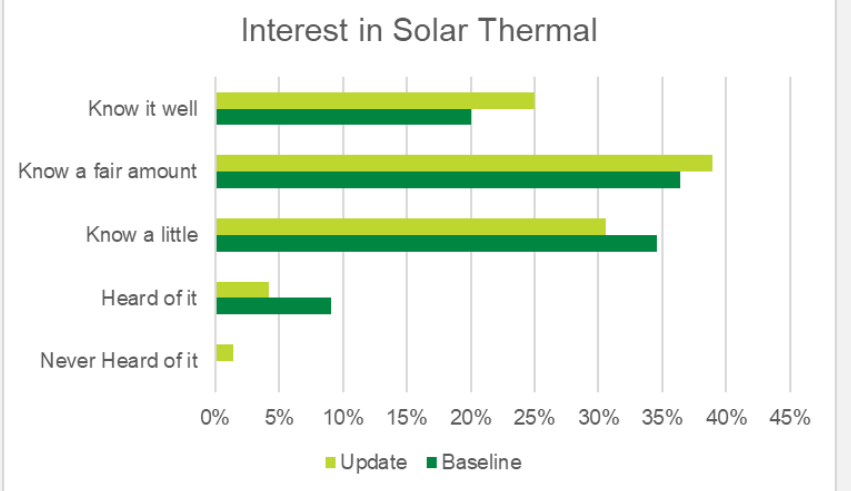
The following subsection presents and interprets the key results and insights gathered from the activities within the SKILLBILL project against the assessment of Awareness of RES.

7.8.1 Analysis and interpretation of awareness of RES

Table 24. Interpretation of Results for Awareness of RES

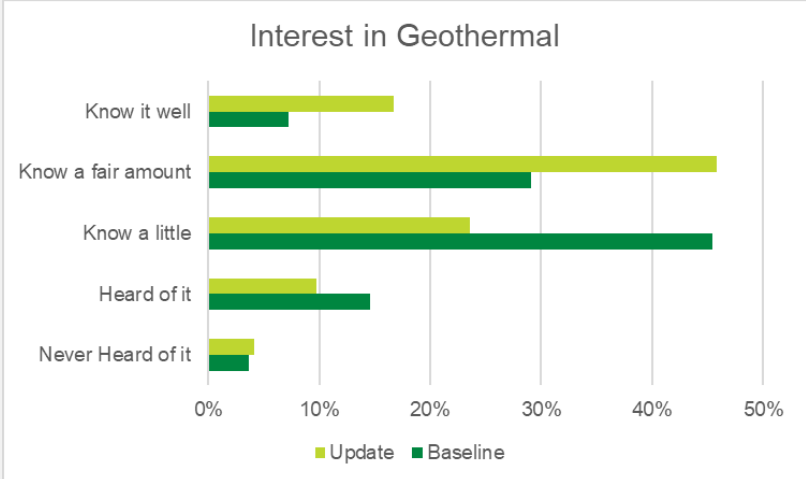
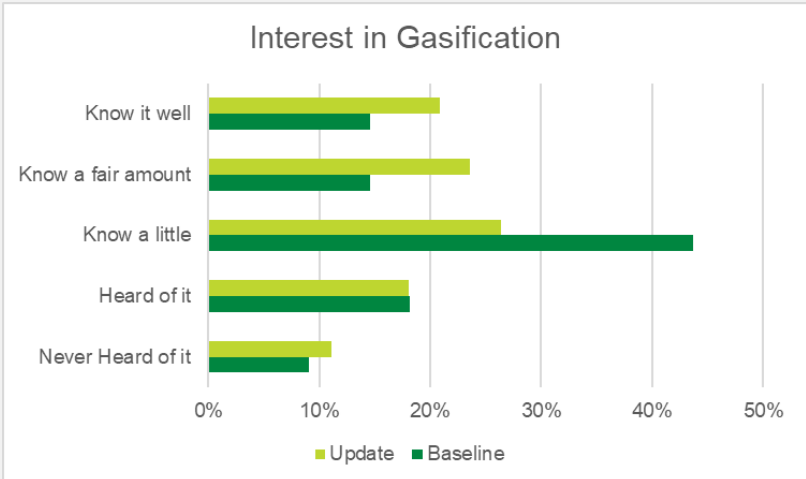
Objective	Indicators	Question/Analysis																		
<p>O6.1 Information, dissemination and public perception regarding renewable energy sources and technologies</p>	<p>Access to information</p>	<p>Percentage of respondents who selected each option provided in the multiple-choice question to determine the most frequently used sources for information on renewable energy systems</p> <p><i>[Where do you usually search for information on Renewable Energy Systems? Multiple choice (you may choose more than one): Internet, Ask friends, Ask technicians or experts, Books, TV]</i></p>  <table border="1"> <caption>Access to information - Data from Chart</caption> <thead> <tr> <th>Source</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>TV</td> <td>~5</td> <td>~5</td> </tr> <tr> <td>Books</td> <td>~16</td> <td>~17</td> </tr> <tr> <td>Ask Technicians or experts</td> <td>~24</td> <td>~26</td> </tr> <tr> <td>Ask friends</td> <td>~8</td> <td>~11</td> </tr> <tr> <td>Internet</td> <td>~49</td> <td>~44</td> </tr> </tbody> </table> <p>The results showed that most people search for information on Renewable Energy Systems (RES) through the <i>internet</i>, and this has increased from 44% at baseline to 49% after the activities. This suggested that online tools, such as the green portal, helped improve awareness. Asking <i>technicians</i> or <i>experts</i> remained a popular option, with only a small change in the percentage, indicating ongoing trust in professional advice. <i>Books</i> and <i>TV</i> remained less commonly used sources, with little to no change. Interestingly, <i>asking friends</i> slightly decreased, showing that informal sources are becoming less important compared to more structured or digital options. Overall, the activities seemed to have a positive impact, especially in encouraging the use of online resources for learning about RES.</p>	Source	Update (%)	Baseline (%)	TV	~5	~5	Books	~16	~17	Ask Technicians or experts	~24	~26	Ask friends	~8	~11	Internet	~49	~44
Source	Update (%)	Baseline (%)																		
TV	~5	~5																		
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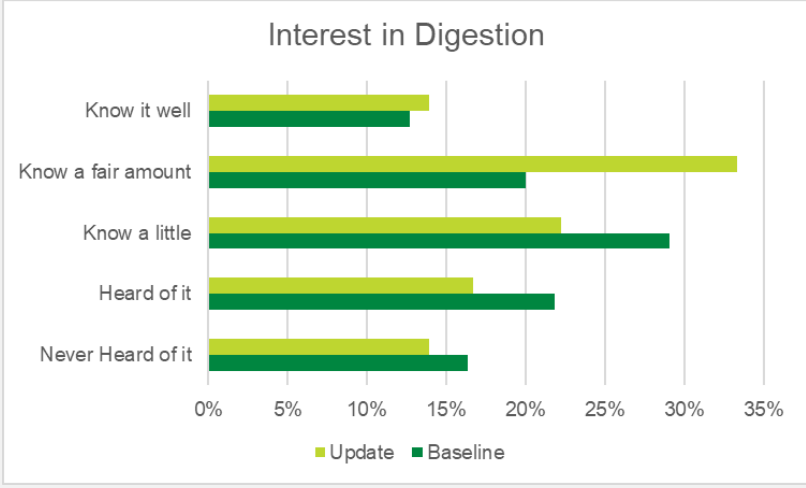
Objective	Indicators	Question/Analysis																		
	Perception of information reliability	<p>Perceived reliability rate</p> <p><i>[How reliable do you find the information shared on the internet? Scale: Not at all reliable to very much reliable]</i></p>  <table border="1" data-bbox="576 376 1401 869"> <caption>Perception of information reliability</caption> <thead> <tr> <th>Reliability Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very much reliable</td> <td>17</td> <td>11</td> </tr> <tr> <td>Quite reliable</td> <td>46</td> <td>53</td> </tr> <tr> <td>As reliable as any other source/neutral</td> <td>28</td> <td>36</td> </tr> <tr> <td>Quite unreliable</td> <td>10</td> <td>0</td> </tr> <tr> <td>Not at all reliable</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>The majority of respondents considered internet information on Renewable Energy Systems to be reliable, with a slight positive shift over time. The percentage of those who find it <i>very reliable</i> increased from 11% to 17%, showing growing trust. While the number of people who find it <i>quite reliable</i> also increased in absolute terms, the percentage slightly dropped from 53% to 46%, likely due to more people selecting the <i>very reliable</i> option. The number of <i>neutral</i> responses stayed the same (20 people), but dropped in percentage from 36% to 28%. Notably, 7 respondents (10%) viewed the internet as <i>quite unreliable</i>, compared to none at baseline, suggesting that while trust was generally improving, there may be concerns among a small group. Overall, trust in internet-based information remained strong and even slightly increased, likely reflecting the impact of quality online content shared through the project.</p>	Reliability Level	Update (%)	Baseline (%)	Very much reliable	17	11	Quite reliable	46	53	As reliable as any other source/neutral	28	36	Quite unreliable	10	0	Not at all reliable	0	0
	Reliability Level	Update (%)	Baseline (%)																	
Very much reliable	17	11																		
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As reliable as any other source/neutral	28	36																		
Quite unreliable	10	0																		
Not at all reliable	0	0																		
Interest in Renewable Energy Sources and Technologies	<p>Interest Score for different Technologies (Rating for each renewable energy technology)</p> <p><i>[How would you rate your interest in: Solar photovoltaic, Solar thermal, Hydrogen, Wind, Biofuel (biodiesel, bioethanol, biomethane), Hydro, Geothermal, Gasification, Digestion, Biomass combustion, Heat recovery, Energy storage, Heat pumps, Oceans. Scale: Never Heard of it to Know it well]</i></p>																			

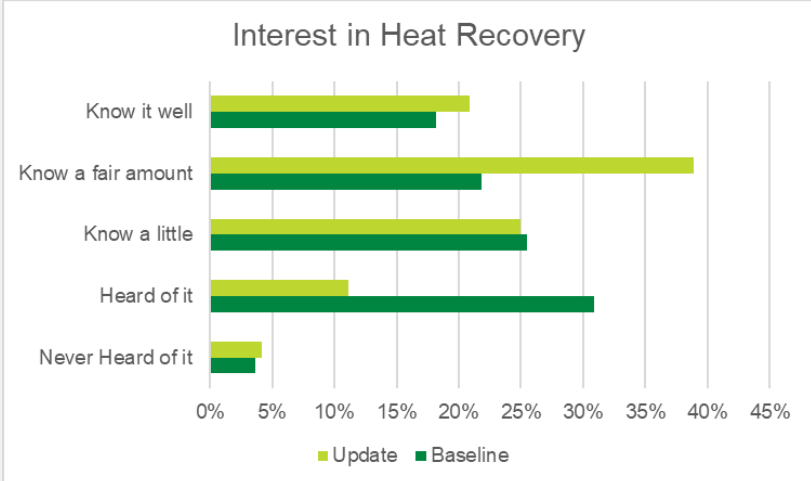
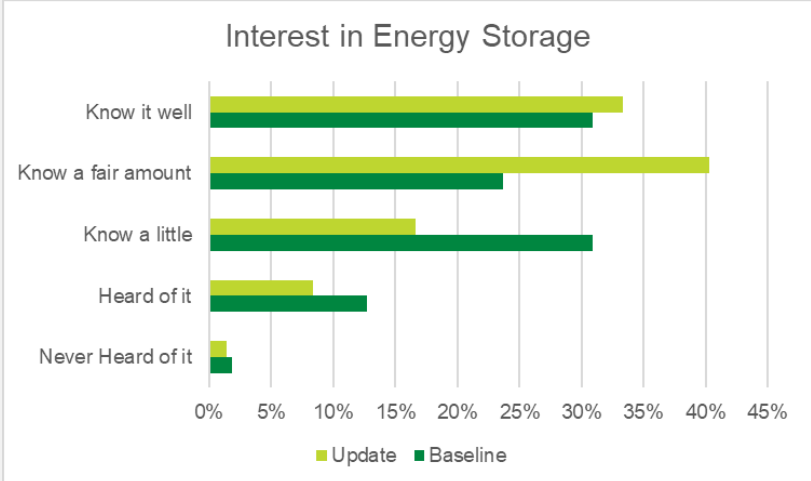
Objective	Indicators	Question/Analysis																		
		 <p>Interest in Solar Photovoltaic</p> <table border="1"> <thead> <tr> <th>Knowledge Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Know it well</td> <td>39</td> <td>36</td> </tr> <tr> <td>Know a fair amount</td> <td>44</td> <td>47</td> </tr> <tr> <td>Know a little</td> <td>14</td> <td>15</td> </tr> <tr> <td>Heard of it</td> <td>3</td> <td>2</td> </tr> <tr> <td>Never Heard of it</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	Knowledge Level	Update (%)	Baseline (%)	Know it well	39	36	Know a fair amount	44	47	Know a little	14	15	Heard of it	3	2	Never Heard of it	0	0
		Knowledge Level	Update (%)	Baseline (%)																
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Know a fair amount	44	47																		
Know a little	14	15																		
Heard of it	3	2																		
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<p>Interest in solar photovoltaic technology remained strong. The percentage of participants who said they <i>know it well</i> increased from 36% to 39%, while those who <i>know a fair amount</i> decreased slightly from 47% to 44%. Very few had only <i>heard of it</i> (2–3%), and none reported never hearing of it. This suggested a high and stable awareness and interest, with a slight increase in deeper knowledge.</p>																				
 <p>Interest in Solar Thermal</p> <table border="1"> <thead> <tr> <th>Knowledge Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Know it well</td> <td>25</td> <td>20</td> </tr> <tr> <td>Know a fair amount</td> <td>39</td> <td>36</td> </tr> <tr> <td>Know a little</td> <td>31</td> <td>35</td> </tr> <tr> <td>Heard of it</td> <td>4</td> <td>9</td> </tr> <tr> <td>Never Heard of it</td> <td>1</td> <td>0</td> </tr> </tbody> </table>	Knowledge Level	Update (%)	Baseline (%)	Know it well	25	20	Know a fair amount	39	36	Know a little	31	35	Heard of it	4	9	Never Heard of it	1	0		
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<p>Awareness and interest in solar thermal energy increased moderately. The share of respondents who <i>knew it well</i> rose from 20% to 25%, while those <i>knowing a fair amount</i> increased from 36% to 39%. Fewer people reported only hearing of it or <i>knowing just a little</i>. This indicated improved understanding and growing engagement with solar thermal topics.</p>																				

