



Deliverable D4.1

Dissemination & Communication Plan

BioBeo

Innovative Education for the BioEconomy



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Consortium: **University College Dublin, Ireland (UCD), Coordinator**

Maynooth University, Ireland (MU)

An Taisce, Ireland (AnT)

Universitaet Hohenheim, Germany (UH)

ODISEE University of Applied Sciences, Belgium (OUAS)

Center for Social and Economic Research, Poland (CASE)

Rotterdam University of Applied Sciences, Netherlands (RUAS)

SYNYO GmbH, Austria (SYNYO)

Foundation for Environmental Education, United Kingdom (FEE)

Youth in Science and Business Foundation, Estonia (YSBF)

Hellenic Education Society of STEM, Greece (E3STEM)

International Parents Alliance, Netherlands (IPA)

Universitatea Valahia Targoviste, Romania (UVT)

Technical University Berlin, Germany (TUB)

BOS+, Belgium (BOS+)

Deliverable

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Executive Summary

Scope

This Plan, under the coordination of partner SYNYO, sets out the delivery of meaningful, targeted and effective communication and dissemination of all actions under BioBeo. Three main stages are envisaged for implementation:

STAGE 1 (“Dissemination for Awareness”): Raise awareness for bioeconomy-related education across as many interest groups within the European Union as possible.

STAGE 2 (“Dissemination for Action”): The focus shifts to delivering the BioBeo education programme, digital toolkits, and other relevant outcomes that stimulate different stakeholders to mobilise and take specific action relevant to their interaction with the project.

STAGE 3 (“Dissemination for Results”): The final stage is dedicated to communicating the outcomes and accomplishments from WP2 and WP3.

Key messages

1. Engagement with young people is paramount in stimulating their educational experience, potential future career ambitions and prospects within bioeconomy.
2. Need to strengthen cooperation and coordination between science and education in bioeconomy policy (i.e. they should not be in separate and disconnected silos).
3. Co-creation (involving pupils, parents and teachers) of educational materials and curricula necessary to achieve buy-in.
4. Observation and practical work and digital methods for delivery will provide more inspiration than textbooks and theory.

Identified Target Groups

1. Young people (different age groups preschool, primary and secondary and third levels)
2. Teachers
3. Initial Teacher Education institutes
4. Parents, Guardians and extended family
5. Schools
6. Education policy makers and authorities
7. Businesses
8. Other H2020 and Horizon Europe projects
9. Organisations

Expected impacts

- 1.** Increased awareness of the environmental, social, and economic benefits of sustainable and circular bioeconomy and its sectors, in particular bio-based sectors among young people at preschool, primary and secondary levels.
- 2.** Increased interest among new generations to join education and training on sustainable and circular behaviours and to become responsible consumers that will take on a sustainable and circular lifestyle; and new ways of attracting talent in life science, technology, and the bioeconomy opportunities.
- 3.** Preparing the younger generation to assume their role in the transition to a circular and sustainable bioeconomy, e.g. through the uptake of innovative solutions. Innovative approaches to providing a toolkit with educational and information material, such as videos, games, social media, and prize competitions, including the nomination of “Bioeconomy Youth Ambassadors” campaigns for children and young adults in secondary schools
- 4.** From preschool to the third level, the voice of youth will be prioritised.
- 5.** From preschool to third-level stakeholders, observe the circularity of the natural world and emulate this in their involvement in the BioBeo Detective activities.
- 6.** BioBeo digital tool kit adds value to the knowledge and cost-effectiveness of innovative technologies focusing on the 5 bioeconomy themes and solutions.
- 7.** BioBeo gender-neutral education activities.
- 8.** Preschool to university-level stakeholders improves language acquisition and heighten cultural awareness of the bioeconomy

Process

All partners are involved in the process and committed to effective communication and dissemination activities. The Plan is kept under constant review and updated by the Steering Committee every six months as necessary.

Actions include:

- 1.** Feedback from engaged audiences to assess the impact of dissemination
- 2.** Engagement with actors, particularly active engagement with young persons
- 3.** Specific briefings (lobbying) for MEPs and national and local (municipal) and regional politicians and decision-makers.
- 4.** Planned workshops/focus groups to bring together key actors and promote wider awareness, and diffusion of activities.
- 5.** Participation in conferences; national and international conferences (e.g. World Bioeconomy Forum) to present results and gain feedback.