Objective	Indicators	Question/Analysis																		
		<div data-bbox="576 226 1407 719" data-label="Figure"> <table border="1"> <caption>Interest in Hydrogen</caption> <thead> <tr> <th>Knowledge Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Know it well</td> <td>20</td> <td>20</td> </tr> <tr> <td>Know a fair amount</td> <td>39</td> <td>35</td> </tr> <tr> <td>Know a little</td> <td>25</td> <td>35</td> </tr> <tr> <td>Heard of it</td> <td>14</td> <td>11</td> </tr> <tr> <td>Never Heard of it</td> <td>3</td> <td>0</td> </tr> </tbody> </table> </div> <div data-bbox="571 741 1449 1010" data-label="Text"> <p>Interest in hydrogen also improved, particularly in deeper knowledge. The percentage of respondents who <i>knew a fair amount</i> rose from 35% to 39%, while those who <i>knew it well</i> remained stable around 20%. However, there was an increase in respondents who had <i>only heard of it</i> or <i>never heard of it</i> (from 0% to 3%). This suggested a need for continued education to shift superficial awareness into deeper knowledge.</p> </div>	Knowledge Level	Update (%)	Baseline (%)	Know it well	20	20	Know a fair amount	39	35	Know a little	25	35	Heard of it	14	11	Never Heard of it	3	0
		Knowledge Level	Update (%)	Baseline (%)																
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<div data-bbox="576 1077 1407 1570" data-label="Figure"> <table border="1"> <caption>Interest in Wind</caption> <thead> <tr> <th>Knowledge Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Know it well</td> <td>25</td> <td>20</td> </tr> <tr> <td>Know a fair amount</td> <td>38</td> <td>38</td> </tr> <tr> <td>Know a little</td> <td>32</td> <td>38</td> </tr> <tr> <td>Heard of it</td> <td>6</td> <td>4</td> </tr> <tr> <td>Never Heard of it</td> <td>0</td> <td>0</td> </tr> </tbody> </table> </div> <div data-bbox="571 1592 1449 1827" data-label="Text"> <p>Interest in wind energy remained consistently high. The number of people who <i>knew it well</i> increased from 20% to 25%, and those <i>knowing a fair amount</i> stayed at 38%. The number who <i>knew a little</i> decreased slightly, indicating that participants may be gaining a deeper understanding. Wind energy continued to be one of the most well-known and trusted RES technologies.</p> </div>	Knowledge Level	Update (%)	Baseline (%)	Know it well	25	20	Know a fair amount	38	38	Know a little	32	38	Heard of it	6	4	Never Heard of it	0	0		
Knowledge Level	Update (%)	Baseline (%)																		
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Objective	Indicators	Question/Analysis																		
		<div data-bbox="576 226 1401 714"> <table border="1"> <caption>Interest in Biofuels</caption> <thead> <tr> <th>Knowledge Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Know it well</td> <td>22%</td> <td>29%</td> </tr> <tr> <td>Know a fair amount</td> <td>35%</td> <td>33%</td> </tr> <tr> <td>Know a little</td> <td>26%</td> <td>16%</td> </tr> <tr> <td>Heard of it</td> <td>14%</td> <td>20%</td> </tr> <tr> <td>Never Heard of it</td> <td>3%</td> <td>2%</td> </tr> </tbody> </table> </div> <p data-bbox="571 741 1437 969">Awareness of biofuels saw some shifts. Those who <i>knew a fair amount</i> increased slightly from 33% to 35%, but those who <i>knew it well</i> dropped from 29% to 22%. The increase in respondents who <i>knew a little</i> (from 16% to 26%) suggested more people were introduced to the topic, but fewer felt confident in their deep understanding.</p>	Knowledge Level	Update (%)	Baseline (%)	Know it well	22%	29%	Know a fair amount	35%	33%	Know a little	26%	16%	Heard of it	14%	20%	Never Heard of it	3%	2%
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<div data-bbox="576 1043 1401 1532"> <table border="1"> <caption>Interest in Hydro</caption> <thead> <tr> <th>Knowledge Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Know it well</td> <td>25%</td> <td>18%</td> </tr> <tr> <td>Know a fair amount</td> <td>32%</td> <td>25%</td> </tr> <tr> <td>Know a little</td> <td>29%</td> <td>40%</td> </tr> <tr> <td>Heard of it</td> <td>12%</td> <td>16%</td> </tr> <tr> <td>Never Heard of it</td> <td>2%</td> <td>0%</td> </tr> </tbody> </table> </div> <p data-bbox="571 1559 1437 1787">Knowledge of hydro energy improved, especially among those reporting higher familiarity. Respondents who <i>knew it well</i> rose from 18% to 25%, and those with a fair amount of knowledge increased from 25% to 32%. Fewer people reported <i>knowing only a little</i>. This indicated effective knowledge-building around hydro power.</p>	Knowledge Level	Update (%)	Baseline (%)	Know it well	25%	18%	Know a fair amount	32%	25%	Know a little	29%	40%	Heard of it	12%	16%	Never Heard of it	2%	0%		
Knowledge Level	Update (%)	Baseline (%)																		
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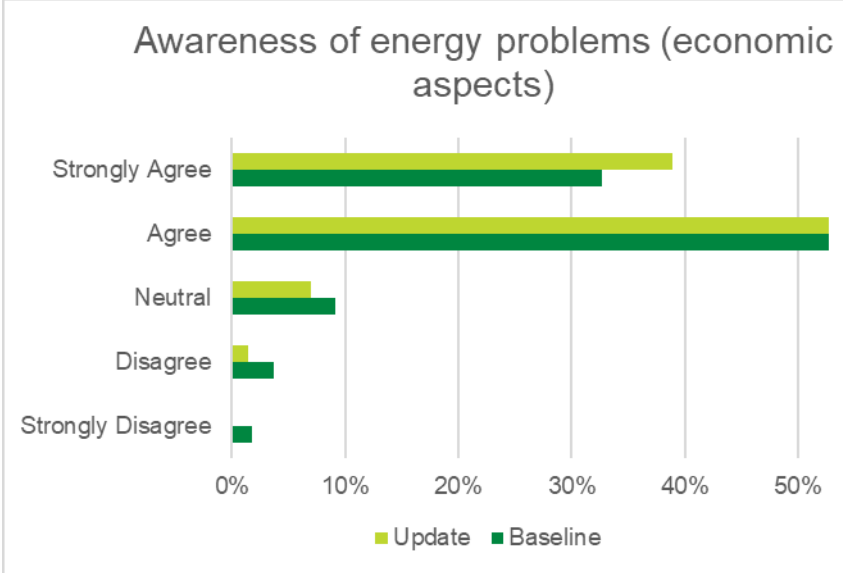
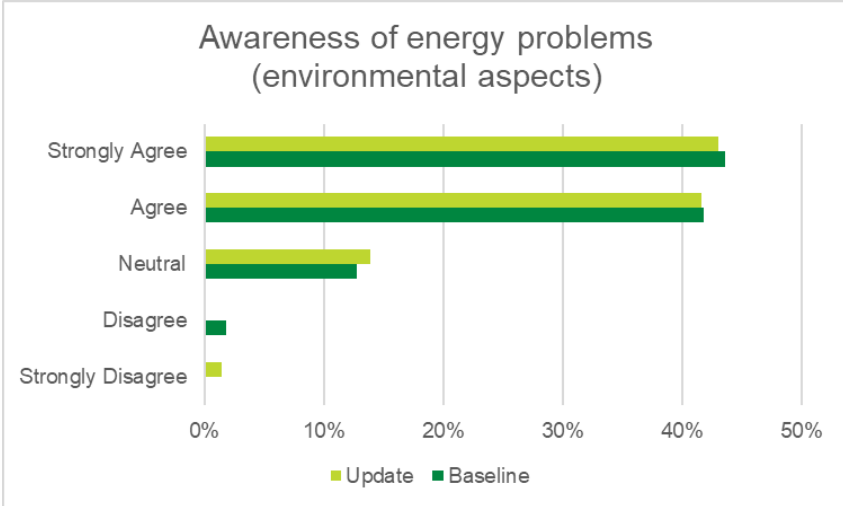
Objective	Indicators	Question/Analysis																		
		 <table border="1"> <caption>Interest in Geothermal</caption> <thead> <tr> <th>Knowledge Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Know it well</td> <td>17</td> <td>7</td> </tr> <tr> <td>Know a fair amount</td> <td>46</td> <td>29</td> </tr> <tr> <td>Know a little</td> <td>24</td> <td>45</td> </tr> <tr> <td>Heard of it</td> <td>10</td> <td>15</td> </tr> <tr> <td>Never Heard of it</td> <td>5</td> <td>4</td> </tr> </tbody> </table>	Knowledge Level	Update (%)	Baseline (%)	Know it well	17	7	Know a fair amount	46	29	Know a little	24	45	Heard of it	10	15	Never Heard of it	5	4
		Knowledge Level	Update (%)	Baseline (%)																
Know it well	17	7																		
Know a fair amount	46	29																		
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<p>Geothermal energy saw a noticeable improvement in awareness. The share of respondents who <i>know it well</i> increased significantly from 7% to 17%, and those who <i>knew a fair amount</i> increased from 29% to 46%. Those <i>knowing only a little</i> decreased from 45% to 24%, showing a positive trend towards more in-depth knowledge.</p>																				
 <table border="1"> <caption>Interest in Gasification</caption> <thead> <tr> <th>Knowledge Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Know it well</td> <td>21</td> <td>15</td> </tr> <tr> <td>Know a fair amount</td> <td>24</td> <td>15</td> </tr> <tr> <td>Know a little</td> <td>26</td> <td>44</td> </tr> <tr> <td>Heard of it</td> <td>18</td> <td>18</td> </tr> <tr> <td>Never Heard of it</td> <td>11</td> <td>9</td> </tr> </tbody> </table>	Knowledge Level	Update (%)	Baseline (%)	Know it well	21	15	Know a fair amount	24	15	Know a little	26	44	Heard of it	18	18	Never Heard of it	11	9		
Knowledge Level	Update (%)	Baseline (%)																		
Know it well	21	15																		
Know a fair amount	24	15																		
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<p>Awareness of gasification also improved. The number of respondents who <i>knew it well</i> increased from 15% to 21%, and those with a fair amount of knowledge rose from 15% to 24%. However, the share of participants who only <i>knew a little</i> dropped from 44% to 26%, suggesting some are progressing to more advanced understanding.</p>																				

Objective	Indicators	Question/Analysis																		
		 <p>Interest in Digestion</p> <table border="1"> <thead> <tr> <th>Knowledge Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Know it well</td> <td>14</td> <td>13</td> </tr> <tr> <td>Know a fair amount</td> <td>33</td> <td>20</td> </tr> <tr> <td>Know a little</td> <td>23</td> <td>29</td> </tr> <tr> <td>Heard of it</td> <td>17</td> <td>22</td> </tr> <tr> <td>Never Heard of it</td> <td>14</td> <td>17</td> </tr> </tbody> </table>	Knowledge Level	Update (%)	Baseline (%)	Know it well	14	13	Know a fair amount	33	20	Know a little	23	29	Heard of it	17	22	Never Heard of it	14	17
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Know it well	14	13																		
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Never Heard of it	14	17																		
<p>There was moderate growth in interest in digestion (e.g., anaerobic digestion). The percentage of those who <i>knew a fair amount</i> increased from 20% to 33%, and those who <i>knew it well</i> also rose slightly. However, a notable portion reported only <i>hearing of it</i> or <i>knowing a little</i>, indicating space for further engagement.</p>																				
		 <p>Interest In biomass Combustion</p> <table border="1"> <thead> <tr> <th>Knowledge Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Know it well</td> <td>28</td> <td>16</td> </tr> <tr> <td>Know a fair amount</td> <td>24</td> <td>20</td> </tr> <tr> <td>Know a little</td> <td>22</td> <td>35</td> </tr> <tr> <td>Heard of it</td> <td>22</td> <td>24</td> </tr> <tr> <td>Never Heard of it</td> <td>4</td> <td>6</td> </tr> </tbody> </table>	Knowledge Level	Update (%)	Baseline (%)	Know it well	28	16	Know a fair amount	24	20	Know a little	22	35	Heard of it	22	24	Never Heard of it	4	6
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<p>Interest in biomass combustion has grown. Those who knew it well nearly doubled from 16% to 28%, and those with a <i>fair amount of knowledge</i> rose slightly. At the same time, fewer respondents reported <i>only knowing a little</i>. This has pointed to increasing awareness and depth of understanding in this area.</p>																				

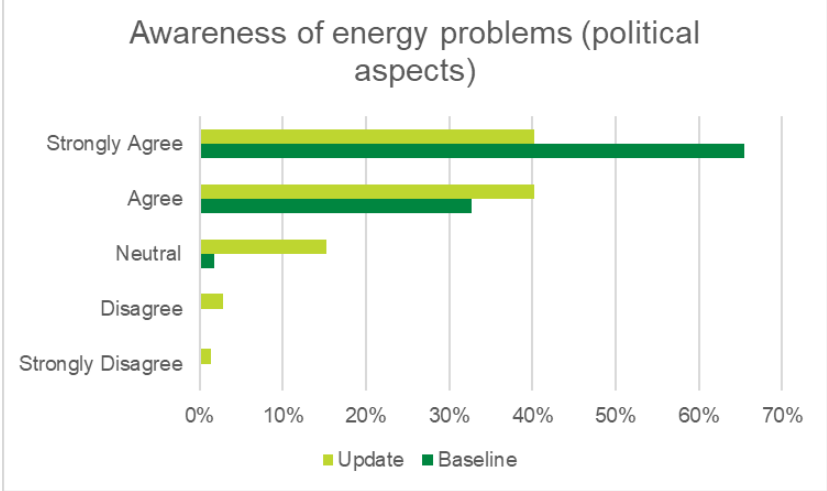
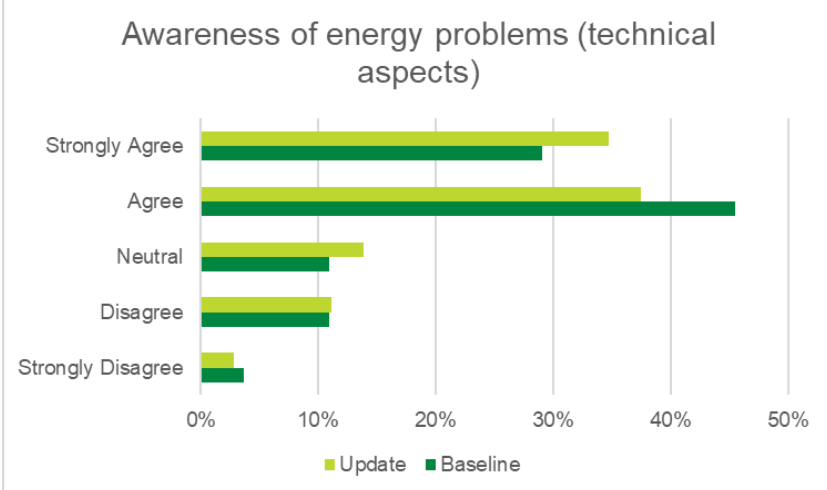
Objective	Indicators	Question/Analysis																		
		 <p>Interest in Heat Recovery</p> <table border="1"> <thead> <tr> <th>Knowledge Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Know it well</td> <td>21</td> <td>18</td> </tr> <tr> <td>Know a fair amount</td> <td>39</td> <td>22</td> </tr> <tr> <td>Know a little</td> <td>25</td> <td>26</td> </tr> <tr> <td>Heard of it</td> <td>11</td> <td>31</td> </tr> <tr> <td>Never Heard of it</td> <td>4</td> <td>3</td> </tr> </tbody> </table>	Knowledge Level	Update (%)	Baseline (%)	Know it well	21	18	Know a fair amount	39	22	Know a little	25	26	Heard of it	11	31	Never Heard of it	4	3
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<p>Interest in heat recovery improved significantly. Respondents who <i>knew a fair amount</i> increased from 22% to 39%, and those who <i>knew it well</i> also rose. The percentage of those who <i>had only heard of it</i> dropped sharply, suggesting effective awareness-raising through project activities.</p>																				
 <p>Interest in Energy Storage</p> <table border="1"> <thead> <tr> <th>Knowledge Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Know it well</td> <td>33</td> <td>31</td> </tr> <tr> <td>Know a fair amount</td> <td>40</td> <td>24</td> </tr> <tr> <td>Know a little</td> <td>16</td> <td>31</td> </tr> <tr> <td>Heard of it</td> <td>8</td> <td>13</td> </tr> <tr> <td>Never Heard of it</td> <td>1</td> <td>2</td> </tr> </tbody> </table>	Knowledge Level	Update (%)	Baseline (%)	Know it well	33	31	Know a fair amount	40	24	Know a little	16	31	Heard of it	8	13	Never Heard of it	1	2		
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<p>Energy storage saw one of the strongest improvements. The number of people who <i>knew a fair amount</i> increased from 24% to 40%, and those who <i>knew it well</i> rose from 31% to 33%. Overall, interest and understanding are high and improving, reflecting the growing relevance of storage solutions in RES systems.</p>																				

Objective	Indicators	Question/Analysis																		
		 <p>Interest in Heat Pumps</p> <table border="1"> <thead> <tr> <th>Knowledge Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Know it well</td> <td>26</td> <td>22</td> </tr> <tr> <td>Know a fair amount</td> <td>35</td> <td>18</td> </tr> <tr> <td>Know a little</td> <td>27</td> <td>43</td> </tr> <tr> <td>Heard of it</td> <td>8</td> <td>16</td> </tr> <tr> <td>Never Heard of it</td> <td>4</td> <td>0</td> </tr> </tbody> </table>	Knowledge Level	Update (%)	Baseline (%)	Know it well	26	22	Know a fair amount	35	18	Know a little	27	43	Heard of it	8	16	Never Heard of it	4	0
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Know a little	27	43																		
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<p>Interest in heat pumps improved noticeably. Those who <i>knew a fair amount</i> increased from 18% to 35%, and those who <i>knew it well</i> increased from 22% to 26%. Fewer people reported low levels of familiarity, which suggested that awareness-raising activities had a positive impact.</p>																				
 <p>Interest in Ocean Energy</p> <table border="1"> <thead> <tr> <th>Knowledge Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Know it well</td> <td>10</td> <td>5</td> </tr> <tr> <td>Know a fair amount</td> <td>25</td> <td>20</td> </tr> <tr> <td>Know a little</td> <td>27</td> <td>29</td> </tr> <tr> <td>Heard of it</td> <td>30</td> <td>36</td> </tr> <tr> <td>Never Heard of it</td> <td>10</td> <td>9</td> </tr> </tbody> </table>	Knowledge Level	Update (%)	Baseline (%)	Know it well	10	5	Know a fair amount	25	20	Know a little	27	29	Heard of it	30	36	Never Heard of it	10	9		
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<p>Interest in ocean energy (tidal/wave) showed moderate improvement. Respondents who <i>knew it well</i> doubled from 5% to 10%, and those <i>knowing a fair amount</i> rose from 20% to 25%. However, many fell into the lower awareness categories, indicating a need for further education in this area.</p>																				
<p>-----</p> <p>When comparing all renewable energy technologies, solar photovoltaic, wind, and energy storage stood out as the most well-known and well-understood technologies across both time points. They consistently scored high in the <i>know it well</i> and <i>know a fair amount</i> categories.</p> <p>Technologies such as geothermal, heat recovery, and biomass combustion showed the most significant growth in deeper</p>																				

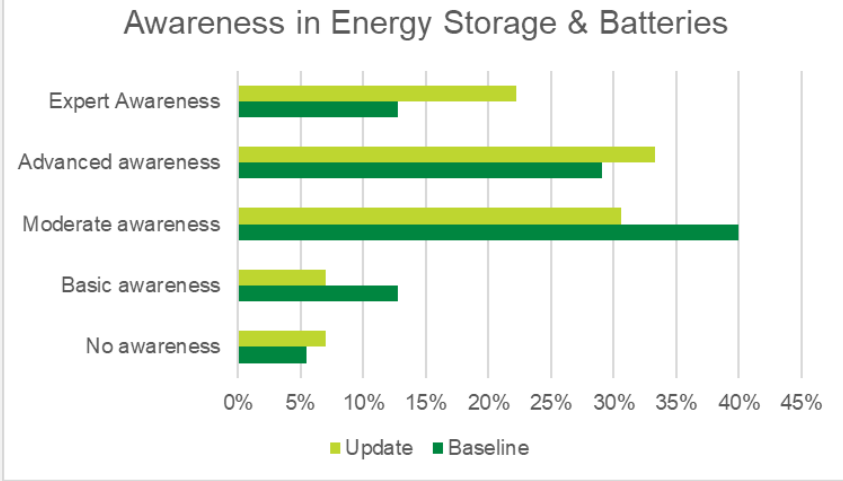
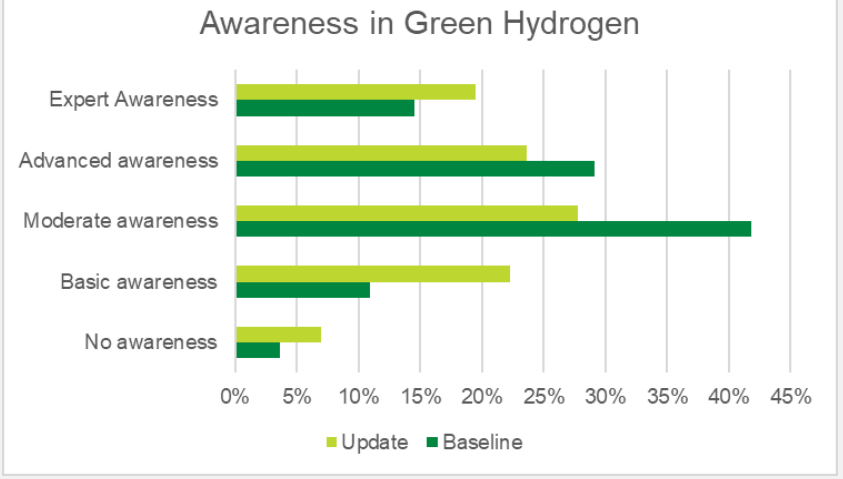
Objective	Indicators	Question/Analysis																		
		<p>knowledge, suggesting that project activities were particularly effective in promoting these lesser-known options.</p> <p>On the other hand, biofuels, digestion, gasification, and ocean energy had a relatively high share of participants who either only <i>knew a little</i> or had <i>just heard of them</i>. This indicated a need for more targeted awareness-raising and educational efforts to boost familiarity and understanding of these options.</p> <div data-bbox="576 584 1422 1070" data-label="Figure"> <table border="1"> <caption>Interest in RES Technologies (Cumulative)</caption> <thead> <tr> <th>Reliability Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Very much reliable</td> <td>23%</td> <td>19%</td> </tr> <tr> <td>Quite reliable</td> <td>36%</td> <td>29%</td> </tr> <tr> <td>As reliable as any other source/neutral</td> <td>25%</td> <td>33%</td> </tr> <tr> <td>Quite unreliable</td> <td>12%</td> <td>16%</td> </tr> <tr> <td>Not at all reliable</td> <td>4%</td> <td>3%</td> </tr> </tbody> </table> </div> <p>The cumulative awareness of RES technologies showed a notable shift in perceptions between the baseline and the update. Initially, a significant portion of respondents (33%) viewed RES as <i>neutral</i> in terms of reliability, but this perception slightly declined to 25% in the update. At the same time, confidence in renewables increased, with those rating them as <i>quite reliable</i> rising from 29% to 36%, and those who saw them as <i>very much reliable</i> increasing from 19% to 23%. Thus, the percentage of respondents who are aware of / interested in RES increased by approximately 11%. Meanwhile, negative perceptions remained low, with only minor changes—<i>not at all reliable</i> rose slightly from 3% to 4%, and <i>quite unreliable</i> dropped from 16% to 12%. This trend suggested a growing trust and positive awareness in the reliability of RES technologies among respondents, marking progress in public and stakeholder understanding of renewable energy systems.</p> <p>In general, participants' interest and awareness increased across all technologies, demonstrating a positive impact from the various activities, including working groups, VET, the green portal, and ESP courses. However, the level of improvement varies, suggesting that future actions could focus more on underrepresented or lower-awareness technologies.</p>	Reliability Level	Update (%)	Baseline (%)	Very much reliable	23%	19%	Quite reliable	36%	29%	As reliable as any other source/neutral	25%	33%	Quite unreliable	12%	16%	Not at all reliable	4%	3%
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<p>O6.2 Promoting awareness and understanding of energy-related issues, trends, and policies</p>	<p>Awareness of energy problems</p>	<p>Aspect Agreement Score: calculation of the score for stronger agreement with the notion that energy problems are related to</p> <p><i>[Do you agree that energy problems are related to economic aspects? Scale: Strongly Disagree to Strongly Agree]</i></p>  <table border="1"> <caption>Awareness of energy problems (economic aspects)</caption> <thead> <tr> <th>Agreement Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>39</td> <td>33</td> </tr> <tr> <td>Agree</td> <td>53</td> <td>53</td> </tr> <tr> <td>Neutral</td> <td>7</td> <td>9</td> </tr> <tr> <td>Disagree</td> <td>2</td> <td>4</td> </tr> <tr> <td>Strongly Disagree</td> <td>0</td> <td>2</td> </tr> </tbody> </table> <p>There was strong agreement among respondents that energy problems were related to economic aspects. At both baseline and update stages, over half (53%) <i>agreed</i> with this statement, while the share of those who <i>strongly agreed</i> increased from 33% to 39%. At the same time, <i>disagreement</i> dropped slightly, and no one <i>strongly disagreed</i> in the update phase. This indicated that participants increasingly recognise the economic implications of energy issues, such as affordability, investments, and cost-efficiency.</p>	Agreement Level	Update (%)	Baseline (%)	Strongly Agree	39	33	Agree	53	53	Neutral	7	9	Disagree	2	4	Strongly Disagree	0	2
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		<p>Environmental concerns were consistently recognised as being closely related to energy problems. The percentage of respondents who <i>strongly agreed</i> remained high (44% at baseline, 43% at update), and <i>agreement</i> overall stayed stable (42%). While <i>neutrality</i> increased slightly (from 13% to 14%), <i>disagreement</i> remained very low. These results confirmed that environmental impacts—such as emissions, pollution, and resource depletion—were widely understood as key components of energy challenges.</p> <p><i>[Do you agree that energy problems are related to social aspects? Scale: Strongly Disagree to Strongly Agree]</i></p> <div data-bbox="576 685 1406 1178" data-label="Figure"> <table border="1"> <caption>Awareness of energy problems (social aspects)</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>32</td> <td>31</td> </tr> <tr> <td>Agree</td> <td>47</td> <td>53</td> </tr> <tr> <td>Neutral</td> <td>14</td> <td>13</td> </tr> <tr> <td>Disagree</td> <td>6</td> <td>0</td> </tr> <tr> <td>Strongly Disagree</td> <td>0</td> <td>0</td> </tr> </tbody> </table> </div> <p>Awareness of the social dimension of energy issues was moderately high but slightly more mixed compared to economic and environmental aspects. <i>Agreement</i> slightly decreased from 53% to 47%, while <i>strong agreement</i> increased slightly from 31% to 32%. Notably, 6% of respondents expressed <i>disagreement</i> in the update phase (none at baseline). This suggested growing awareness but also possible uncertainty or differing opinions on how energy intersects with social justice, equity, or access.</p> <p><i>[Do you agree that energy problems are related to political aspects? Scale: Strongly Disagree to Strongly Agree]</i></p>	Response	Update (%)	Baseline (%)	Strongly Agree	32	31	Agree	47	53	Neutral	14	13	Disagree	6	0	Strongly Disagree	0	0
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Objective	Indicators	Question/Analysis
		<p>recognised, there may be varying levels of understanding or confidence in this area.</p> <hr/> <p>Across the five dimensions—economic, environmental, social, political, and technical—the strongest consensus was found around the economic and environmental connections to energy problems, with stable and high levels of agreement and very low disagreement.</p> <p>Social and technical aspects were acknowledged, but with slightly more variation in responses. The social aspect, in particular, showed a small increase in disagreement, suggesting the need for further awareness-raising on how energy systems affect communities, public health, and social equity.</p> <p>The most notable change was in the perception of political aspects, where strong agreement dropped significantly, and neutrality rose. This reflected increased critical thinking or new perspectives introduced through the project’s activities.</p> <p>These findings highlighted the importance of taking a holistic and multidimensional approach when designing awareness-raising actions and educational materials related to energy systems, ensuring that economic, environmental, technical, social, and political dimensions were all addressed to support a well-rounded understanding and informed decision-making.</p>
	<p>Awareness of emerging trends in RES</p>	<p>Average Awareness Score for Each Trend</p> <p><i>[How aware are you of the following emerging trends or advancements in renewable energy research and development? Energy Storage Technologies (Advancements in battery technologies, such as lithium-ion batteries, flow batteries, and solid-state batteries), Green Hydrogen, Floating Solar Farms/Plants, Biogas and Bioenergy, Artificial Intelligence (AI) and Renewable Energy (The integration of AI and machine learning algorithms into renewable energy systems is improving efficiency, reliability, and predictive capabilities). Community Renewable Energy Projects/Initiatives Electrification of Transportation, Offshore Wind Energy, Renewable Energy Finance and Investment. Scale: No awareness to Expert Awareness. Please name any other trend that is not stated above: open answer]</i></p>