6. Participation in a range of annual events such as EU Green Week, Week of European Week for Cities and Regions, FEE Global Action Days, World Environment Day, World Food Day, World Water Day, International Day for Biological Diversity, International Youth Day, Global Day of Parents and World Teachers' Day.

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Introduction

This Plan enshrines the principles for good communication and dissemination as set out in the EC Research & Innovation Participant Portal Glossary/Reference Terms i.e, **Communication** on projects is “a strategically planned process that starts at the outset of the action and continues throughout its entire lifetime, aimed at promoting the action and its results. It requires strategic and targeted measures for communicating about (i) the action and (ii) its results to a multitude of audiences, including the media and the public and possibly engaging in a two-way exchange.” **Dissemination** is “the public disclosure of the results by any appropriate means (other than resulting from protecting or exploiting the results), including by scientific publications in any medium.”

The Dissemination & Communication Plan was developed under WP4 (“Dissemination, Exploitation and Communication”). The objective is to promote BioBeo, raise awareness about achievements, and communicate benefits to the targeted stakeholder groups. It also informs through articles, leaflets, the website, social media, scientific publications, and presentations at conferences and other events. The Plan utilises tailor-made dissemination strategies that target the identified target audiences including researchers, related businesses and industry, and the education sectors (schools, teachers, students).

The plan is updated regularly under the WP4 lead SYNYO. All dissemination and communication measures entail high visibility, accessibility, and promotion of BioBeo as well as how the targeted groups will be reached and the activities executed.

All partners will play a role in the dissemination of results and their interests and opportunities. They will be provided with survey templates to be submitted at regular intervals to SYNYO to ensure that their individual efforts are recorded and fed into updating the Plan. The partner responsible for each deliverable will identify the dissemination potential of the deliverable prior to its submission. The dissemination activities will be tracked and monitored constantly with a report made at each SC meeting on actions taken and progress towards achieving the expected impacts

Expected impacts

- 1.** Increased awareness of the environmental, social and economic benefits of sustainable and circular bioeconomy and its sectors, in particular bio-based sectors among young people at preschool, primary and secondary levels. Strengthened cooperation between teachers, parents, school communities and youth through bioeconomy remote and in-person events. All stakeholders will understand circularity and the circular bioeconomy and their individual response-ability.
- 2.** Increased interest among new generations to join education and training on sustainable and circular behaviours and to become responsible consumers that will take on a sustainable and circular lifestyle; and new ways of attracting talent in life science, technology and the bioeconomy opportunities.
- 3.** Preparing the younger generation to assume their role in the transition to a circular and sustainable bioeconomy, e.g. through the uptake of innovative solutions. Innovative approaches to providing a toolkit with educational and information material, such as videos, games, social media, and prize competitions, including the nomination of ‘Bioeconomy Youth Ambassadors’ campaigns for children and young adults in secondary schools. Embedding digital technologies will ensure connections are made across the whole of Europe between stakeholders.
- 4.** From preschool to the third level, the voice of youth will be foregrounded. They will be invited to contribute to policy from the local level. To ensure coordination and collaborative decision-making, multiple networks

throughout the BioBeo consortium. The 'Interconnectedness Programme' will be a vehicle for youth to have their say. This governance will ensure the dynamic nature of the BioBeo Programme. Our innovative governance recognises and promotes resilience in the face of the ongoing climate crisis.

5. From preschool to third level stakeholders observe the circularity of the natural world and emulate this in their involvement in the BioBeo Detective activities. Reduced environmental burden leading to cleaner air, and water and reduced climate impacts, harnessing agricultural knowledge and innovation systems. More efficient use of scarce input resources. Move towards more sustainable systems where the use of scarce resources is optimised, leading to less environmental pollution and enhancing society's ability to meet food and other needs globally.

6. BioBeo digital tool kit adds value to the knowledge and cost-effectiveness of innovative technologies focusing on the 5 bioeconomy themes and solutions. BioBeo digital tool kit benefits citizens, businesses, researchers, the environment, society at large and policy-makers.

7. BioBeo gender-neutral education activities. Students of any sex, gender identity, expression, or sexual orientation—regardless of racial or ethnic background or ability—empowered, challenged, supported, and provided full access to become successful bioeconomy learners and promoters of the bioeconomy concept and circularity.

8. Preschool to university-level stakeholders improves language acquisition and heighten cultural awareness of the bioeconomy

1. Dissemination and Communication Plan

BioBeo has an extensive reach across various sectors and disciplines within Europe to enhance awareness of the environmental, social, and economic benefits of sustainable and circular bioeconomy and its sectors, in particular, bio-based sectors among young people at the pre-school, elementary, and high school level. Targeted audiences of the BioBeo dissemination plans include young people at primary, secondary, and third levels, teachers, teacher education institutes, parents, guardians, extended family, schools, education policymakers and authorities, businesses, other H2020, and Horizon Europe projects, and other relevant organisations.

1.1. Evolving strategy

BioBeo project will identify new additional stakeholders, especially during the early phase. The partners of BioBeo are well connected to leverage such connections.

Stages and timeframe

Selected work packages focus on aggregating information and delivering knowledge to various target groups. This process will be conducted in a timely and efficient manner to achieve maximum impact. Three are identified:

STAGE 1 (“Dissemination for Awareness”): At the early stage of the project raise awareness for bioeconomy-related education across as many interest groups within the European Union as possible. Targeted audiences will become aware of BioBeo through its web page, and Social Media channels that promote our approach. These initial awareness-raising efforts lay the groundwork for the long-term engagement of relevant interest groups.

STAGE 2 (“Dissemination for Action”): During the second stage, the focus shifts to delivering BioBeo education program, digital toolkits, and other relevant outcomes that stimulate different stakeholders to mobilise and take specific action relevant to their interaction with the project. The project has several intended channels (Twitter, Facebook, Instagram, web page) and two conferences. At this stage, the dissemination is also focused on gathering new contact details of the target groups and interested users to extend future outreach.

STAGE 3 (“Dissemination for Results”): The final stage is dedicated to communicating the outcomes and accomplishments from WP2 and WP3 disseminating to not only selected stakeholders in the education and industry sector but also to a wider community of EU citizens at large.

In brief, the BioBeo Dissemination Plan includes the provision of information relating to the following areas:

- Information about BioBeo and the underlying approach
- Information about opportunities for the Circular Economy in education and industry
- Information about the BioBeo educational materials and actions

1.2. Dissemination Goals and Impact Measurement

A set of qualitative and quantitative criteria are specified in the Grant Agreement and will be used to estimate the overall impact of the project approach. The consortium is anticipating that the initial reach of the BioBeo project will target 35 schools (preschool, primary and secondary level) which includes 1000 students, 500 parents, and 100 teachers in Ireland, Belgium, Netherlands, and Germany. There is potential to increase the scale of the cohort further with Consortium partners in Poland, Greece, Romania, and Estonia beyond the 30-month timeframe. Potential scalable figures could be in the region of 70 schools, 2000 students, 1000 parents, and 200 teachers. This is not inclusive of the possible further reach to other EU states and the potential increased engagement of teachers, parents, and students outside of the targeted educational settings through the use of the Geospatial App, animations on the YouTube channel, and picture book series (WP2 and WP3).

QUANTITATIVE CRITERIA

The following indicators will be used to assess the reach of this Plan:

CRITERIA	QUANTITY
Organisation of conference - M12 Warsaw and M23 Brussels	2
Organization of workshops (incl. co-creation workshops)	6
Popularised publication (non-scientific and non-peer-reviewed publication)	2
Scientific and peer-reviewed publication	2
Social media posts	800
Website visits	3000
Participation in a conference or conference workshop	5
Videos	5
Participation in events organized jointly with other EU project(s) and/or other relevant networks	4
Press releases	3
Newsletters with BioBeo information to relevant networks	5
Leaflet	2
Stakeholders' views and opinions focus group	1
Policy briefs of the BioBeo Interconnectedness Programme	1
Participation in an event other than a conference or workshop	5
Key policymakers on a final project meeting in Brussels	5

These figures will be reviewed at quarterly intervals at WP4 meetings alongside an evaluation of the impact of the dissemination activities undertaken to date.