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		<p style="text-align: center;">Awareness in Energy Storage & Batteries</p>  <table border="1" data-bbox="576 241 1422 719"> <caption>Awareness in Energy Storage & Batteries</caption> <thead> <tr> <th>Awareness Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Expert Awareness</td> <td>22%</td> <td>13%</td> </tr> <tr> <td>Advanced awareness</td> <td>33%</td> <td>29%</td> </tr> <tr> <td>Moderate awareness</td> <td>31%</td> <td>40%</td> </tr> <tr> <td>Basic awareness</td> <td>8%</td> <td>13%</td> </tr> <tr> <td>No awareness</td> <td>7%</td> <td>5%</td> </tr> </tbody> </table> <p>Awareness of battery technology advancements increased slightly. While <i>moderate awareness</i> saw a small decline from 40% to 31%, both <i>advanced awareness</i> and <i>expert awareness</i> rose (29% to 33% and 13% to 22%, respectively). This indicated a growing understanding of the importance of battery innovation in renewable energy, though general awareness remained somewhat moderate overall.</p>	Awareness Level	Update (%)	Baseline (%)	Expert Awareness	22%	13%	Advanced awareness	33%	29%	Moderate awareness	31%	40%	Basic awareness	8%	13%	No awareness	7%	5%
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<p>This area saw an increase in <i>expert awareness</i> from 7% to 19%, but also a rise in <i>no awareness</i> from 5% to 13%. <i>Moderate and advanced awareness</i> levels stayed relatively stable. The trend showed growing interest and knowledge among a niche group, while many participants lacked exposure to the concept.</p>																				
		<p style="text-align: center;">Awareness in Bioenergy</p> <table border="1"> <caption>Awareness in Bioenergy</caption> <thead> <tr> <th>Awareness Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Expert Awareness</td> <td>21%</td> <td>18%</td> </tr> <tr> <td>Advanced awareness</td> <td>29%</td> <td>33%</td> </tr> <tr> <td>Moderate awareness</td> <td>26%</td> <td>31%</td> </tr> <tr> <td>Basic awareness</td> <td>19%</td> <td>14%</td> </tr> <tr> <td>No awareness</td> <td>4%</td> <td>0%</td> </tr> </tbody> </table>	Awareness Level	Update (%)	Baseline (%)	Expert Awareness	21%	18%	Advanced awareness	29%	33%	Moderate awareness	26%	31%	Basic awareness	19%	14%	No awareness	4%	0%
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<p>Respondents demonstrated increased overall awareness. <i>Expert awareness</i> grew from 18% to 21%, and <i>basic awareness</i> also increased. Only a small rise in <i>no awareness</i> was observed (0% to 4%), which confirmed that biogas and bioenergy were relatively well understood within the group.</p>																				

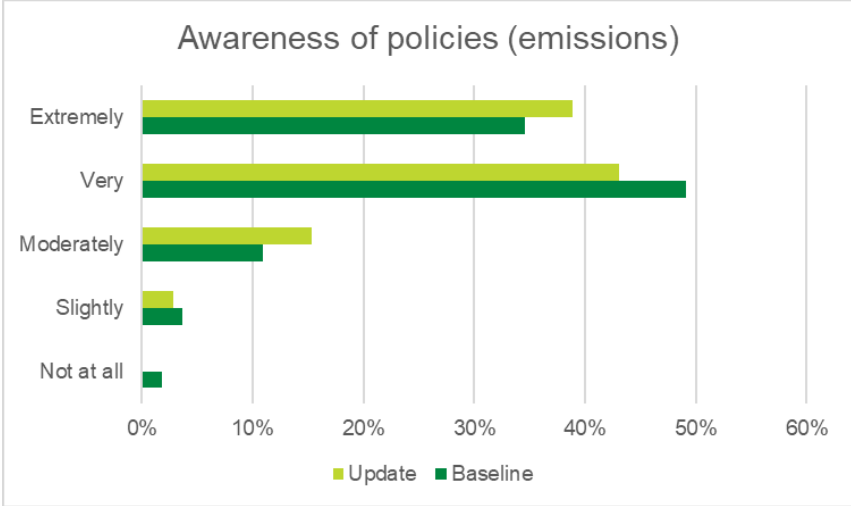
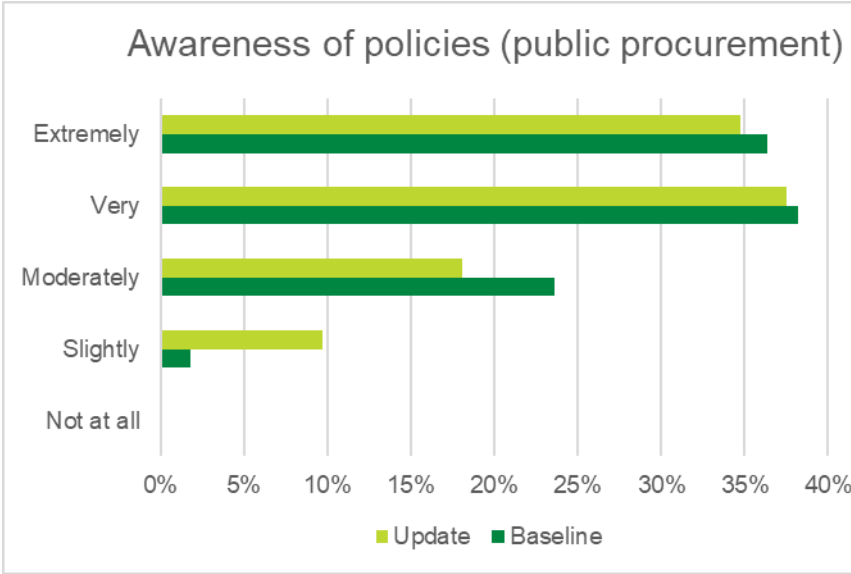
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		<div data-bbox="576 226 1430 719" style="border: 1px solid #ccc; padding: 10px;"> <h3 style="text-align: center;">Awareness in AI and RES</h3> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th>Awareness Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Expert Awareness</td> <td>19%</td> <td>5%</td> </tr> <tr> <td>Advanced awareness</td> <td>25%</td> <td>22%</td> </tr> <tr> <td>Moderate awareness</td> <td>25%</td> <td>35%</td> </tr> <tr> <td>Basic awareness</td> <td>22%</td> <td>29%</td> </tr> <tr> <td>No awareness</td> <td>9%</td> <td>8%</td> </tr> </tbody> </table> </div> <p data-bbox="576 741 1437 931">There was a substantial growth in <i>expert awareness</i> (from 5% to 19%) and a balanced distribution across other categories. While <i>moderate awareness</i> declined, <i>advanced awareness</i> increased, indicating a shift toward deeper knowledge of AI integration in renewable energy systems.</p> <div data-bbox="576 1003 1430 1496" style="border: 1px solid #ccc; padding: 10px; margin-top: 20px;"> <h3 style="text-align: center;">Awareness in Energy Communities</h3> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th>Awareness Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Expert Awareness</td> <td>24%</td> <td>25%</td> </tr> <tr> <td>Advanced awareness</td> <td>26%</td> <td>29%</td> </tr> <tr> <td>Moderate awareness</td> <td>31%</td> <td>31%</td> </tr> <tr> <td>Basic awareness</td> <td>15%</td> <td>13%</td> </tr> <tr> <td>No awareness</td> <td>4%</td> <td>2%</td> </tr> </tbody> </table> </div> <p data-bbox="576 1518 1437 1709"><i>Expert awareness</i> remained high (25% to 24%), and steady awareness levels across all categories implied that community-based projects are widely recognised. However, the limited increase in advanced or expert levels suggested more educational efforts could help deepen this awareness.</p>	Awareness Level	Update (%)	Baseline (%)	Expert Awareness	19%	5%	Advanced awareness	25%	22%	Moderate awareness	25%	35%	Basic awareness	22%	29%	No awareness	9%	8%	Awareness Level	Update (%)	Baseline (%)	Expert Awareness	24%	25%	Advanced awareness	26%	29%	Moderate awareness	31%	31%	Basic awareness	15%	13%	No awareness	4%	2%
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<p>This topic saw a clear improvement in understanding, with <i>expert awareness</i> increasing from 20% to 28%, and <i>moderate awareness</i> also rising. A slight drop in <i>advanced awareness</i> may reflected a re-categorisation as knowledge deepened. Overall, the topic was well-understood and increasingly relevant.</p>																				
<p style="text-align: center;">Awareness in Offshore Wind</p> <table border="1"> <caption>Awareness in Offshore Wind</caption> <thead> <tr> <th>Awareness Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Expert Awareness</td> <td>17%</td> <td>9%</td> </tr> <tr> <td>Advanced awareness</td> <td>19%</td> <td>24%</td> </tr> <tr> <td>Moderate awareness</td> <td>29%</td> <td>33%</td> </tr> <tr> <td>Basic awareness</td> <td>31%</td> <td>31%</td> </tr> <tr> <td>No awareness</td> <td>4%</td> <td>3%</td> </tr> </tbody> </table>	Awareness Level	Update (%)	Baseline (%)	Expert Awareness	17%	9%	Advanced awareness	19%	24%	Moderate awareness	29%	33%	Basic awareness	31%	31%	No awareness	4%	3%		
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<p><i>Expert awareness</i> doubled from 9% to 17%, but the middle categories (moderate and advanced awareness) declined slightly. <i>Basic awareness</i> remained the same. This implied the topic was known but not yet deeply understood by most respondents.</p>																				

Objective	Indicators	Question/Analysis																		
		<div data-bbox="576 226 1406 707" style="text-align: center;"> <h3>Awareness in Energy Finance</h3> <table border="1" style="margin: 10px auto;"> <caption>Awareness in Energy Finance Data</caption> <thead> <tr> <th>Awareness Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Expert Awareness</td> <td>15</td> <td>10</td> </tr> <tr> <td>Advanced awareness</td> <td>34</td> <td>35</td> </tr> <tr> <td>Moderate awareness</td> <td>24</td> <td>26</td> </tr> <tr> <td>Basic awareness</td> <td>20</td> <td>24</td> </tr> <tr> <td>No awareness</td> <td>10</td> <td>8</td> </tr> </tbody> </table> </div> <p data-bbox="576 734 1430 882">Awareness increased gradually across all levels, particularly in <i>expert awareness</i>. The shift suggested growing recognition of the role that finance played in the renewable energy sector and a maturing understanding of related mechanisms.</p> <p data-bbox="576 909 1430 1249">Across all categories, there was a general trend of increased awareness, especially in the expert category, signalling a positive shift toward deeper understanding of advanced and emerging renewable energy trends. While technologies like battery storage, biogas, and electrification of transport showed strong improvements, topics like floating solar and offshore wind faced some gaps in basic exposure. Notably, AI in renewable energy experienced one of the largest jumps in expert-level awareness, reflecting growing interest in digitalisation and smart technologies.</p> <p data-bbox="576 1276 1430 1536">The wide range of responses to the open-ended question also highlighted an expanding knowledge base in the field, including mentions of blockchain, hybrid systems, Carbon Capture Utilisation and Storage, synthetic fuels, and digitalisation. This suggested that while general awareness was increasing, there was also a growing curiosity about highly specialised and technical innovations in the sector.</p>	Awareness Level	Update (%)	Baseline (%)	Expert Awareness	15	10	Advanced awareness	34	35	Moderate awareness	24	26	Basic awareness	20	24	No awareness	10	8
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Awareness of policies	<p data-bbox="576 1581 1270 1608">Policy Influence Score for Each Policy/Regulation</p> <p data-bbox="576 1635 1430 1816"><i>[According to your knowledge, how do the following policies and regulations influence the growth of renewable energy industries? Incentives and subsidies, Renewable Portfolio Standards (a certain percentage of electricity generation should come from RES, Net-metering, Regulations governing grid access and interconnection, Emissions limits/environmental regulations, Public Procurement Policies (prioritising renewable energy sources). Scale: Not at All to Extremely]</i></p>																			

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<p>Participants consistently perceived incentives and subsidies as highly influential in promoting the renewable energy sector. In both the baseline and update data, around 40% of respondents rated them as <i>extremely impactful</i>. Although the <i>very</i> category saw a slight drop (from 42% to 36%), the combined share of high ratings (<i>very and extremely</i>) remained dominant. This suggested that financial support mechanisms continued to be widely recognised as critical drivers of renewable energy growth.</p>																				
		<table border="1"> <caption>Awareness of policies (renewable portfolio standards)</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Extremely</td> <td>22</td> <td>35</td> </tr> <tr> <td>Very</td> <td>49</td> <td>44</td> </tr> <tr> <td>Moderately</td> <td>19</td> <td>13</td> </tr> <tr> <td>Slightly</td> <td>10</td> <td>9</td> </tr> <tr> <td>Not at all</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	Category	Update (%)	Baseline (%)	Extremely	22	35	Very	49	44	Moderately	19	13	Slightly	10	9	Not at all	0	0
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<p>Awareness of the role of Renewable Portfolio Standards increased slightly in the <i>very</i> category (from 44% to 49%). However, the <i>extremely</i> influential rating dropped notably (from 35% to 22%). This may indicate a shift in perception—while Renewable Portfolio Standards were seen as important, fewer respondents consider it a decisive factor, possibly due to limited implementation or visibility in some regions.</p>																				