The consortium will commence the first activities with:

- Co-organizing activities with synergy projects **BIObec**, **Gen B**, **GreenSCENT**, and **ECF4CLIM**.

- Communication activities to the relevant networks: **WEF G100 Global STEM Education network**, European Bioeconomy Library, Europe Bioeconomy Network, the European Bioeconomy University (EBU), and the European Community of Practice for Bioeconomy Education (CoP Bio-Edu), ‘Competence Labs’ initiative for STEM Education in Greece, Planning for publications on open-access repositories and open-access journals and/or platforms, such as the EC’s new Open Access platform **Open Research Europe** and for the **Special Issue of the Hellenic Journal of STEM Education**,
- Planning for interactive online events with industry during EU Green Week,
- Planning for participation in annual events: EU Green Week, Week of European Week for Cities and Regions, FEE Global Action Days, World Environment Day, World Food Day, World Water Day, International Day, for Biological Diversity, International Youth Day, Global Day of Parents and World Teachers’ Day,
- Planning for participation in national and international conferences (World Bioeconomy Forum), and
- Communication with partners from projects AgroCycle, UrBIOfuture, BIOVOICES, BioCannDo, Erasmus+ program ABBEE.

QUALITATIVE CRITERIA

Qualitative evidence will be used to assess the efficiency and quality of the execution of the Communication and Dissemination Plan. Most of all, communication with stakeholders from all relevant fields (young people at primary, secondary, and third levels, teachers, teacher education institutes, parents, guardians, extended family, schools, education policymakers and authorities, businesses, other H2020, and Horizon Europe projects, and other relevant organisations) as well as with potential or existing participants in the BioBeo actions will be continuously evaluated.

Partly this will be done through feedback from email conversations, social media channels, personal talks with stakeholders at conferences, regional or national events, and co-creation workshops. Additionally, *focus groups and forums* will sound out stakeholders’ views and opinions. BioBeo partners will estimate the quality of these contacts and their implications based on recurring concerns, requests, and misconceptions as well as on positive feedback, acknowledgment, or consent. BioBeo partners will report such feedback from stakeholders and peer experts to the consortium - in order to illustrate how the BioBeo project is perceived and if the perception of the overall approach is.

In particular, this feedback should demonstrate whether or not the progress is:

- corresponding with the initial aims and objectives,
- considered as beneficial for young people’s interests and needs,
- in line with the BioBeo partners’ reputation and professional profiles,
- matching European policy standards and developments, and
- understandable in relation to the purpose and procedures of the BioBeo actions.

2. Communication about the BioBeo approach

BioBeo adopts several dissemination channels to optimize external communication with a broad audience. These are set out below;

2.1. Project identity

Immediate recognition of disseminated materials is important. Together with all partners, BioBeo is building a strong project identity. Following design and communication elements strengthen the uniformity and identity and support delivery of clear messages to our audience: BioBeo naming, logo, presentations template, templates for reports and letters, project factsheet, project posters, and the overall promotion package for teachers and students including posters and shareable digital snippets, banners, and stickers.



Figure 1. BioBeo Identity kit

2.2. Project Website

BioBeo has already established a strong web presence with the website launched at the beginning of the project.

All pertinent information about BioBeo and its activities including partner contact details, background information, working papers, events (seminars, workshops, conferences), etc. will be accessible through the website. The website serves as an important dissemination channel for instructional material – and in this respect, the web acts as a principal means of publication. In order to ensure the timely provision of appropriate and reliable information to all interested groups the BioBeo website will also include frequent news and updates on circularity and sustainable development education. The website will also show students sustainable entrepreneurship and career trajectories in the Bioeconomy.

The BioBeo website can be accessed at www.biobeo.eu.

The initial structure of the BioBeo website is illustrated in Figure 2.

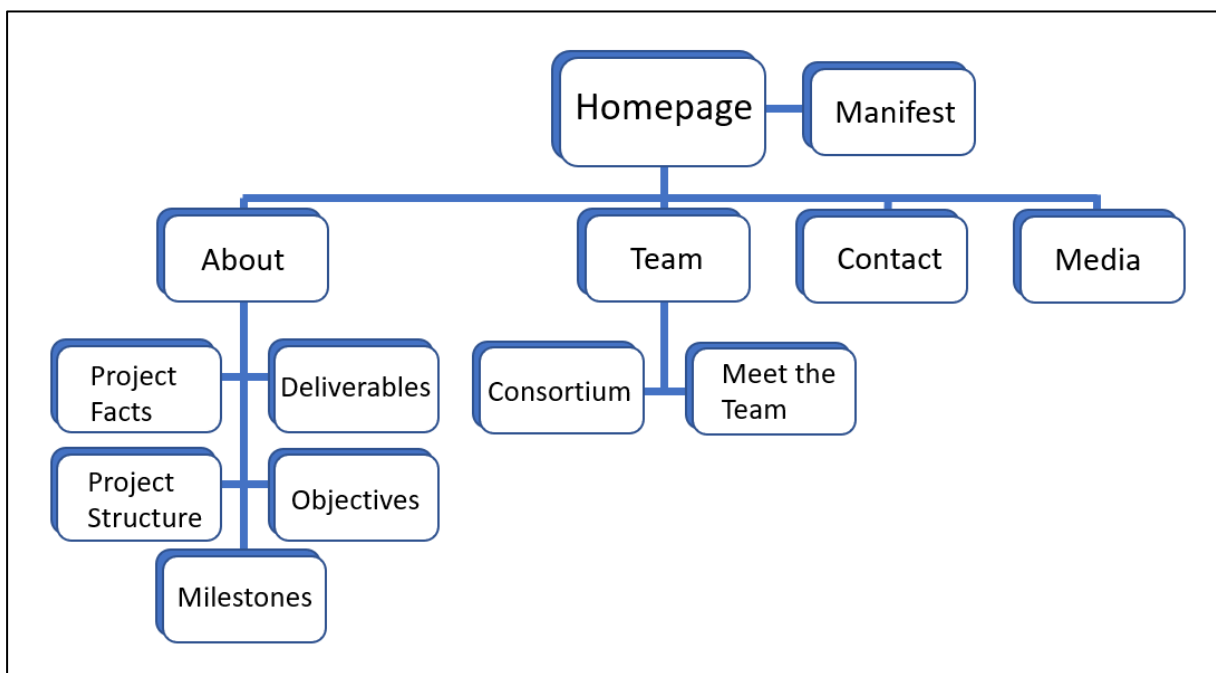


Figure 2. Structure of the BioBeo.eu website

Figure 2 shows the first version sitemap of the website. The main menu includes the most frequently required links such as a shortcut to the home page, project overview, Consortium, and contact. The main menu items are sub-levelled into pages that give more detailed information. The sitemap will evolve as the project progresses and produces outcomes.

Content Outline: Homepage

The front page (“Home”) highlights the main facts in brief and provides information on the project idea and background. The text also formulates the challenges, the vision, and the plan and should give the visitor a good overview without getting too technical or detailed.