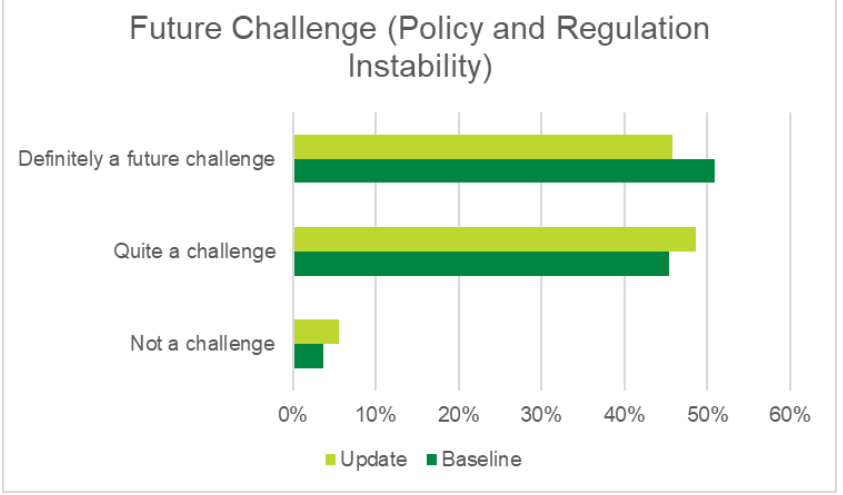
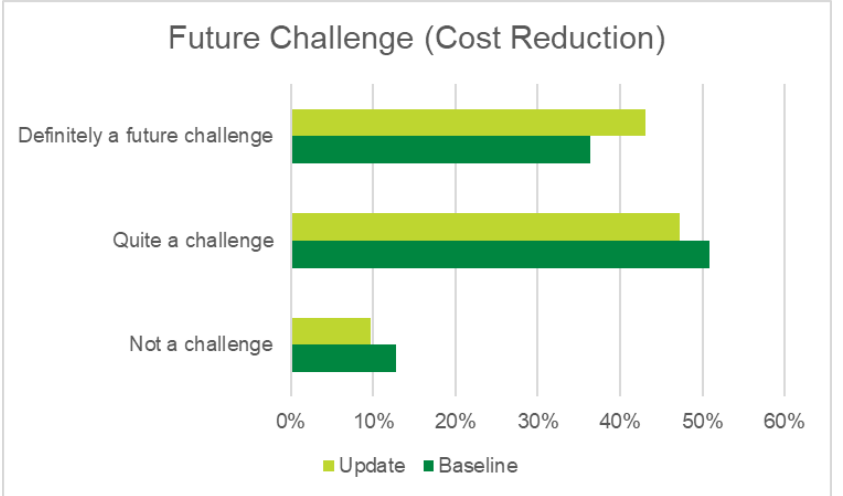
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<p>Perception of the impact of net-metering shifted positively. The <i>extremely</i> impactful rating increased from 7% to 19%, and the <i>very</i> category also grew slightly. Meanwhile, the <i>moderately</i> influential view dropped from 51% to 40%, implying a general trend of respondents upgrading their perception of net-metering’s significance. This reflected increased awareness and perhaps greater experience with this mechanism over time.</p>																				
<p style="text-align: center;">Awareness of policies (grid access and interconnections)</p> <table border="1"> <caption>Awareness of policies (grid access and interconnections)</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Extremely</td> <td>36%</td> <td>25%</td> </tr> <tr> <td>Very</td> <td>36%</td> <td>47%</td> </tr> <tr> <td>Moderately</td> <td>20%</td> <td>18%</td> </tr> <tr> <td>Slightly</td> <td>9%</td> <td>8%</td> </tr> <tr> <td>Not at all</td> <td>0%</td> <td>2%</td> </tr> </tbody> </table>	Category	Update (%)	Baseline (%)	Extremely	36%	25%	Very	36%	47%	Moderately	20%	18%	Slightly	9%	8%	Not at all	0%	2%		
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<p>There was a significant increase in the <i>extremely</i> impactful rating, from 25% to 36%. The <i>very</i> influential category, however, declined from 47% to 36%, showing a redistribution toward stronger conviction in its importance. Overall, grid access regulations were increasingly viewed as a key enabler (or barrier) to renewable energy deployment, especially as projects scale up.</p>																				

Objective	Indicators	Question/Analysis
		<p style="text-align: center;">Awareness of policies (emissions)</p>  <p>The <i>extremely</i> influential perception rose from 35% to 39%, with <i>very</i> slightly dropping from 49% to 43%. Overall, the majority of respondents still considered environmental regulations as a strong catalyst for renewable energy uptake. The increased weight on the <i>extremely</i> category suggested stronger consensus around the critical importance of aligning policy with climate goals.</p>
		<p style="text-align: center;">Awareness of policies (public procurement)</p>  <p>Public procurement policies were consistently seen as impactful, with little change between the baseline and update. The majority (over 70%) rated them as either <i>very</i> or <i>extremely influential</i>. The slight increase in the <i>slightly</i> category (from 2% to 10%) reflected varying awareness of how procurement frameworks were applied in practice, but overall support remained strong.</p> <p>-----</p> <p>Across all policy areas, there was a strong and growing awareness of the influence that regulations and incentives had on the development of the renewable energy industry. Incentives and</p>

Objective	Indicators	Question/Analysis															
		<p>subsidies continued to be perceived as the most influential, with grid access regulations and emissions limits also gaining traction in perceived importance. Net-metering and public procurement policies saw notable improvements in recognition, especially in the extremely category. On the other hand, Renewable Portfolio Standards showed a decrease in top-tier confidence, suggesting possible regional disparities in their implementation or visibility. Overall, the data indicated increasing policy literacy and awareness among respondents, likely influenced by recent educational or outreach activities.</p>															
<p>O6.3 Recognising and understanding obstacles, challenges, and opportunities related to the adoption and utilisation of renewable energy sources (RES)</p>	<p>Acknowledgement of hindrances in RES use</p>	<p>Percentage of the most significant reasons hindering the increased use of RES</p> <p>[At present, a greater use of RES is not achieved because of: (Multiple choice/more than one choice), Lack of technologies, Lack of Information, Lack of economic interest, There is no need to use RES at present]</p> <div data-bbox="576 846 1409 1344"> <table border="1"> <caption>Acknowledgement of hindrances in RES use</caption> <thead> <tr> <th>Hindrance</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>There is no need to use RES at present</td> <td>~2</td> <td>~3</td> </tr> <tr> <td>Lack of economic interest</td> <td>46</td> <td>47</td> </tr> <tr> <td>Lack of Information</td> <td>33</td> <td>30</td> </tr> <tr> <td>Lack of technologies</td> <td>19</td> <td>21</td> </tr> </tbody> </table> </div> <p>Participants were asked why the greater use of RES was not currently achieved, and multiple responses were allowed. The most commonly cited barrier in both the baseline and the update was the <i>lack of economic interest</i>, with nearly half of the respondents selecting this option (47% at baseline and 46% at update). This suggested that economic drivers—such as profitability, investment returns, or financial incentives—were still seen as the primary obstacle to wider RES adoption.</p> <p>The second most mentioned reason was <i>lack of information</i>, which slightly increased from 30% to 33%. This indicated that despite project efforts, there was still a perception that awareness and knowledge of RES technologies, benefits, or usage options were insufficient.</p> <p>The <i>lack of technologies</i> remained stable (21% to 19%), suggesting that some viewed technological limitations or availability as a challenge, though this perception was less widespread.</p>	Hindrance	Update (%)	Baseline (%)	There is no need to use RES at present	~2	~3	Lack of economic interest	46	47	Lack of Information	33	30	Lack of technologies	19	21
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Objective	Indicators	Question/Analysis											
		<p>Finally, only a small percentage (2% in both periods) believed that there was <i>no need to use RES</i>, showing that nearly all participants recognised the necessity of renewable energy, even if challenges to implementation remained.</p>											
	<p>Identification of future challenges</p>	<p>Rating for each future challenge to identify which challenges are most pressing</p> <p><i>[Please assess the following future global challenges for renewable energy systems: Grid instability and intermittency of renewable energy sources (meaning their output fluctuates based on weather conditions), High cost and limited scalability of energy storage, Renewable energy infrastructure expansion and land coverage, Inconsistency and instability of policy and regulatory frameworks, Necessity of cost reduction, Scale: Not a challenge to definitely a future challenge. Please name any other future challenge that is not listed here. Open answer.]</i></p> <div data-bbox="576 775 1406 1267"> <table border="1"> <caption>Future Challenge (Grid instability)</caption> <thead> <tr> <th>Challenge Rating</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Definitely a future challenge</td> <td>54%</td> <td>94%</td> </tr> <tr> <td>Quite a challenge</td> <td>40%</td> <td>38%</td> </tr> <tr> <td>Not a challenge</td> <td>6%</td> <td>6%</td> </tr> </tbody> </table> </div> <p>This was widely seen as a key <i>future challenge</i>. The majority of respondents considered it either <i>quite a challenge</i> or definitely a future challenge, with a slight increase in concern (from 94% at baseline to 94% at update). The share of those who saw it as <i>definitely a future challenge</i> remained high at 54%. This highlighted ongoing awareness that the variable nature of renewables (e.g., solar and wind) impacted energy reliability without proper grid management or storage solutions.</p>	Challenge Rating	Update (%)	Baseline (%)	Definitely a future challenge	54%	94%	Quite a challenge	40%	38%	Not a challenge	6%
Challenge Rating	Update (%)	Baseline (%)											
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		<div data-bbox="576 226 1396 712"> <h3 style="text-align: center;">Future Challenge (Energy Storage)</h3> <table border="1"> <caption>Future Challenge (Energy Storage)</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Definitely a future challenge</td> <td>47%</td> <td>45%</td> </tr> <tr> <td>Quite a challenge</td> <td>52%</td> <td>51%</td> </tr> <tr> <td>Not a challenge</td> <td>1%</td> <td>4%</td> </tr> </tbody> </table> </div> <p data-bbox="571 734 1433 1003">Concern about energy storage challenges remained strong and slightly increased. At the update stage, 47% identified this as <i>definitely a future challenge</i> (up from 45%), and over half saw it as <i>quite a challenge</i>. The fact that very few saw it as <i>not a challenge</i> (just 1%) showed high consensus that storage—key to balancing supply and demand—remained a critical area needing innovation and investment.</p>	Category	Update (%)	Baseline (%)	Definitely a future challenge	47%	45%	Quite a challenge	52%	51%	Not a challenge	1%	4%
		Category	Update (%)	Baseline (%)										
Definitely a future challenge	47%	45%												
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<div data-bbox="576 1077 1422 1579"> <h3 style="text-align: center;">Future Challenge (Infrastructure and land coverage)</h3> <table border="1"> <caption>Future Challenge (Infrastructure and land coverage)</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Definitely a future challenge</td> <td>42%</td> <td>44%</td> </tr> <tr> <td>Quite a challenge</td> <td>43%</td> <td>47%</td> </tr> <tr> <td>Not a challenge</td> <td>15%</td> <td>9%</td> </tr> </tbody> </table> </div> <p data-bbox="571 1601 1433 1832">This issue was recognised but perceived with slightly less urgency compared to others. While 42% saw it as a <i>definite challenge</i>, the share of those who consider it <i>not a challenge</i> increased from 9% to 15%. This reflected a growing understanding that technological solutions (e.g., rooftop solar, offshore wind) can help address land use concerns or that some regions faced fewer spatial limitations.</p>	Category	Update (%)	Baseline (%)	Definitely a future challenge	42%	44%	Quite a challenge	43%	47%	Not a challenge	15%	9%		
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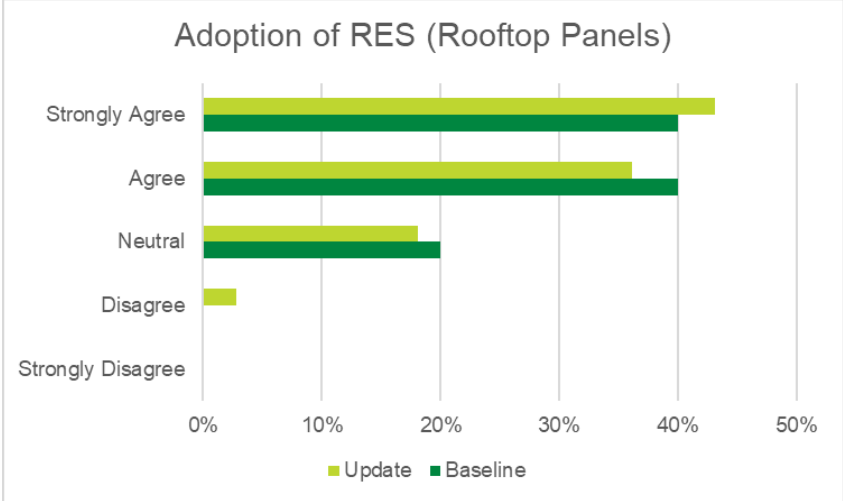
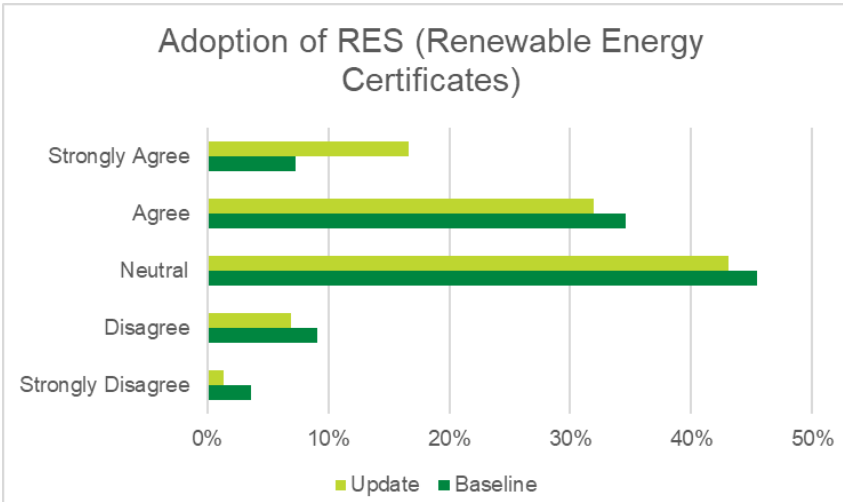
Objective	Indicators	Question/Analysis												
		<p style="text-align: center;">Future Challenge (Policy and Regulation Instability)</p>  <table border="1" data-bbox="576 235 1422 728"> <caption>Future Challenge (Policy and Regulation Instability)</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Definitely a future challenge</td> <td>46%</td> <td>51%</td> </tr> <tr> <td>Quite a challenge</td> <td>49%</td> <td>46%</td> </tr> <tr> <td>Not a challenge</td> <td>5%</td> <td>3%</td> </tr> </tbody> </table> <p>Policy uncertainty continued to be viewed as a significant barrier, with 46% identifying it as a <i>definite challenge</i>, although this was a slight drop from 51% at baseline. The share of respondents seeing it as <i>quite a challenge</i> rose to 49%. This showed continued concern that unstable or unclear regulations could hinder the investment and deployment of renewable energy technologies.</p>	Category	Update (%)	Baseline (%)	Definitely a future challenge	46%	51%	Quite a challenge	49%	46%	Not a challenge	5%	3%
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<p style="text-align: center;">Future Challenge (Cost Reduction)</p>  <table border="1" data-bbox="576 1052 1422 1545"> <caption>Future Challenge (Cost Reduction)</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Definitely a future challenge</td> <td>43%</td> <td>36%</td> </tr> <tr> <td>Quite a challenge</td> <td>47%</td> <td>51%</td> </tr> <tr> <td>Not a challenge</td> <td>10%</td> <td>13%</td> </tr> </tbody> </table> <p>The need to reduce the cost of RES remained an important future challenge. The percentage of respondents who viewed this as <i>definitely a future challenge</i> increased from 36% to 43%. This indicated a growing awareness that even though costs for technologies like solar and wind have dropped, further reductions were necessary—especially for storage, hydrogen, and emerging tech—to ensure affordability and widespread adoption.</p> <p>Among the listed future challenges for renewable energy systems, grid instability and the intermittency of renewable sources remained the most widely recognised issue, with 94% of respondents in both the baseline and update stages identifying it as either quite or definitely a challenge. This reflected a strong and</p>	Category	Update (%)	Baseline (%)	Definitely a future challenge	43%	36%	Quite a challenge	47%	51%	Not a challenge	10%	13%		
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Objective	Indicators	Question/Analysis
		<p>consistent understanding that variable energy production, particularly from solar and wind, posed a major challenge for system stability without adequate storage or smart grid technologies. The high cost and limited scalability of energy storage were also viewed as a significant concern, with the percentage of respondents seeing it as a definite challenge increasing slightly to 47% in the update. This highlighted that energy storage was still considered a key barrier to large-scale RES deployment, despite ongoing technological advancements.</p> <p>The inconsistency and instability of policy and regulatory frameworks also remained a top concern, though the share of those seeing it as a definite challenge dropped slightly from 51% to 46%, while quite a challenge responses increased. This may indicate a shift toward a more nuanced view, but the overall message is clear: a stable and supportive policy environment was essential for advancing RES. The necessity of cost reduction was increasingly acknowledged, with 43% viewing it as a definite challenge—up from 36%—signalling growing awareness that affordability remained a barrier for emerging technologies like green hydrogen and advanced storage systems.</p> <p>Meanwhile, the challenge of infrastructure expansion and land coverage was seen as slightly less pressing. Although still recognised by a majority, the share of respondents who view it as not a challenge increased from 9% to 15%, possibly reflecting increased familiarity with alternatives like rooftop solar, offshore wind, and urban energy solutions that reduced land-use conflicts. In summary, while all the challenges were acknowledged, technical (grid and storage), economic (cost), and regulatory (policy) issues were viewed as the most critical, with land-use concerns considered more context-dependent and possibly less urgent.</p> <p>Participants provided a wide range of thoughtful additional challenges, which can be grouped into key categories:</p> <ol style="list-style-type: none"> 1. Policy & Governance <ul style="list-style-type: none"> ○ Inconsistent global and national policies ○ Weak participation and consultation processes ○ Government resistance or bureaucracy ○ Private economic interests obstructing progress 2. Skills & Workforce <ul style="list-style-type: none"> ○ Lack of skilled personnel, especially in public institutions ○ Gaps in digital, technical, and numeracy skills

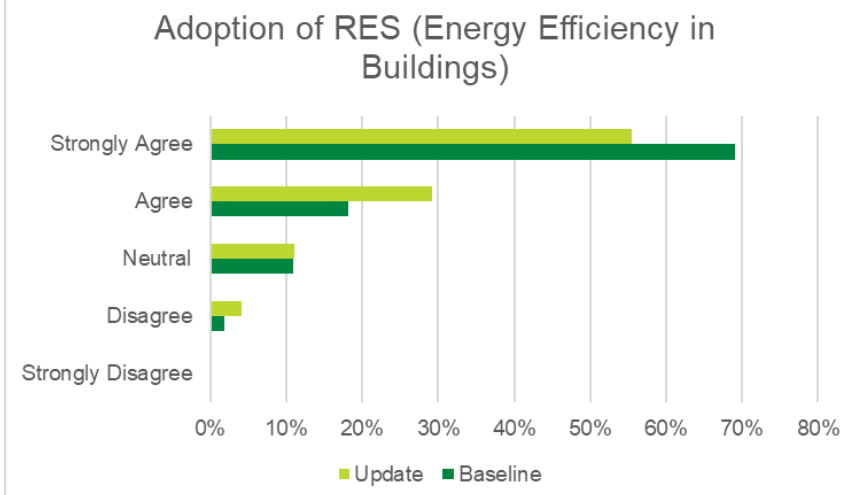
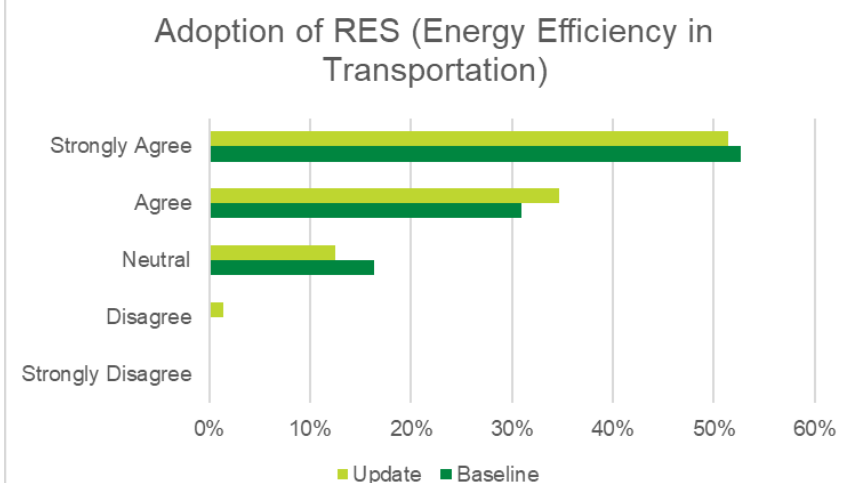
Objective	Indicators	Question/Analysis											
		<ul style="list-style-type: none"> ○ Shortage of training programs for new technologies <p>3. Public Awareness & Trust</p> <ul style="list-style-type: none"> ○ Disinformation and lack of public knowledge ○ Public resistance or low acceptance of RES ○ People’s thinking and lack of trust in new systems <p>4. Technology & Infrastructure</p> <ul style="list-style-type: none"> ○ Battery recycling and environmental impact ○ Grid modernisation needs ○ Integration of electric vehicles ○ Material scarcity for key components (e.g., lithium, rare earths) <p>5. Strategic and Global Issues</p> <ul style="list-style-type: none"> ○ Geopolitical risks ○ Supply chain vulnerabilities ○ Achieving global goals (Agenda 2030/2050) 											
	<p>Identification of global future opportunities</p>	<p>Rating for each future opportunity to identify the most promising or impactful opportunities</p> <p><i>[How would you rate future opportunities for renewable energy systems on a global scale? Decarbonisation and Climate Mitigation, Clean and affordable energy access to communities and social equity, Creation of new jobs globally, Diversification of energy mix with renewable energy sources. Scale: Not an opportunity to definitely an opportunity]</i></p> <div data-bbox="576 1312 1401 1805"> <table border="1"> <caption>Future Opportunities (Decarbonisation)</caption> <thead> <tr> <th>Opportunity Rating</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Definitely an opportunity</td> <td>69%</td> <td>71%</td> </tr> <tr> <td>Quite an opportunity</td> <td>31%</td> <td>29%</td> </tr> <tr> <td>Not an opportunity</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table> </div> <p>Participants strongly recognised decarbonisation and climate mitigation as a key global opportunity offered by renewable energy systems. At baseline, 71% viewed this as <i>definitely an opportunity</i>, which remained high at 69% during the update. The share of those selecting <i>not an opportunity</i> dropped to zero, reinforcing strong consensus on the critical role of renewables in tackling climate</p>	Opportunity Rating	Update (%)	Baseline (%)	Definitely an opportunity	69%	71%	Quite an opportunity	31%	29%	Not an opportunity	0%
Opportunity Rating	Update (%)	Baseline (%)											
Definitely an opportunity	69%	71%											
Quite an opportunity	31%	29%											
Not an opportunity	0%	0%											

Objective	Indicators	Question/Analysis												
		<p>change. The increase in quite an opportunity from 25% to 31% suggests a growing but slightly more moderate appreciation among some participants.</p> <div data-bbox="576 412 1396 898"> <table border="1"> <caption>Future Opportunities (Social equity and energy access)</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Definitely an opportunity</td> <td>57</td> <td>69</td> </tr> <tr> <td>Quite an opportunity</td> <td>40</td> <td>25</td> </tr> <tr> <td>Not an opportunity</td> <td>3</td> <td>6</td> </tr> </tbody> </table> </div> <p>The perception of renewables as a driver for energy access and social equity also remained positive. However, there was a noticeable shift: while 69% of participants initially considered this <i>definitely an opportunity</i>, that figure dropped to 57% in the update. Meanwhile, the <i>quite an opportunity</i> responses increased from 25% to 40%, possibly indicating more nuanced or cautious optimism. The low number of <i>not an opportunity</i> responses (just 3%) suggested overall agreement with the importance of this dimension, but potentially reflected concern over whether these benefits are currently being equitably realised.</p>	Category	Update (%)	Baseline (%)	Definitely an opportunity	57	69	Quite an opportunity	40	25	Not an opportunity	3	6
		Category	Update (%)	Baseline (%)										
Definitely an opportunity	57	69												
Quite an opportunity	40	25												
Not an opportunity	3	6												
<div data-bbox="576 1379 1388 1861"> <table border="1"> <caption>Future Opportunities (Creation of New Jobs)</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Definitely an opportunity</td> <td>60</td> <td>73</td> </tr> <tr> <td>Quite an opportunity</td> <td>33</td> <td>25</td> </tr> <tr> <td>Not an opportunity</td> <td>7</td> <td>2</td> </tr> </tbody> </table> </div> <p>The belief in the job creation potential of renewable energy systems remained strong, although slightly weakened. At baseline, 73% of respondents saw this as <i>definitely an opportunity</i>, which fell to 60% in the update. The number of respondents who saw this only as <i>quite an opportunity</i> increased from 25% to 33%,</p>	Category	Update (%)	Baseline (%)	Definitely an opportunity	60	73	Quite an opportunity	33	25	Not an opportunity	7	2		
Category	Update (%)	Baseline (%)												
Definitely an opportunity	60	73												
Quite an opportunity	33	25												
Not an opportunity	7	2												

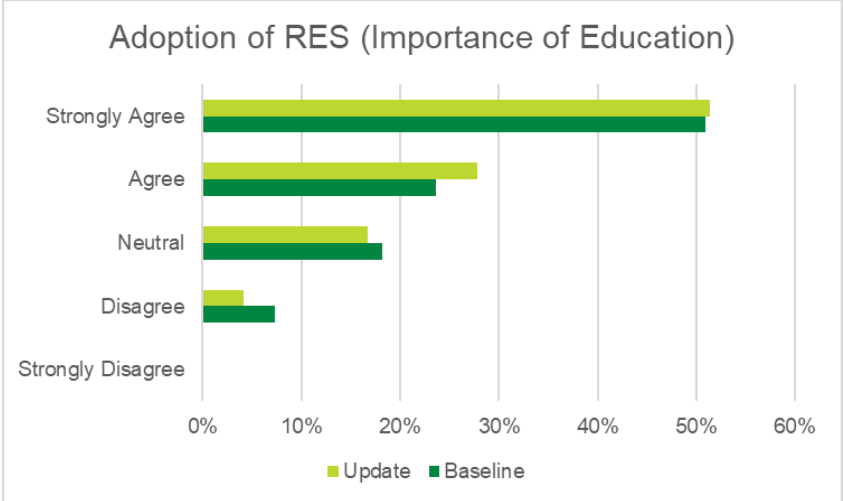
Objective	Indicators	Question/Analysis												
		<p>and the <i>not an opportunity</i> category rose slightly to 7%. This shift could reflect growing awareness that job creation depended on various factors, including training, technology maturity, and supportive policies.</p> <div data-bbox="576 450 1394 936" style="text-align: center;"> <table border="1" style="margin: auto;"> <caption>Future Opportunities (Energy Mix)</caption> <thead> <tr> <th>Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Definitely an opportunity</td> <td>63%</td> <td>75%</td> </tr> <tr> <td>Quite an opportunity</td> <td>33%</td> <td>24%</td> </tr> <tr> <td>Not an opportunity</td> <td>4%</td> <td>7%</td> </tr> </tbody> </table> </div> <p>Renewables were broadly recognised as crucial for diversifying the global energy mix, with 75% of respondents initially rating it as <i>definitely an opportunity</i>, decreasing to 63% in the update. Similar to other questions, there was a slight increase in moderate responses (<i>quite an opportunity</i> rose from 24% to 33%) and in scepticism, with 4% selecting <i>not an opportunity</i>. Despite the decrease in strong optimism, the majority viewed diversification as a clear benefit of renewables.</p> <p>Across all four dimensions, decarbonisation and climate mitigation consistently received the strongest support, with nearly universal agreement and minimal variation over time. This underscores it as the most firmly recognised global opportunity for RES. In contrast, social equity and job creation saw declines in the percentage of respondents who definitely view them as opportunities. This may reflect increasing realism or challenges in translating renewable expansion into tangible social outcomes. The diversification of the energy mix was also strongly supported, though slightly less so in the update, suggesting that while the strategic benefit is clear, some concerns or doubts are emerging. Overall, stakeholders recognised multiple overlapping benefits of RES, but are also becoming more nuanced in their expectations, especially regarding social and economic dimensions.</p>	Category	Update (%)	Baseline (%)	Definitely an opportunity	63%	75%	Quite an opportunity	33%	24%	Not an opportunity	4%	7%
		Category	Update (%)	Baseline (%)										
Definitely an opportunity	63%	75%												
Quite an opportunity	33%	24%												
Not an opportunity	4%	7%												
<p>O6.4.</p>	<p>Adoption rate of RES practices</p>	<p>Contribution rate of each practice in promoting the adoption of renewable energy</p> <p><i>[How can individuals and communities contribute to the adoption of renewable energy in their daily lives? By Installing Rooftop Solar Panels, By purchasing Renewable Energy Certificates (RECs), By switching to Green Energy Providers, By investing in Renewable Energy Communities, By improving energy efficiency</i></p>												

Objective	Indicators	Question/Analysis																																				
		<p data-bbox="571 230 1433 414"><i>in homes/ buildings, By improving energy efficiency in transportation, By using geothermal energy for buildings/home heating, By advocating for Renewable Energy Policies that support renewable energy deployment at the local, regional, and national levels, By educating communities about the importance of transitioning to a clean energy. Scale: Strongly Disagree, (2) to Strongly Agree, Other]</i></p> <div data-bbox="576 432 1422 931">  <p data-bbox="746 450 1251 488">Adoption of RES (Rooftop Panels)</p> <table border="1" data-bbox="576 510 1422 931"> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>43</td> <td>40</td> </tr> <tr> <td>Agree</td> <td>36</td> <td>40</td> </tr> <tr> <td>Neutral</td> <td>18</td> <td>20</td> </tr> <tr> <td>Disagree</td> <td>3</td> <td>0</td> </tr> <tr> <td>Strongly Disagree</td> <td>0</td> <td>0</td> </tr> </tbody> </table> </div> <p data-bbox="571 958 1433 1220">Support for installing rooftop solar panels was strong. At both baseline and update, around 80% of respondents either <i>agree</i> or <i>strongly agree</i> that this was a meaningful action. In fact, the share of those who <i>strongly agree</i> increased from 40% to 43%, showing slightly growing enthusiasm for self-production of renewable energy. Only 3% <i>disagree</i> in the update, and no respondents <i>strongly disagree</i>.</p> <div data-bbox="576 1294 1422 1794">  <p data-bbox="730 1312 1283 1391">Adoption of RES (Renewable Energy Certificates)</p> <table border="1" data-bbox="576 1413 1422 1794"> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>17</td> <td>7</td> </tr> <tr> <td>Agree</td> <td>32</td> <td>35</td> </tr> <tr> <td>Neutral</td> <td>43</td> <td>45</td> </tr> <tr> <td>Disagree</td> <td>7</td> <td>9</td> </tr> <tr> <td>Strongly Disagree</td> <td>1</td> <td>4</td> </tr> </tbody> </table> </div> <p data-bbox="571 1832 1433 2054">Opinions about Renewable Energy Certificates remained more mixed. A high proportion of respondents remained <i>neutral</i> (43% in the update), with a modest increase in <i>strongly agree</i> (from 7% to 17%). This suggested that although awareness and acceptance were growing, Renewable Energy Certificates might were unfamiliar or perceived as less direct than physical actions like</p>	Response	Update (%)	Baseline (%)	Strongly Agree	43	40	Agree	36	40	Neutral	18	20	Disagree	3	0	Strongly Disagree	0	0	Response	Update (%)	Baseline (%)	Strongly Agree	17	7	Agree	32	35	Neutral	43	45	Disagree	7	9	Strongly Disagree	1	4
		Response	Update (%)	Baseline (%)																																		
Strongly Agree	43	40																																				
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Strongly Disagree	1	4																																				

Objective	Indicators	Question/Analysis																		
		<p>installing solar. Some scepticism remains, with 8% still disagreeing.</p> <div data-bbox="576 371 1430 882" data-label="Figure"> <p>Adoption of RES (Green Energy Providers)</p> <table border="1"> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>32</td> <td>33</td> </tr> <tr> <td>Agree</td> <td>38</td> <td>40</td> </tr> <tr> <td>Neutral</td> <td>25</td> <td>22</td> </tr> <tr> <td>Disagree</td> <td>0</td> <td>8</td> </tr> <tr> <td>Strongly Disagree</td> <td>0</td> <td>0</td> </tr> </tbody> </table> </div> <p>Switching to green energy providers was broadly supported, with 70% of respondents <i>agreeing</i> or <i>strongly agreeing</i> at both baseline and update. Interestingly, the share of people who <i>disagree</i> dropped to 0% in the update. Although support remained high, the increase in <i>neutral</i> responses (from 22% to 25%) could indicated a need for better information or market availability.</p>	Response	Update (%)	Baseline (%)	Strongly Agree	32	33	Agree	38	40	Neutral	25	22	Disagree	0	8	Strongly Disagree	0	0
		Response	Update (%)	Baseline (%)																
Strongly Agree	32	33																		
Agree	38	40																		
Neutral	25	22																		
Disagree	0	8																		
Strongly Disagree	0	0																		
<div data-bbox="576 1205 1430 1715" data-label="Figure"> <p>Adoption of RES (Energy Communities)</p> <table border="1"> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>42</td> <td>36</td> </tr> <tr> <td>Agree</td> <td>36</td> <td>45</td> </tr> <tr> <td>Neutral</td> <td>21</td> <td>13</td> </tr> <tr> <td>Disagree</td> <td>2</td> <td>4</td> </tr> <tr> <td>Strongly Disagree</td> <td>0</td> <td>2</td> </tr> </tbody> </table> </div> <p>There was a notable rise in strong support for investing in energy communities. <i>Strongly agree</i> responses rose from 36% to 42%, while <i>neutral</i> increased from 13% to 21%. This showed growing interest, but also suggested that some may still felt uncertain or need more information before getting involved. Overall, a positive trend toward collective action was visible.</p>	Response	Update (%)	Baseline (%)	Strongly Agree	42	36	Agree	36	45	Neutral	21	13	Disagree	2	4	Strongly Disagree	0	2		
Response	Update (%)	Baseline (%)																		
Strongly Agree	42	36																		
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Disagree	2	4																		
Strongly Disagree	0	2																		

Objective	Indicators	Question/Analysis																		
		<p style="text-align: center;">Adoption of RES (Energy Efficiency in Buildings)</p>  <table border="1" data-bbox="574 235 1433 728"> <caption>Adoption of RES (Energy Efficiency in Buildings) - Survey Data</caption> <thead> <tr> <th>Response Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>56%</td> <td>69%</td> </tr> <tr> <td>Agree</td> <td>29%</td> <td>18%</td> </tr> <tr> <td>Neutral</td> <td>10%</td> <td>10%</td> </tr> <tr> <td>Disagree</td> <td>4%</td> <td>2%</td> </tr> <tr> <td>Strongly Disagree</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Response Category	Update (%)	Baseline (%)	Strongly Agree	56%	69%	Agree	29%	18%	Neutral	10%	10%	Disagree	4%	2%	Strongly Disagree	0%	0%
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Agree	29%	18%																		
Neutral	10%	10%																		
Disagree	4%	2%																		
Strongly Disagree	0%	0%																		
<p>This action received the strongest support overall. Even though <i>strongly agree</i> dropped slightly from 69% to 56%, the <i>agree</i> category rose from 18% to 29%, suggesting a shift from strong to moderate agreement rather than actual decline. Very few <i>disagreed</i> (only 4% in the update), affirming broad consensus on the importance of home efficiency.</p>																				
<p style="text-align: center;">Adoption of RES (Energy Efficiency in Transportation)</p>  <table border="1" data-bbox="574 1075 1433 1556"> <caption>Adoption of RES (Energy Efficiency in Transportation) - Survey Data</caption> <thead> <tr> <th>Response Category</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>52%</td> <td>53%</td> </tr> <tr> <td>Agree</td> <td>35%</td> <td>31%</td> </tr> <tr> <td>Neutral</td> <td>12%</td> <td>16%</td> </tr> <tr> <td>Disagree</td> <td>1%</td> <td>0%</td> </tr> <tr> <td>Strongly Disagree</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Response Category	Update (%)	Baseline (%)	Strongly Agree	52%	53%	Agree	35%	31%	Neutral	12%	16%	Disagree	1%	0%	Strongly Disagree	0%	0%		
Response Category	Update (%)	Baseline (%)																		
Strongly Agree	52%	53%																		
Agree	35%	31%																		
Neutral	12%	16%																		
Disagree	1%	0%																		
Strongly Disagree	0%	0%																		
<p>Support for improving transport energy efficiency remained high and stable, with over 85% either <i>agreeing</i> or <i>strongly agreeing</i>. Slight increases in both agreement categories and low <i>disagreement</i> (only 1%) confirmed that this was widely accepted as an impactful action.</p>																				

Objective	Indicators	Question/Analysis																		
		<p style="text-align: center;">Adoption of RES (Geothermal in Buildings)</p>  <table border="1" data-bbox="576 241 1423 719"> <caption>Adoption of RES (Geothermal in Buildings)</caption> <thead> <tr> <th>Agreement Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>36%</td> <td>24%</td> </tr> <tr> <td>Agree</td> <td>31%</td> <td>33%</td> </tr> <tr> <td>Neutral</td> <td>29%</td> <td>31%</td> </tr> <tr> <td>Disagree</td> <td>4%</td> <td>13%</td> </tr> <tr> <td>Strongly Disagree</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Agreement Level	Update (%)	Baseline (%)	Strongly Agree	36%	24%	Agree	31%	33%	Neutral	29%	31%	Disagree	4%	13%	Strongly Disagree	0%	0%
		Agreement Level	Update (%)	Baseline (%)																
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Agree	31%	33%																		
Neutral	29%	31%																		
Disagree	4%	13%																		
Strongly Disagree	0%	0%																		
<p>This option saw a clear improvement in support: <i>strongly agree</i> increased from 24% to 36%, and <i>disagree</i> dropped from 13% to 4%. While the <i>neutral</i> share remained high (29%), the trend indicated growing awareness and acceptance of geothermal as a viable clean heating option.</p>																				
		<p style="text-align: center;">Adoption of RES (RES Policies)</p>  <table border="1" data-bbox="576 1034 1423 1512"> <caption>Adoption of RES (RES Policies)</caption> <thead> <tr> <th>Agreement Level</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>36%</td> <td>35%</td> </tr> <tr> <td>Agree</td> <td>40%</td> <td>38%</td> </tr> <tr> <td>Neutral</td> <td>18%</td> <td>24%</td> </tr> <tr> <td>Disagree</td> <td>6%</td> <td>4%</td> </tr> <tr> <td>Strongly Disagree</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Agreement Level	Update (%)	Baseline (%)	Strongly Agree	36%	35%	Agree	40%	38%	Neutral	18%	24%	Disagree	6%	4%	Strongly Disagree	0%	0%
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Neutral	18%	24%																		
Disagree	6%	4%																		
Strongly Disagree	0%	0%																		
<p>Respondents consistently view policy advocacy as an important action. Agree and strongly agree responses together rose slightly (from 73% to 76%), while <i>disagreement</i> remains low. This demonstrated that individuals recognised the value of influencing systemic change beyond personal consumption.</p>																				

Objective	Indicators	Question/Analysis																		
		<p style="text-align: center;">Adoption of RES (Importance of Education)</p>  <table border="1" data-bbox="576 226 1422 725"> <caption>Adoption of RES (Importance of Education) - Data from Chart</caption> <thead> <tr> <th>Response</th> <th>Update (%)</th> <th>Baseline (%)</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>51%</td> <td>51%</td> </tr> <tr> <td>Agree</td> <td>28%</td> <td>24%</td> </tr> <tr> <td>Neutral</td> <td>17%</td> <td>18%</td> </tr> <tr> <td>Disagree</td> <td>4%</td> <td>7%</td> </tr> <tr> <td>Strongly Disagree</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table> <p>Education was also seen as vital, with 79% of respondents <i>agreeing</i> or <i>strongly agreeing</i> (no change in <i>strongly agree</i> at 51%). The slight drop in <i>disagreement</i> (from 7% to 4%) showed improved recognition of the importance of grassroots awareness-raising.</p> <hr/> <p>Across the board, improving energy efficiency in homes, transportation, and installing rooftop solar were the most widely supported and least controversial actions, with consistently high agreement levels. Community-level approaches such as investing in energy communities and policy advocacy also gained support over time, though they faced some uncertainty. Actions like purchasing RECs and using geothermal energy showed increased awareness but carried relatively high neutral responses, indicating either limited familiarity or perceived barriers to adoption. Overall, the data reflected a growing willingness among individuals and communities to act, especially when solutions were visible, practical, or collectively empowering.</p>	Response	Update (%)	Baseline (%)	Strongly Agree	51%	51%	Agree	28%	24%	Neutral	17%	18%	Disagree	4%	7%	Strongly Disagree	0%	0%
Response	Update (%)	Baseline (%)																		
Strongly Agree	51%	51%																		
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7.8.2 Summary of awareness of RES

The growing interest in Energy Storage and Green Hydrogen technologies was evident, with a noticeable increase in expert awareness, signalling their crucial role in the future of renewable energy. Energy storage advancements, particularly in battery technologies, were expected to drive efficiency and sustainability in energy systems. Similarly, Green Hydrogen was emerging as a promising energy carrier that could help decarbonise various sectors. Other important trends included Floating Solar Farms, which are gaining traction as a viable option for generating renewable energy in offshore environments, and the integration of AI in renewable energy systems, which is improving the efficiency, reliability, and predictive capabilities of these systems. Lastly, the Electrification of Transportation was becoming more prominent, with a clear focus on reducing emissions from the transport sector through electric vehicles and other sustainable alternatives. **Overall, the percentage of respondents who are aware of / interested in RES increased by approximately 11%.**

Despite the growing interest in renewable energy, there were still significant barriers to overcome. Grid Instability remained a major challenge, as renewable energy sources like solar and wind were intermittent, meaning their output fluctuated depending on weather conditions. Additionally, high storage costs and limited scalability of current energy storage technologies hindered broader adoption. Policy and regulatory inconsistencies were also a pressing issue, with fluctuations in government policies and regulatory frameworks creating uncertainty for investors and stakeholders. Lastly, the necessity for cost reduction in renewable energy technologies continued to be an important challenge, as high initial costs prevent many from making the switch to sustainable options.