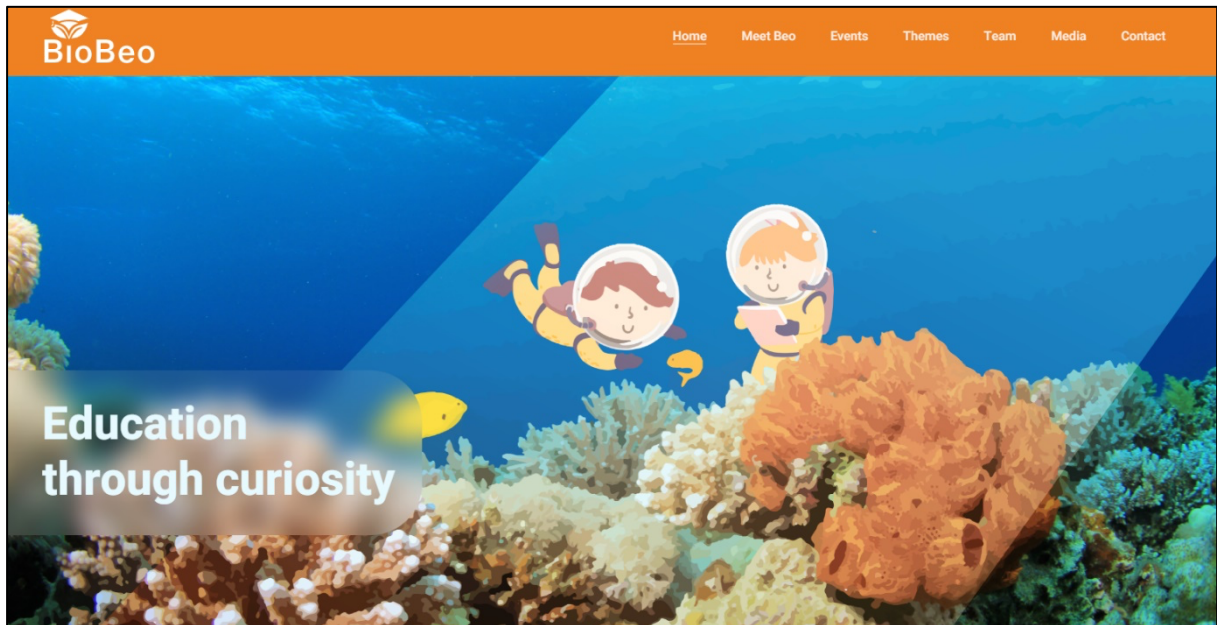










Figure 3. BioBeo.eu Homepage

 <p>Introduce new approaches to enhance how governance of education in the circular bioeconomy is tackled and delivered by the education systems across Europe.</p>	 <p>Implement the concept of a bioeconomy via the BioBeo education programme through the 5 BioBeo themes to a cohort of 35 schools i.e. 1,000 students, 500 parents, and 100 teachers</p>	 <p>Provide a basis for piloting the BioBeo education programme and resources in preschools, primary and secondary level schools and also in teacher education modules in university courses and to conduct an ongoing evaluation.</p>	 <p>Enhance learner outcomes and experiences on the bioeconomy by developing a suite of digital toolkits such as videos, games, and a series featuring bioeconomy children's character Bio and her friends, social media, prize competitions, etc.</p>
 <p>Develop the BioBeo Interconnectedness Programme with primary, secondary and university students which will disseminate bioeconomy resources across consortium and will culminate in the Interconnectedness Award.</p>	 <p>Demonstrate a measured increase in the engagement of young people and their intention to pursue education and careers in life science, technology and bioeconomy.</p>	 <p>Integrate the BioBeo education programme into university curricula in Ireland, Netherlands, Germany, Belgium and Greece.</p>	 <p>Coordinate communication and dissemination by optimising the reach and visibility to children of all ages, student teachers, teachers, policy makers and parents including utilising the World Economic Forum G100 Global STEM network with dissemination to 100 additional countries for potential future uptake.</p>

Objectives

Figure 4. BioBeo Project objectives

Project Tasks

This page shows how the work is planned and divided into the work packages described as “steps”. The steps clearly describe the stages of the project without revealing too much about the technical workflow.

Deliverables

The public deliverables will be uploaded and linked at the end. When the deliverables have been uploaded and are available for download, this will be shown in the “Download” column.

Project Facts

The subsection provides a project overview and presents the main facts. It includes the dates and information on the funding.




Figure 5. BioBeo Project tasks

Content Outline: Section “Team”


This section provides information on the partners. It includes a description of the institutions, their role in the project as well as a contact person. Additionally, a simple click on the specific link brings the user to the related institution or its social media pages.

Our Consortium




University College Dublin, National University of Ireland, Dublin

University College Dublin is Ireland's largest university. It has co-ordinated many international projects such as H2020 AgroCycle addressing the circular economy. It leads BiOrbic bioeconomy Research Centre, Ireland's national bioeconomy centre. It jointly provides a MSc in Bioeconomy with Business.




National University of Ireland Maynooth

Maynooth University focuses on humanities, social sciences and natural sciences, and research into teaching and education methods. It is dedicated to people, ideas and culture, working together as a scholarly community to inquire and discover, to teach and learn, to create, conserve, disseminate and apply knowledge, and to engage with the problems and challenges that face modern society.



An Taisce – The National Trust for Ireland (Green-Schools)

An Taisce (National Trust for Ireland) is an independent charitable body and works to preserve and protect Ireland's natural and built heritage. Their Environmental Education Unit has built several award-winning environmental programmes such as Green-Schools which is Ireland's leading environmental management and education programme for schools. It promotes long-term, whole-school action for the environment.



Universität Hohenheim

University of Hohenheim brings together three relevant faculties covering agriculture, natural science and business economics and social sciences. UHOH has a special profile in bioeconomy research and education, is involved in several bioeconomy related education programmes and is deeply connected with the bioeconomy community of Baden-Württemberg. It is also a co-sponsor of an innovative academic enrichment programme "Kids' University".

Figure 6. BioBeo Consortium

Content Outline: Section “Contact”

The section shows the contact details coordinator (SYNYO GmbH), as well as links to social media (Twitter, Facebook). For more information about the project or specific inquiries, a single point of access email is provided (office@BioBeo.eu).

Content Outline: Section “Media”

This section displays all relevant publications, as well as dissemination materials. Here, the flyer, leaflets, logos, and other promotional materials with the project logo can be viewed and downloaded.

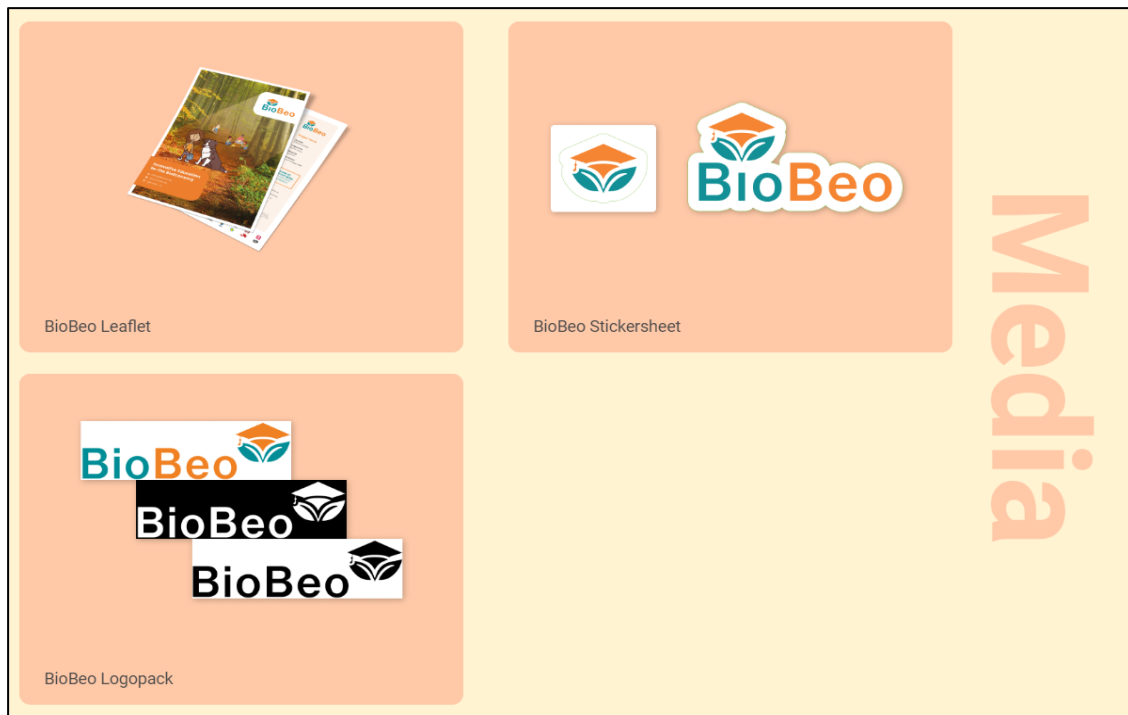


Figure 7. BioBeo Media Page

The website has installed an **SEO plugin** which will increase the visibility of the site. In addition, the website is connected with Google Webmaster Tools to increase the project index in search engines.

The project website is connected also to **Google analytics** which will help us survey the usage of the site from end users in different dimensions like location, language, device, technology, demographic, browser, and more.