Looking forward, Renewable Energy Systems presented substantial opportunities for global change. Decarbonisation and climate mitigation efforts were seen as major benefits of renewable energy adoption, with respondents strongly agreeing that renewables played a central role in tackling climate change. There was also a recognition of the potential for job creation as the renewable energy sector grew. Many believed that the transition to renewable energy helped diversify the energy mix and created new industries and opportunities for local communities. The expansion of renewable energy was viewed not just as a technical challenge but as a critical opportunity for global economic and social development.

Individuals and communities were seen as key players in the transition to renewable energy. Actions like installing rooftop solar panels and switching to green energy providers were commonly identified as ways that individuals contributed directly to reducing their carbon footprint. There was also strong support for improving energy efficiency in homes and buildings, which was considered a simple yet effective step toward reducing energy consumption. Additionally, advocating for renewable energy policies and educating communities about the importance of transitioning to clean energy were seen as vital strategies for widespread adoption. Investing in Renewable Energy Communities and using geothermal energy for heating were recognised as important community-driven actions that can further promote sustainability.

8. Challenges and risks identified

In its mission to advance renewable energy practices, SKILLBILL was taking on a four-pronged approach (SKILLBILL main activities), considering also horizontal issues of gender equality in STEM and raising awareness of RES in society:

1. by fostering collaboration through stakeholder engagement, open discussions, and transparent networks.
2. by creating an inclusive online platform for easy access to renewable energy information and education.
3. by designing innovative educational programmes that enhance skills and utilise Virtual Reality.

In its commitment to assessing the social impact of activities, SKILLBILL faced challenges and risks, particularly in collecting feedback through questionnaires. One prominent challenge was to ensure a diverse and representative respondent pool. There was a risk of underrepresentation, potentially skewing results if certain demographics or stakeholder groups were not adequately included. Mitigating this involved implementing targeted outreach strategies to ensure a comprehensive and inclusive sample, mainly in GP, and disseminating the surveys widely via SKILLBILL communication channels. For the rest of the SKILLBILL activities, reminders were sent by the responsible SKILLBILL partners.

Another challenge laid in the accuracy and reliability of the collected data. Respondents may provide biased or inaccurate information unintentionally, affecting the overall effectiveness of the SIMA. In SKILLBILL, this was addressed by incorporating clear and well-structured questions, utilising a mix of quantitative and qualitative methods.

Lastly, maintaining the confidentiality and privacy of respondents was crucial. The fear of data misuse may would have deterred individuals from providing honest feedback. SKILLBILL emphasised data protection measures, clearly communicated the anonymity of responses, and complied with relevant privacy regulations to inspire confidence among participants.

The above-mentioned risks and challenges are also summarised in the table below.

Table 25. SIMA risks, challenges, and mitigation measures

Risks and challenges	Mitigation Measures
A limited representative pool of responses	<p>Targeted outreach to diverse stakeholders through the different SKILLBILL activities.</p> <p>Utilisation of different communication channels.</p> <p>Close collaboration with the Leader of each SKILLBILL activity, responsible for the collection of data.</p>
Inaccuracy and unreliability of data	<p>Development of clear and well-structured questionnaires.</p> <p>A mixture of quantitative and qualitative methods.</p> <p>Comparison with external data sources.</p>

Risks and challenges	Mitigation Measures
Confidentiality and Privacy Concerns	Emphasis on data protection measures. Communication of anonymity of responses. Compliance with relevant privacy regulations

By proactively addressing these challenges and implementing mitigation measures, SKILLBILL enhanced the reliability and representativeness of the feedback collected through questionnaires, ensuring a more robust social impact assessment.

9. Conclusions

The SKILLBILL SIMA framework aimed to set the foundation for capturing the social impact of the SKILLBILL main activities, meaning the four Working Groups, the Green Portal, the European specialisation programme, and the vocational educational training. By the SIMA framework, SKILLBILL assessed:

- the employment impact of activities (e.g. job creation).
- the social equity and inclusion, by assessing the access to renewable energy system education and the community engagement in the four pillar activities.
- the educational opportunities offered, especially translated into skill development opportunities in the renewable energy sector and investments in innovation research and development.
- the challenges of social acceptance of RES that may arise, and the economic disruptions that may be caused due to the dependence on traditional energy sources and the resistance to transition strategies.
- the policy influence and need for regulatory shifts to support the acceleration of RES adoption.

In conclusion, the social impact framework was expected to demonstrate a range of positive/negative outcomes across economic, environmental, and social dimensions. Towards this scope, identified objectives and indicators were designed in the present SIMA Framework to capture performance.

The next steps that were followed put the framework into practice, collected the required data, utilising the given templates of questionnaires and following the time frame set within the SIMA framework. Data was collected through the four main pillars of SKILLBILL and was shared with Q-PLAN for the final processing and interpretation of results, producing valuable evaluation insights. The impact results are included in this updated report (D6.4, due August 2025), presenting the performance, outcomes, and impacts of the SKILLBILL project. A detailed analysis is presented in Section 7. A summary of them is presented below.

9.1 Working Groups insights

- **Increased Stakeholder Engagement:** Regular participation improved, with more members engaging every semester and contributing actively through suggestions, policy input, and technical solutions.
- **High-Quality Contributions:** The Majority of participants rated WG contributions as good to excellent, reflecting strong knowledge-sharing and collaboration.
- **Trust and Transparency:** Discussions were perceived as very transparent, with participants feeling free to express opinions and confident that their input influenced decisions.
- **Expanded Network:** The project successfully broadened the stakeholder network, enhancing synergies across different regions and expertise areas.
- **Diversity and Inclusion:** Growing recognition of diversity within WG experts, with significant representation across gender, ethnicity, and age; project fostered an inclusive and welcoming environment.

- Skill Development Opportunities: Participants gained valuable skills through activities like course development, expert exchanges, and joint discussions, leading to considerable to significant self-assessed skill improvement.
- Access to Knowledge and Best Practices: The project facilitated access to up-to-date knowledge, successful project data, and European-level RES developments.
- Positive Employment Impact: More participants secured renewable energy sector jobs after their involvement, indicating the project's role in enhancing career prospects.
- High Satisfaction Levels: Strong satisfaction with skills development resources and clarity of communication, reflecting the project's effectiveness in addressing skills gaps.
- Active Collaboration: Stakeholders engaged in joint brainstorming and thematic activities promoting diversity and inclusion, such as the Green Portal and school contests.

9.2 Green Portal Insights

- Ease of Finding Materials: The Majority found it easy or very easy to find materials, with moderate difficulty reported by fewer users.
- Language Suitability: Most users rated the language as mostly to very suitable.
- Overall Satisfaction: High satisfaction overall.
- Usefulness of Content: The Majority found the content mostly to very useful.
- Platform Addressing Needs: The majority said the platform addresses their specific RES needs.
- Relevance of Materials: Most users found the materials to be highly relevant.
- Suitability for Expertise: Nearly all users found materials suitable for their expertise level.
- Ample Content: The majority considered the materials to be mostly to very ample.
- Clarity: Most rated materials as mostly to very clear.
- Completeness: The Majority found the content considerably to very complete, with some increase in moderate completeness perception.
- Behaviour Change Possibility: Most found it considerably to very possible to change daily behaviour based on platform use.
- Long-term Engagement: High intention to continue engagement.
- Sharing Materials: Sharing varied, rare to sometimes sharing increased, often sharing decreased.
- Knowledge Improvement: The Majority reported moderate to significant knowledge improvement.
- Skills Improvement: Most reported slight to significant skills improvement, with a shift toward slight improvement over time.
- Awareness of Global Challenges: Consistent, significant or slight increase.
- Involvement in International Initiatives: Split evenly.
- Access to RES Information: The Majority reported significant or slight improvement.
- Sharing with Underserved Communities: Slight decrease in intention to share materials.

- Contribution to Job Creation: Majority saw a somewhat to significant contribution, though significant impact perception dropped.
- Satisfaction with Green Job Readiness: High satisfaction.
- Time Spent on Platform: Varied from short sessions (30 minutes) to longer use (5-6 hours/month).
- Materials Accessed Per Session: Ranged from 1-3 to 5-10 materials, with some users accessing many.

9.3 Vocational Educational Training Insights

- Strong Knowledge and Skills Gain: Most participants acquired solid knowledge and skills in renewable energy, feeling more proficient in solving real-world problems.
- High Motivation to Apply and Continue Learning: Many intend to apply what they learned professionally and pursue further education or training in the field.
- Positive Impact of Innovative Tools: The use of Virtual Reality significantly enhanced the learning experience for nearly half of the participants.
- Inclusiveness and Diversity: The programme was widely seen as accessible and inclusive across gender, age, socioeconomic, and cultural backgrounds, with good representation in leadership roles.
- Career Development: Participants generally expect the programme to support career advancement, though expectations for promotions are more mixed.
- Alignment with Market Needs: The content was considered relevant and well-matched to real-life and market demands.
- Strong Collaboration Benefits: Cooperation between VET organisations played a key role in enhancing programme quality, knowledge sharing, and enriching learning experiences.
- Environmental Focus: The programme clearly emphasised environmental sustainability, which participants valued.

Table 26. VET Target

Specific Objective	Indicator	Target Value	Achieved Value
SO4. Develop a technical practical permanent Vocational Education Training (VET) program on RES	XR/AR is appreciated by students by a feedback questionnaire	> 60%	88% Extremely 48% Somehow: 40%

9.4 European Specialisation Programme Insights

- Strong Knowledge and Skill Growth in RES: Participants reported a significant increase in knowledge and skills related to Renewable Energy Sources (RES) after the ESP programme. There was also a notable rise in applying these skills professionally or academically.

- **Increased Confidence in Problem-Solving:** Participants felt more proficient in solving real-world RES problems, with fewer reporting low proficiency after the update.
- **XR/AR Technology in Learning:** Interestingly, the belief that XR/AR enhanced the overall learning experience decreased in the update by 31%.
- **Career Impact and Advancement:** Most participants believed the ESP programme advanced their career and talent in the RES sector. However, fewer participants felt the programme directly offered promotion or advancement opportunities in their current jobs, with many reporting no change. Employment prospects linked to the programme showed some uncertainty, with a decline in those confident it will lead to employment.
- **Inclusivity and Accessibility:** The programme was widely perceived as accessible and inclusive across gender, age, socioeconomic status, educational, and cultural backgrounds. Representation of diverse backgrounds in leadership roles was increasingly observed. Participants strongly agreed that the programme catered effectively to a diverse student population.
- **Programme Flexibility and Environmental Focus:** High satisfaction with the flexibility of the ESP programme was reported. Most participants felt the programme contributed positively to environmental considerations.
- **Motivation and Continued Learning:** Interest in lifelong learning and specialisation in RES were key motivations for enrolling. Many participants planned to pursue further education, certifications, workshops, and professional development in RES.
- **University Collaboration:** Collaboration between universities was strongly valued, with participants agreeing it enhanced the quality, impact, knowledge facilitation, and enrichment of the learning experience. Positive perceptions of collaboration remained stable or improved across all related questions.
- **Alignment with Market Needs:** Satisfaction with the relevance of the ESP’s content to real-life and market needs was generally high, though some see room for improvement.

Table 27. ESP KPI

Specific Objective	Indicator	Target Value	Achieved Value
SO3. Develop an advanced permanent education program on RES at European level	XR/AR is appreciated by students by a feedback questionnaire	> 60%	31% reduction Baseline 57% Update 26%

9.5 Gender Aspects in STEM

- **Increased Visibility of Women in Leadership:** The perception of women frequently or always in leadership roles rose significantly, showing improved gender representation.
- **Persistent Uncertainty About Equal Career Advancement:** Neutral responses on equal opportunities rose, indicating ongoing uncertainty and room for progress in perceived career equality.

- Improved Perceptions of Pay Fairness: Disagreement with experiencing gender-based pay inequality grew notably, suggesting better pay equity perceptions.
- Mixed Experiences with Gender Discrimination: While more respondents strongly disagreed with facing discrimination, those strongly agreeing also rose, highlighting persistent challenges.
- Positive Impact of SKILLBILL on Work-Life Balance: The proportion of respondents reporting better work-life balance increased, indicating meaningful progress.
- Increased Interest in Renewable Energy Education: Though current enrolment slightly decreased, future plans to enrol rose, showing growing engagement.
- Improved Access to Women-Focused Training: The percentage finding access easy increased, with difficulties decreasing, but access challenges remain for many.
- Broad Access to Professional Development: Access to workshops and seminars rose, reflecting steady growth in learning opportunities.

Table 28. Gender Aspects KPI

Specific Objective	Indicator	Target Value	Achieved Value
SO5. Reduce the gender gap in STEM	Feedback from the appreciation of the SKILLBILL activities	> 60%	13% Baseline 72% Update 59%

9.6 RES Awareness

Key Trends in Renewable Energy: Energy Storage and Green Hydrogen were gaining increasing attention, with notable growth in expert awareness, signalling a strong future focus. Floating Solar Farms and AI Integration in energy systems were emerging as significant technological innovations. The electrification of Transportation was seen as a growing area of interest, with rising awareness of its role in the clean energy transition.

Challenges for Renewable Energy: Grid Instability and Energy Storage Costs remained major challenges, with many seeing them as key obstacles to broader adoption. Policy and Regulatory Inconsistencies were a significant concern, as well as the need for cost reductions to make renewables more affordable.

Opportunities in Renewable Energy: Decarbonisation and Climate Mitigation were seen as significant opportunities for renewable energy, with strong support for their role in addressing climate change. Job Creation and Energy Mix Diversification were also highlighted as major benefits of expanding renewable energy systems.

Community Contributions to Renewable Energy: Installing Rooftop Solar Panels and Switching to Green Energy Providers were key ways individuals and communities can contribute, with broad support for both actions. Energy Efficiency improvements, both in homes/buildings and transportation, were widely endorsed. Policy Advocacy and Community Education were seen as essential for furthering renewable energy adoption.

Table 29. Awareness KPI

Specific Objective	Indicator	Target Value	Achieved Value
SO6. Increase awareness of RES	Feedback from the appreciation of SKILLBILL activities to assess the RES awareness	> 60%	11% Baseline 48% Update 59%

Annexes

Annex I: Questionnaire for assessing the impact of the four Working Groups

O1: Steer the development of a greener, more effective, and pervasive next generation of sustainable technology.

The following questionnaire should be addressed to all Working Group Members and the four Lighthouse Experts

Objectives	Indicators	Question
O1.1	O1.1.1: Number of stakeholders Engagement	How many stakeholders have you been engaged with in the past year in the context of SKILLBILL WGs? [Please write a number]
	O1.1.2: Frequency of stakeholders' engagement	How frequently have you engaged with stakeholders related to renewable energy technology development through this project in the past year? Scale [Rarely, Occasionally, Frequently, Very Frequently]
	O1.1.3: Collaborative Initiatives	Have you been involved in any collaborative projects or initiatives related to renewable energy technology within this project? Scale [Yes, No] If yes, please name what kind of project they develop? [Open text answer]
	O1.1.4: Network Growth	Have you noticed an expansion in the network of stakeholders involved in renewable energy technology development activities due to this project? Scale [Yes, No]
O1.2	O1.2.1: Transparency Score	On a scale of 1 to 5, how transparent do you find the discussions and communication related to renewable energy technology development within this project? Scale [1 = Not transparent, 5 = Very transparent]
	O1.2.2: Freedom of expression	How freely did you express your opinion during the WG meetings? Scale [1 = Not at all freely, 5 = Very freely]
	O1.2.3: Language Clarity	How clear and understandable do you find the language used in discussions about renewable energy technology development within this project?

Objectives	Indicators	Question
		Scale [1 = Not clear at all, 5 = Very Clear]
	O1.2.4: Participation Satisfaction	How satisfied are you with the clarity of language and openness of discussions related to renewable energy technology development? Scale [1 = Very Dissatisfied, 5 = Very Satisfied]
	O1.2.5: Influence on discussion	How much do you believe your opinion influenced the discussion or the recommendations' development? Scale [1 = Not at all, 5 = Very much]
O1.3	O1.3.1: Trust Index	How much do you trust the project activities and actions related to renewable energy technology development? Scale [1 = No trust, 5 = Full trust]
	O1.3.2: Accountability Rating	How accountable do you perceive the actions and decisions made by this project in the context of renewable energy technology development? Scale [1 = Not accountable, 5 = Very accountable]
O1.4	O1.4.1: Dissemination Reach	Have you disseminated the policy and technical recommendations related to renewable energy technology development developed by this project? Scale [Yes, No] If yes, how many stakeholders/decision makers did you send the policy and technical recommendations to? [Please write a number]
	O1.4.2: Feedback on Recommendation	Have you provided any feedback or suggestions on the policy and technical recommendations related to renewable energy technology produced by this project? Scale [Yes, No]
	O1.4.3: Implementation Rate	Have you utilised the policy and technical recommendations related to renewable energy technology development provided by this project? Scale [Yes, No]
O1.5	O1.5.1: Participation Rate	How frequently have you participated in discussions (in WG chat and WG meetings) related to renewable energy technology development within the project? Multiple Choice [Every month, Every semester, four times a year, once a year]

Objectives	Indicators	Question
	O1.5.2 Content contribution	<p>How did you actively contribute to the WG discussions?</p> <p>Multiple choice (you may choose more than one)</p> <ul style="list-style-type: none"> • by contributing with suggestions • by contributing to guidelines • by contributing to policy recommendations • by posting papers/science material/articles on common chat • by posing questions to the WG in chat • by suggesting solutions to technical RES problems
	O1.5.3: Quality of Contributions	<p>How would you rate the quality of contributions made by WG members in discussions about renewable energy technology development within the project?</p> <p>Scale [1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent]</p>
	O1.5.4: Level of Engagement	<p>How would you rate the average time spent by members in discussions?</p> <p>Scale [1 = Very low involvement, 5 = very high involvement]</p>
O1.6	O1.6.1: Employment Rate	<p>Have you successfully secured employment in the renewable energy sector as a direct result of your participation in this project?</p> <p>Scale [Yes, No]</p>
	O1.6.2: Job Placement Speed	<p>How long did it take you to secure employment in the renewable energy sector after you participated in this project? A month, a trimester, a semester, a year, more than a year.</p>
O1.7	O1.7.1: Participant Satisfaction	<p>How satisfied are you with the skills development opportunities and resources provided by this project in terms of reducing the skills gap in the renewable energy sector?</p> <p>Scale [1 = Very dissatisfied, 5 = very satisfied]</p>
	O1.7.2: Skills Assessment	<p>How would you rate the improvement in your skills as assessed by you, as a project participant?</p> <p>Scale [1 = No improvement, 5 = Significant improvement]</p>
	O1.7.3 Skill advancement opportunities	<p>What are the project opportunities that led you to reduce your own skill gaps?</p> <p>[Open answer]</p>
O1.8	O1.8.1: Diversity Index	<p>How diverse do you perceive the WG experts in terms of representation from various backgrounds, including gender, ethnicity, and age?</p>

Objectives	Indicators	Question
		Scale [1= No diverse at all, 5 = Significantly diverse]
	O1.8.2: Inclusion Perception	<p>Do you feel that this project fosters an inclusive and welcoming environment for participants of various backgrounds and that all voices are heard and valued?</p> <p>Not at all, yes, I do not have an opinion on this</p>
	O1.8.3: Inclusion Initiatives	<p>Have you observed or participated in any specific initiatives or activities within the project that promote diversity and inclusion among participants and stakeholders? If so, please describe your experience.</p> <p>Open answer</p>

Annex II: Questionnaire for assessing the impact of the Green Portal

O2: Launch the point of reference for qualitative information on RES and promote and accelerate the development of sustainable solutions.

The following questionnaire should be addressed to the Green Portal Users

Objectives	Indicators	Question
O2.1	O2.1.1: Usability	How easily can you find the materials you need on the platform? Scale [1 = Very difficult, 5 = Very easy]
	O2.1.2: Language Appropriateness	Do you find the language used in the materials suitable for your level of understanding? Scale [1 = Not suitable, 5 = Highly suitable]
O2.2	O2.2.1: User Satisfaction	How satisfied are you with the platform overall? Scale [1 = Very dissatisfied, 5 = Very satisfied]
	O2.2.2: Green Portal's usefulness	How useful do you find the content concentrated in the Green Portal? Scale [1 = Very unuseful, 5 = Very useful]
O2.3	O2.3.1: Relevance to Needs	Does the platform address your specific needs in the field of RES? Scale [Yes, No]
	O2.3.2: Content Relevance	How relevant are the materials to your interests and needs? Scale [1 = Not relevant, 5 = Highly relevant]
O2.4	O2.4.1: Material Adaptability	Do you find materials suitable for your level of expertise? Scale [Yes, No]
	O2.4.2: Material Diversity	Do you believe that the material in the green portal is ample enough? Scale [1= not at all, 5= very ample] If not ample, what topic is not addressed at all or is not sufficiently addressed? [Open answer]
O2.5	O2.5.1: Clarity of Materials	Are the materials on the platform clear and easy to understand? Scale [1 = Not clear, 5 = Very clear]
	O2.5.2: Material Completeness	Do you find the materials on the platform complete in each topic? Scale [1 = Not complete, 5 = Very complete]

Objectives	Indicators	Question
O2.6	O2.6.1: Behaviour Change	How possible is it to make any changes in your daily behaviour as a result of using the platform? Scale [1 = Not possible, 5 = Very Possible]
	O2.6.2: Long-term Commitment	Do you plan to continue engaging with RES practices of the Portal in the long term? Scale [Yes, No]
O2.7	O2.7.1: Knowledge Sharing	How often do you share materials from the platform with others? Scale [Rarely / Sometimes / Often] If you often share Green Portal materials with others, what is the category /material you most frequently share with others? (multiple choice on types of material) [Open answer]
	O2.7.2: Knowledge Acquisition	Do you feel that your knowledge of RES has improved since using the platform? Scale [Not improved / Moderate improved / Significantly improved]
O2.8	O2.8.1: Skill Enhancement	Have your skills related to RES been improved through the platform? Scale [Not improved / Slightly improved / Significantly improved]
O2.9	O2.9.1: Global Awareness	Has your awareness of global RES challenges been increased? Scale [Not increased / Slightly increased / Significantly increased]
	O2.9.2: International Collaboration	Are you involved in international RES initiatives as a result of the platform? Scale [Yes, No]
O2.10	O2.10.1: Accessibility Perception	Has the platform improved your access to RES information? Scale [Not improved / Slightly improved / Significantly improved]
	O2.10.2: Information Reach	Have you shared platform materials with underserved communities? Scale [Yes, No]
O2.11	O2.11.1: Job Creation Impact	Do you think the platform has contributed or can contribute to job creation in the RES sector? Scale [Not at all, Somewhat, significantly]

Objectives	Indicators	Question
	O2.11.2: Job Seeker Satisfaction	How satisfied are you with the green material you found on the platform in terms of getting you ready for your green job? Scale [1 = Very dissatisfied, 5 = Very satisfied]
O2.12	O2.12.1: Platform Engagement	How many minutes or sessions do you spend on the platform per month? [Number]
	O2.12.2: Material Utilisation	How many available materials do you typically access as a user of the platform per session? [Number]

Some questions can be also addressed to the Green Portal Manager, apart from the users. The questions to be answered also by the Green Portal Manager are the following:

Objectives	Indicators	Question
O2.4	O2.4.1: Material Adaptability	Do you find materials suitable for your level of expertise? Scale [Yes, No]
	O2.4.2: Material Diversity	Do you believe that the material in the green portal is ample enough? Scale [1= not at all, 5= very ample] If not ample, what topic is not addressed at all or is not sufficiently addressed? [Open answer]
O2.12	O2.12.1: Platform Engagement	How many minutes or sessions do you spend on the platform per month? [Number]
	O2.12.2: Material Utilisation	How many available materials do you typically access as a user of the platform per session? [Number]

Annex III: Questionnaire for assessing the impact of the Specialisation ESP / VET Programme

O3: Develop an advanced permanent education programme on RES at the European level.

The following questionnaire should be addressed to the students of the European Specialisation Programme. Additional questions are added at the end of this questionnaire to be answered by the ESP Manager (ESP staff/professors from UNITUS, USE, UU, Metropolia)

Objectives	Indicators	Question
O3.1	O3.1.1: Knowledge Gain	At the beginning: Do you have knowledge and skills related to RES? Scale: [1=no knowledge at all, 2=slightly, 3= Strongly] At the end: Did you acquire new knowledge and skills related to RES through this programme? Scale: [1=no new knowledge acquired at all, 2=slightly acquired, 3= Strongly acquired]
	O3.1.2: Skill Application	At the beginning: Are you applying skills and knowledge related to RES in your professional or academic life? At the end: Are you applying the skills and knowledge gained through the programme in your professional or academic life? Scale [Not at All, Rarely, Occasionally, Often, always]
	O3.1.3: Problem-Solving Proficiency	At the beginning: Do you feel proficient in solving real-world problems related to renewable energy sources (RES)? At the end: Do you feel more proficient in solving real-world problems related to renewable energy sources (RES), as a result of the Programme? Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Highly proficient
	O3.2.1: Perceived Learning Enhancement	At the beginning: To what extent do you believe the integration of Extended/Augmented Reality (XR/AR) technology enhances the overall learning experience in this programme? At the end: To what extent do you believe the integration of Extended/Augmented Reality (XR/AR) technology has enhanced your overall learning experience in this programme? Scale: (1) Not at all, (2) Slightly, (3) Moderately, (4) Very much, (5) Extremely
O3.3	O3.3.1: Talent Development	At the beginning: Do you believe that an education programme in RES will enhance your talent and potential in the sector? At the end: Do you believe your talents and potential in RES have been maximised during the programme?

Objectives	Indicators	Question
		Scale: (1) Not at All, (2) Slightly, (3) Somewhat, (4) (5) Completely
	O3.3.2: Innovation Output	<p>At the beginning: Are you contributing to innovative projects or outputs in the field of renewable energy sources (RES)?</p> <p>At the end: Have you actively contributed to innovative projects or outputs in the field of renewable energy sources (RES) after having completed this programme?</p> <p>Scale: (1) Not at all, (2) Rarely, (3) Occasionally, (4) Often, (5) Always</p>
O3.4	O3.4.1: Inclusivity	<p>At the beginning: Do you agree that the programme provides equal access and opportunities for students from various backgrounds?</p> <p>At the end: Do you agree that the programme provided equal access and opportunities for students from various backgrounds?</p> <p>Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly Agree</p>
	O3.4.2: Representation in Leadership Roles	<p>At the beginning and at the end: Do you observe representation from individuals of diverse backgrounds in leadership or influential roles within the programme?</p> <p>Scale: (1) Highly observed representation, (2) some representation observed, (3) Neutral, (4) Strongly Observed</p>
O3.5	O3.5.1: Flexibility Satisfaction	<p>At the beginning: Are you satisfied with the flexibility of the ESP?</p> <p>At the end: Were you satisfied with the flexibility of the ESP?</p> <p>Scale: (1) Not Satisfied, (2) Slightly Satisfied, (3) Neutral, (4) Satisfied, (5) Highly Satisfied</p>
	O3.5.2 Environment	<p>At the beginning: Do you feel that the ESP attributes to environmental considerations?</p> <p>Do you feel that the programme has attributed to environmental considerations?</p> <p>Scale: (1) No, (2) Partially, (3) Neutral, (4) Yes, (5) very much indeed</p>
O3.6	O3.6.1: Willingness to Continue Learning	<p>At the beginning: What led you to pursue an educational programme in RES?</p> <p>Scale: (1) Interested in life-long learning, (2) get specialised in RES, (3) network with experts/professors, (4) required in job position (multiple answers)</p> <p>At the end: Are you interested in pursuing further education or training in the field of RES?</p>

Objectives	Indicators	Question
		Scale: (1) Not Interested, (2) Slightly Interested, (3) Neutral, (4) Interested, (5) Highly Interested
	O3.6.2: Post-Programme Learning Behaviour	<p>At the beginning and at the end: After completing the courses, will you actively seek out additional learning opportunities or programmes related to renewable energy sources (RES) and the skills?</p> <p>Scale: (1) Not at All, (2) Rarely, (3) Occasionally, (4) Often, (5) Always</p> <p>Please note down a few: [Open answer]</p>
O3.7	O3.7.1: Career Progression	<p>At the beginning: Do you believe that your career will be advanced or improved by completing the courses?</p> <p>At the end: Do you believe that your career has been advanced or improved by completing the courses?</p> <p>Scale: (1) Not Advanced, (2) Slightly Advanced, (3) Neutral, (4) Advanced, (5) Highly Advanced</p>
	O3.7.2: Promotion Opportunities	<p>At the beginning: Do you believe that the programme will offer you a promotion or career advancement opportunities in your current job?</p> <p>At the end: Have you been offered or received any promotions or career advancement opportunities in your current job since completing the programme?</p> <p>Scale: (1) No Opportunities/ No Change, (2) Slightly Advanced, (3) Moderately Advanced, (4) Significantly Advanced</p>
	O3.7.3: Connection with real market	<p>At the beginning, and at the end: How satisfied are you with the relation of course content to real-life/real market needs?</p> <p>Scale: (1) Very dissatisfied, (2) Slightly dissatisfied, (3) Moderate, (4) Very satisfied, (5) Very satisfied</p>
O3.8	O3.8.1: Employment Rate	<p>At the beginning: Do you feel that these courses can play a significant role in getting employed?</p> <p>At the end: Do you feel that these courses played a significant role in getting employed?</p> <p>Scale: (1) No, (2) Partially, (3) Neutral, (4) Yes</p>
	O3.8.2: Job Placement Rate	<p>At the beginning: Do you feel that the educational programme in RES will secure a job in the RES field in the future?</p> <p>Scale: (1) Yes, (2) No, (3) Neutral</p> <p>At the end: Did you secure a job in the RES field within [specify a time frame, e.g., 6 months] after completing the programme?</p>

Objectives	Indicators	Question
		(1) Within the first month (2) Within 6 months, (3) Within 1 year, (4) Within 2 years, (5) Longer than 2 years
O3.9	O3.9.1: Enrolment Diversity	<p>At the beginning and at the end: Do you agree that the programme is accessible to individuals of all genders and age groups?</p> <p>Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly Agree</p>
	O3.9.2: Demographic Representation	<p>At the beginning and at the end: Do you believe the programme effectively caters to a diverse student population in terms of gender and age?</p> <p>Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Extremely</p>
	O3.9.3: Accessibility Perception	<p>At the beginning and at the end: Do you agree that the programme is accessible to individuals from various backgrounds, considering factors such as socioeconomic status, educational background, and cultural differences?</p> <p>Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly Agree</p>
O3.10	O3.10.1: Collaboration Effectiveness	<p>At the beginning and at the end: Has / Does the collaboration between universities enhanced / enhance the quality of the ESP?</p> <p>Scale: (1) Not Enhanced, (2) Slightly Enhanced, (3) Neutral, (4) Enhanced, (5) Highly Enhanced</p> <p>At the beginning and at the end: Does / Has the collaboration between universities enhance / enhanced the impact of the programme?</p> <p>Scale: (1) Not Enhanced, (2) Slightly Enhanced, (3) Neutral, (4) Enhanced, (5) Highly Enhanced</p>
	O3.10.2: Knowledge Exchange Effectiveness	<p>At the beginning: Do you think the collaboration between organisations effectively facilitates knowledge in the programme?</p> <p>At the end: Do you think the collaboration between universities has effectively facilitated knowledge in the programme?</p> <p>Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Extremely</p> <p>At the beginning: Do you think the collaboration between organisations effectively enriches your learning experience in the programme?</p> <p>At the end: Do you think the collaboration between universities has effectively enriched your learning experience in the programme?</p>

Objectives	Indicators	Question
		Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Extremely

O4: Develop a technical, practical permanent Vocational Education Training programme on RES

The following questionnaire should be addressed to the students of the Vocational Education Training Programme. The questionnaire is like the one developed in the frame of the European Specialisation Programme, but it is presented in this ANNEX as an autonomous questionnaire to facilitate the control of content and the creation of the online questionnaire by the VET Manager. Additional questions are added at the end of this questionnaire to be answered by the VET Manager (SINERGIE) and the trainers.

Objectives	Indicators	Question
O4.1	O4.1.1: Knowledge Gain	Did you acquire new knowledge and skills related to RES through this programme? Scale: [1=no new knowledge acquired at all, 2=slightly acquired, 3=Strongly acquired]
	O4.1.2: Skill Application	Are you applying the skills and knowledge gained through the VET programme in your professional life? Scale: (1) Not at All, (2) Rarely, (3) Occasionally, (4) Often, (5) Always
	O4.1.3: Problem-Solving Proficiency	Do you feel more proficient in solving real-world problems related to renewable energy sources (RES), because of the VET programme? Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Highly proficient
O4.2	O4.2.1: Use and Satisfaction with Extended/Augmented Reality (XR/AR) Technology	Did you use Extended/Augmented Reality (XR/AR) technology during the programme? [Yes/ No] If yes, how satisfied were you with its effectiveness in enhancing your learning experience? Scale: (1) Not Satisfied, (2) Neutral, (3) Satisfied, (4) Highly Satisfied If no, go to the next question
	O4.2.2: Perceived Learning Enhancement	To what extent do you believe the integration of Extended/Augmented Reality (XR/AR) technology has enhanced your overall learning experience in this programme? Scale: (1) Not at all, (2) Slightly, (3) Moderately, (4) Very much, (5) Extremely

Objectives	Indicators	Question
O4.3	O4.3.1: Talent Development	Do you believe your talents and potential have been maximized during the programme? Scale: (1) Not at All, (2) Slightly, (3) Somewhat, (4) (5) Completely
	O4.3.2: Innovation Output	Have you actively contributed to innovative projects or outputs in the field of renewable energy sources (RES) after having completed this programme? Scale: (1) Not at all, (2) Rarely, (3) Occasionally, (4) Often, (5) Always
O4.4	O4.4.1: Inclusivity	Do you agree that the programme provided equal access and opportunities for students from various backgrounds? Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly Agree
	O4.4.2: Representation in Leadership Roles	Do you observe representation from individuals of diverse backgrounds in leadership or influential roles within the programme? Scale: (1) Highly observed representation, (2) some representation observed, (3) Neutral, (4) Strongly Observed
O4.5	O4.5.1: Flexibility Satisfaction	Were you satisfied with the flexibility of the VET Programme? Scale: (1) Not Satisfied, (2) Slightly Satisfied, (3) Neutral, (4) Satisfied, (5) Highly Satisfied
	O4.5.2: Environment	Do you feel that the VET Programme has attributed to environmental considerations? Scale: (1) No, (2) Partially, (3) Neutral, (4) Yes (5) very much indeed
O4.6	O4.6.1: Willingness to Continue Learning	Are you interested in pursuing further education or training in the field of RES? Scale: (1) Not Interested, (2) Slightly Interested, (3) Neutral, (4) Interested, (5) Highly Interested
	O4.6.2: Post-Programme Learning Behaviour	After completing the VET Programme, have you actively sought out additional learning opportunities or programmes related to renewable energy sources (RES) and the skills you gained during the programme? Scale: (1) Not at All, (2) Rarely, (3) Occasionally, (4) Often, (5) Always Please note down a few: [Open answer]

Objectives	Indicators	Question
O4.7	O4.7.1: Career Progression	Has your career advanced or improved since completing the VET Programme? Scale: (1) Not Advanced, (2) Slightly Advanced, (3) Neutral, (4) Considerably advanced, (5) Highly Advanced
	O4.7.2: Promotion Opportunities	Have you been offered or received any promotions or career advancement opportunities in your current job since completing the programme? Scale: (1) No Opportunities/ No Change, (2) Slightly Advanced, (3) Moderately Advanced, (4) Significantly Advanced
	O4.7.3: Connection with real market	How satisfied are you with the relation of VET content to real-life/real-market needs? Scale: (1) Very dissatisfied, (2) Slightly dissatisfied, (3) Moderate, (4) Very satisfied, (5) Very satisfied
O4.8	O4.8.1: Employment Rate	Do you feel that this VET Programme played a significant role in getting employed? Scale: (1) No, (2) Partially, (3) Neutral, (4) Yes
	O4.8.2: Job Placement Rate	Did you secure a job in the RES field within [specify a time frame, e.g., 6 months] after completing the programme? (1) Within the first month (2) Within 6 months, (3) Within 1 year, (4) Within 2 years, (5) Longer than 2 years
O4.9	O4.9.1: Enrolment Diversity	Do you agree that the VET Programme is accessible to individuals of all genders and age groups? Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly Agree
	O4.9.2: Demographic Representation	Do you believe the programme effectively caters to a diverse student population in terms of gender and age? Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Extremely
	O4.9.3: Accessibility Perception	Do you agree that the programme is accessible to individuals from various backgrounds, considering factors such as socioeconomic status, educational background, and cultural differences? Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly Agree
O4.10	O4.10.1: Collaboration	Has the collaboration between VET organisations enhanced the quality of the VET Programme? Scale: (1) Not Enhanced, (2) Slightly Enhanced, (3) Neutral, (4) Enhanced, (5) Highly Enhanced

Objectives	Indicators	Question
	Effectiveness	Has the collaboration between VET organisations enhanced the impact of the programme? Scale: (1) Not Enhanced, (2) Slightly Enhanced, (3) Neutral, (4) Enhanced, (5) Highly Enhanced
	O4.10.2: Knowledge Exchange Effectiveness	Do you think the collaboration between VET organisations has effectively facilitated knowledge in the programme? Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Extremely Do you think the collaboration between VET organisations has effectively enriched your learning experience in the programme? Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Extremely

The additional questions to be addressed to the managers of the VET (SINERGIE) and the Trainers

Objectives	Indicators	Question
O4.1	O4.1.1: Knowledge Gain	Do you notice an increase in the skills and knowledge of your students after completing the programme? Scale: (1) Not Noticeable, (2) Slightly Noticeable, (3) Neutral, (4) Noticeable, (5) Highly Noticeable
O4.2	O4.2.1: Use and Satisfaction with Extended/Augmented Reality (XR/AR) Technology	How many of your students used the Extended/Augmented Reality (XR/AR) Technology in the VET programme? (1) None, (2) ¼ of students, (3) Half of students, (4) Most students, (5) All of students How satisfied are you with the effectiveness of Extended/Augmented Reality (XR/AR) in enhancing your students' learning experience? Scale: (1) Not Satisfied, (2) Neutral, (3) Satisfied, (4) Highly Satisfied
O4.5	O4.5.2: Flexibility to organise the content material	Being a manager or a trainer of the VET Programme, how satisfied are you by the flexibility offered to you to organise the content material? Scale: (1) Very dissatisfied, (2) Slightly dissatisfied, (3) Moderate, (4) Very satisfied, (5) Very satisfied
	O4.5.3: Flexibility to organise the	Being a manager or a trainer of the VET Programme, how satisfied are you by the flexibility offered to you to organise the courses' scheduling?

Objectives	Indicators	Question
	scheduling of the courses	Scale: (1) Very dissatisfied, (2) Slightly dissatisfied, (3) Moderate, (4) Very satisfied, (5) Very satisfied
O4.7	O4.7.3: Connection with real market	Being a manager or a trainer of the VET Programme, how satisfied are you by the relation of the VET Programme content to real life/real market needs? Scale: (1) Very dissatisfied, (2) Slightly dissatisfied, (3) Moderate, (4) Very satisfied, (5) Very satisfied
O4.9	O4.9.1: Enrolment Diversity	Do you agree that the VET Programme is accessible to individuals of all genders and age groups? Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly Agree
	O4.9.2: Demographic Representation	Do you believe the programme effectively caters for a diverse student population in terms of gender and age? Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Extremely
	O4.9.3: Accessibility Perception	Do you agree that the programme is accessible to individuals from various backgrounds, considering factors such as socioeconomic status, educational background, and cultural differences? Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly Agree
O4.10	O4.10.1: Collaboration Effectiveness	Has the collaboration between VET Organisations enhanced the quality of the VET Programme? Scale: (1) Not Enhanced, (2) Slightly Enhanced, (3) Neutral, (4) Enhanced, (5) Highly Enhanced Has the collaboration between VET Organisations enhanced the impact of the programme? Scale: (1) Not Enhanced, (2) Slightly Enhanced, (3) Neutral, (4) Enhanced, (5) Highly Enhanced
	O4.10.2: Knowledge Exchange Effectiveness	Do you think the collaboration between VET Organisations has effectively facilitated knowledge in the programme? Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Extremely Do you think the collaboration between VET Organisations has effectively enriched the learning experience in the programme? Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Extremely

Objectives	Indicators	Question
O4.11	O4.11.1: Internal organisation of the programme	Being a manager or a trainer of the VET Programme, how satisfied are you by the organisation offered? Scale: (1) Very dissatisfied, (2) Slightly dissatisfied, (3) Moderate, (4) Very satisfied, (5) Very satisfied
	O4.11.2: Preparation time	Being a manager or a trainer of the VET Programme, how satisfied are you by the amount of time given to the preparation of a course? Scale: (1) Very dissatisfied, (2) Slightly dissatisfied, (3) Moderate, (4) Very satisfied, (5) Very satisfied
	O4.11.3: Attendance	Being a manager or a trainer of the VET Programme, how satisfied are you by the number of students attending the programme? Scale: (1) Very dissatisfied, (2) Slightly dissatisfied, (3) Moderate, (4) Very satisfied, (5) Very satisfied
O4.12	O4.12.1: Freedom of communication with SKILLBILL consortium	Being a manager or a trainer of the VET Programme, how satisfied are you by the freedom of communication of your ideas, concerns, suggestions with SKILLBILL consortium? Scale: (1) Very dissatisfied, (2) Slightly dissatisfied, (3) Moderate, (4) Very satisfied, (5) Very satisfied
	O4.12.2: Freedom of communication with students	Being a manager or a trainer of the VET Programme, how satisfied are you by the freedom of communication of your ideas, concerns, suggestions with your students? Scale: (1) Very dissatisfied, (2) Slightly dissatisfied, (3) Moderate, (4) Very satisfied, (5) Very satisfied
	O4.12.3: Freedom of communication with other trainers	Being a manager or a trainer of the VET Programme, how satisfied are you by the freedom of communication of your ideas, concerns, suggestions with other trainers? Scale: (1) Very dissatisfied, (2) Slightly dissatisfied, (3) Moderate, (4) Very satisfied, (5) Very satisfied

Annex IV: Questionnaire for assessing the impact of SKILLBILL to gender aspects in STEM.

The following questionnaire should be addressed to WGs members WG manager, to students and Professors of the ESP, to trainees and trainers of the VET Programme and to the Green Portal users and managers. It is considered a horizontal questionnaire to facilitate assessment of gender balance throughout all pillars of SKILLBILL.

O5: Reduce gender gap in STEM.

Objective	Indicators	Question
O5.1	O5.1.3: Representation in Decision-Making	<p>How often do you see women represented in leadership roles within renewable energy organizations?</p> <p>Scale: (1) Rarely, (2) Occasionally, (3) Frequently, (4) Always</p> <p>A woman in a leadership role is better than a man</p> <p>Scale: (1) Strongly disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly agree</p> <p>A man in a leadership role is better than a woman.</p> <p>Scale: (1) Strongly disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly agree</p>
	O5.2.1: Recognition of Female Achievements	<p>How often do you come across instances where the achievements of women in renewable energy are acknowledged?</p> <p>Scale: (1) Rarely, (2) Occasionally, (3) Frequently, (4) Always</p>
O5.2	O5.2.2: Participation in Networking Events	<p>Have you attended any networking events specifically focused on encouraging women in the renewable energy sector?</p> <p>(Yes/No)</p>
	O5.3.1: Participation in Gender Equality Initiatives	<p>Have you actively participated in any initiative aimed at achieving gender equality in the renewable energy sector?</p> <p>(Yes/No) If yes, please name any: __ [open answer]</p>
O5.3	O5.3.2: Balanced Career Advancement Progress	<p>Do you feel that there are equal opportunities for career advancement for both men and women in the renewable energy sector?</p> <p>Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree</p> <p>In the working context, you have lived in circumstances in which you have been paid less for your gender.</p>

Objective	Indicators	Question
		Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree In the working context, you have faced discrimination for your gender. Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree
	O5.3.3: Work-Life Balance Perception	How do you believe SKILLBILL has contributed to work-life balance for women compared to a year ago?? Scale: (1) Worse, (2) Same, (3) Better
O5.4	O5.4.1: Participation in Educational Programmes	Are you currently enrolled in any educational programmes related to renewable energy? (Yes/No)
	O5.4.2: Access to Training Resources	How easily can you access training resources specifically designed for women in the renewable energy sector? Scale: (1) Very Difficult, (2) Difficult, (3) Easy, (4) Very Easy
	O5.4.3: Access to Professional Development Opportunities	Have you had access to professional development opportunities (e.g., workshops, seminars) focused on renewable energy in the past year? (Yes/No)

Annex V: Questionnaire for assessing the awareness of RES.

The following questionnaire is again horizontal and should be addressed to all users and managers involved in all pillars of SKILLBILL, i.e. WG members and WG manager, students and Professors of the ESP, trainees and trainers of the VET Programme and also Green Portal users and managers, to assess the awareness of participants on Renewable Energy Systems.

O6: Increased awareness of RES

Objective	Indicators	Question
<p>O6.1</p>	<p>O6.1.1: Access to information</p>	<p>Where do you usually search for information on Renewable Energy Systems?</p> <p>Multiple choice (you may choose more than one)</p> <ul style="list-style-type: none"> a. Internet b. Ask friends. c. Ask technicians or experts. d. Books e. TV
	<p>O6.1.2: Perception of information reliability</p>	<p>How reliable do you find the information shared on the internet?</p> <p>Scale: (1) Not at all reliable, (2) quite unreliable, (3) as reliable as any other source /neutral (4) quite reliable, (5) very much reliable</p>
	<p>O6.1.3: Interest in Renewable Energy Sources and Technologies</p>	<p>How would you rate your interest in:</p> <p>Solar photovoltaic</p> <p>Scale: (1) Never Heard of it (2) Heard of It (3) Know a little (4) Know a fair amount (5) Know it well</p> <p>Solar thermal</p> <p>Scale: (1) Never Heard of it (2) Heard of It (3) Know a little (4) Know a fair amount (5) Know it well</p> <p>Hydrogen</p> <p>Scale: (1) Never Heard of it (2) Heard of It (3) Know a little (4) Know a fair amount (5) Know it well</p> <p>Wind</p> <p>Scale: (1) Never Heard of it (2) Heard of It (3) Know a little (4) Know a fair amount (5) Know it well</p> <p>Biofuel (biodiesel, bioethanol, biomethane)</p> <p>Scale: (1) Never Heard of it (2) Heard of It (3) Know a little (4) Know a fair amount (5) Know it well</p> <p>Hydro</p> <p>Scale: (1) Never Heard of it (2) Heard of It (3) Know a little (4) Know a fair amount (5) Know it well</p>

Objective	Indicators	Question
		<p>Geothermal Scale: (1) Never Heard of it (2) Heard of It (3) Know a little (4) Know a fair amount (5) Know it well</p> <p>Gasification Scale: (1) Never Heard of it (2) Heard of It (3) Know a little (4) Know a fair amount (5) Know it well</p> <p>Digestion Scale: (1) Never Heard of it (2) Heard of It (3) Know a little (4) Know a fair amount (5) Know it well</p> <p>Biomass combustion Scale: (1) Never Heard of it (2) Heard of It (3) Know a little (4) Know a fair amount (5) Know it well</p> <p>Heat recovery. Scale: (1) Never Heard of it (2) Heard of It (3) Know a little (4) Know a fair amount (5) Know it well</p> <p>Energy storage Scale: (1) Never Heard of it (2) Heard of It (3) Know a little (4) Know a fair amount (5) Know it well</p> <p>Heat pumps. Scale: (1) Never Heard of it (2) Heard of It (3) Know a little (4) Know a fair amount (5) Know it well</p> <p>Oceans Scale: (1) Never Heard of it (2) Heard of It (3) Know a little (4) Know a fair amount (5) Know it well</p>
<p>O6.2</p>	<p>O6.2.1 Awareness of energy problems</p>	<p>Do you agree that energy problems are related to economic aspects? Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree</p>

Objective	Indicators	Question
		<p>Do you agree that energy problems are related to environmental aspects?</p> <p>Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree</p>
		<p>Do you agree that energy problems are related to social aspects?</p> <p>Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree</p>
		<p>Do you agree that energy problems are related to political aspects?</p> <p>Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree</p>
		<p>Do you agree that energy problems are related to technical aspects?</p> <p>Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree</p>
	<p>O6.2.2: Awareness of emerging trends in RES</p>	<p>How aware are you of the following emerging trends or advancements in renewable energy research and development?</p> <p>Energy Storage Technologies (Advancements in battery technologies, such as lithium-ion batteries, flow batteries, and solid-state batteries)</p> <p>Scale: (1) No awareness, (2) Basic awareness, (3) Moderate awareness, (4) Advanced awareness, (5) Expert Awareness</p> <p>Green Hydrogen</p> <p>Scale: (1) No awareness, (2) Basic awareness, (3) Moderate awareness, (4) Advanced awareness, (5) Expert Awareness</p> <p>Floating Solar Farms/Plants</p> <p>Scale: (1) No awareness, (2) Basic awareness, (3) Moderate awareness, (4) Advanced awareness, (5) Expert Awareness</p> <p>Biogas and Bioenergy</p>

Objective	Indicators	Question
		<p>Scale: (1) No awareness, (2) Basic awareness, (3) Moderate awareness, (4) Advanced awareness, (5) Expert Awareness</p> <p>Artificial Intelligence (AI) and Renewable Energy (The integration of AI and machine learning algorithms into renewable energy systems is improving efficiency, reliability, and predictive capabilities).</p> <p>Scale: (1) No awareness, (2) Basic awareness, (3) Moderate awareness, (4) Advanced awareness, (5) Expert Awareness</p> <p>Community Renewable Energy Projects/Initiatives</p> <p>Scale: (1) No awareness, (2) Basic awareness, (3) Moderate awareness, (4) Advanced awareness, (5) Expert Awareness</p> <p>Electrification of Transportation</p> <p>Scale: (1) No awareness, (2) Basic awareness, (3) Moderate awareness, (4) Advanced awareness, (5) Expert Awareness</p> <p>Offshore Wind Energy</p> <p>Scale: (1) No awareness, (2) Basic awareness, (3) Moderate awareness, (4) Advanced awareness, (5) Expert Awareness</p> <p>Renewable Energy Finance and Investment</p> <p>Scale: (1) No awareness, (2) Basic awareness, (3) Moderate awareness, (4) Advanced awareness, (5) Expert Awareness</p> <p>Please name any other trend that is not stated above: _____ [open answer]</p>
	<p>O6.2.3: Awareness of policies</p>	<p>According to your knowledge, how do the following policies and regulations influence the growth of renewable energy industries?</p> <p>Incentives and subsidies</p> <p>Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Extremely</p> <p>Renewable Portfolio Standards (a certain percentage of electricity generation should come from RES)</p>

Objective	Indicators	Question
		<p>Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Extremely</p> <p>Net-metering</p> <p>Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Extremely</p> <p>Regulations governing grid access and interconnection.</p> <p>Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Extremely</p> <p>Emissions limits/environmental regulations</p> <p>Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Extremely</p> <p>Public Procurement Policies (prioritizing renewable energy sources)</p> <p>Scale: (1) Not at All, (2) Slightly, (3) Moderately, (4) Very, (5) Extremely</p>
<p>O6.3</p>	<p>O6.3.1: Acknowledgment of hindrances in RES use</p>	<p>At present, a greater use of RES is not achieved because of:</p> <p>[Multiple choice (you may choose more than one)]</p> <ul style="list-style-type: none"> a. Lack of technologies b. Lack of Information c. Lack of economic interest\ d. There is no need to use RES at present
	<p>O6.3.2: Identification of future challenges</p>	<p>Please assess the following future global challenges for renewable energy systems</p> <p>Grid instability and intermittency of renewable energy sources (meaning their output fluctuates based on weather conditions)</p> <p>Scale: (1) Not a challenge, (2) quite a challenge, (3) definitely a future challenge</p> <p>High cost and limited scalability of energy storage</p>

Objective	Indicators	Question
		<p>Scale: (1) Not a challenge, (2) quite a challenge, (3) definitely a future challenge</p> <p>Renewable energy infrastructure expansion and land coverage Scale: (1) Not a challenge, (2) quite a challenge, (3) definitely a future challenge</p> <p>Inconsistency and instability of policy and regulatory frameworks Scale: (1) Not a challenge, (2) quite a challenge, (3) definitely a future challenge</p> <p>Necessity of cost reduction Scale: (1) Not a challenge, (2) quite a challenge, (3) definitely a future challenge</p> <p>Please name any other future challenge that is not enlisted here: _____ [Open answer]</p>
		<p>How would you rate future opportunities for renewable energy systems on a global scale?</p> <p>Decarbonization and Climate Mitigation Scale: (1) Not an opportunity, (2) quite an opportunity, (3) definitely an opportunity</p> <p>Clean and affordable energy access to communities and social equity. Scale: (1) Not an opportunity, (2) quite an opportunity, (3) definitely an opportunity</p> <p>Creation of new jobs globally Scale: (1) Not an opportunity, (2) quite an opportunity, (3) definitely an opportunity</p> <p>Diversification of energy mix with renewable energy sources Scale: (1) Not an opportunity, (2) quite an opportunity, (3) definitely an opportunity</p>

Objective	Indicators	Question
<p>O6.4</p>	<p>O6.4.1: Adoption rate of RES practices</p>	<p>How can individuals and communities contribute to the adoption of renewable energy in their daily lives?</p> <p>By Installing Rooftop Solar Panels Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree</p> <p>By purchasing Renewable Energy Certificates (RECs) Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree</p> <p>By switching to Green Energy Providers Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree</p> <p>By investing in Renewable Energy Communities Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree</p> <p>By improving energy efficiency in homes/ buildings Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree</p> <p>By improving energy efficiency in transportation Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree</p> <p>By using geothermal energy for buildings/home heating Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree</p> <p>By advocating for Renewable Energy Policies that support renewable energy deployment at the local, regional, and national levels. Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree</p>

Objective	Indicators	Question
		<p>By educating communities about the importance of transitioning to a clean energy</p> <p>Scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral (4) Agree, (5) Strongly Agree</p> <p>Other: _____</p>

The project

SKILLBILL's overall objective is to develop a large and strong foundation for the growth and acceleration of renewable energy's deployment, thanks to engaging with stakeholders of the whole chain, diffusing scientific culture and skilling multi-level workers. The basic idea underlining the project is that the knowledge should be diffused at several different levels and qualitatively appropriate both to train the adequate number of workers and to increase RES awareness and to reach a more social and inclusive Europe. The project aims at creating several pathways to induce target groups to get interested or involved in RES besides their initial level of education and their working position. It's important, beside the creation of instruments for the upskilling and reskilling of workers, technicians and designers, to have awareness modules for unspecific public in order to fight against lack of information, bad quality material, gender gap and the phenomenon of functional illiteracy: it is widely documented that lifelong suitable learning process is the fundamental driver to support the development, maintenance and update of skills. Thus, SKILLBILL proposes concrete actions to accelerate the deployment of renewable energy at different levels to analyse and involve all the interested parts in open discussion using adequate language; create several different pathways to increase skills after having mapped knowledge gap and without gender prejudice; develop and implement innovative learning method; and evaluate the work performed.



Coordinator: **AZZERO CO2 SRL (AzzeroCO2)**

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