2.3. Social Media Presence

Social media is the primary vehicle for spreading information about BioBeo as it is the most relevant source of information and means of social interaction for the main target groups in question –teachers and students. BioBeo will have a strong social media presence and engage in social networking. Social Media Networks will be used to disseminate current information about the project scope and the call for submissions, open feedback, and awareness channels and establish two-way dialogues with the wider public. The various benefits of social networking on well-established social media channels Twitter, Facebook, and Instagram will be utilised to further enhance the scope and outreach of the project and specifically target and connect end-user audiences – the general public, industry, researchers, and the education sector.

The first social network used is **Twitter**, with the handler #BioBeo, and the second is **Instagram**. These BioBeo channels have resulted from a rebranding of the AgroCycle H2020 channels to build on substantial numbers of existing followers. On average 3 SM posts are intended per each week on each channel. The team will use a mix of tweets communicating the project’s objectives, activities, and collaborations with other projects, with retweets from relevant accounts. Tweets target stakeholders related to circularity, sustainability, NGOs, NPOs, and educational networks.



Figure 8. BioBeo Twitter channel

The two channels are mainly planned to create awareness for the project - in the first phase and to establish new contacts. Later, it is possible to establish a TikTok channel to address the younger target group. Within the entire portfolio of communication activities, there will be a notable focus on social media. This is due to the conviction of all partners, that nowadays social media are a close point to the everyday reality of the life of many people. During the execution of the work plan and all WPs, the whole consortium will continuously provide input for the preparation of status updates on social media to enable a consistent flow of information and to contribute to the lively appearance of the project as a whole. The central coordination of all activities in social media channels shall be the responsibility of the task leader of T7.1, SYNYO.

2.4. Dissemination Events

In addition to the above-mentioned communication activities, participation in various conferences, workshops, and seminars will help BioBeo to promote engagement and advocacy and raise awareness about its activities, resources, etc. For that purpose, the BioBeo partners will attend conferences, workshops, and seminars such as EU Green Week, Week of European Week for Cities and Regions, FEE Global Action Days, World Environment Day, World Food Day, World Water Day, International Day for Biological Diversity, International Youth Day, Global Day of Parents and World Teachers' Day with the motivation of increasing the project's scope. Attendance at some of the most relevant conferences and/or symposia in the area concerned is planned with the aim of increasing the overall reach and scope of BioBeo. Additionally, these events will be utilised to draw further synergies with other projects and stakeholder groups. Specific papers as well as poster presentations and other contributions will be prepared in order to present the results of the BioBeo approach to a targeted audience.

The end of the BioBeo will be marked with the BioBeo festival, where policymakers and representatives from research, academia, and industry will be invited. The final Award Event will take during EU Green Week 2024.

2.5. Publications

The knowledge developed in BioBeo will be published in journals within the field of education for sustainable and circular bioeconomy and its sectors. Publications will be peer-reviewed to ensure that they do not conflict with intellectual property and patent rights regulated within the consortium agreement. Publications will be made available at least under a green open access standard. The consortium recognizes that publications are particularly helpful in further spreading the achievements of the project and the societal, institutional and political aspects of the learning that has occurred. This will be an essential part of the exploitation plan.

2.6. Utilizing networks

BioBeo will communicate with typical education institutions and industry fields relating to bioeconomy, notably in research and development, and will collect and communicate profiles of companies, NGOs, university incubators, and education organisations.

The collection of dates, events, and venues will predominantly cover the collected stakeholder contacts and in particular, the big networks, where the project partners are involved or in permanent contact and collaboration. The most relevant identified include

- European Bioeconomy Library
- European Science Events Association – EUSEA
- WEF G100 Global STEM Education network
- Europe Bioeconomy Network
- European Student’s Unions – ESU
- Organising Bureau of European School Student Unions - OBESSU
- European Schoolnet (31 European Ministries of Education)
- Global Access to Postsecondary Education (GAPS Network)
- World Universities Network
- CESAER, UNICA & Universitas 21
- Council of Europe
- European School Heads Association
- European Education Policy Network on Teachers and School Leaders
- European Research Network on Parents in Education
- European Education Research Association
- NCCA (National Council for Curriculum and Assessment)
- SFI (Science Foundation Ireland)
- IAPSE (Irish Association for Primary Science Education)
- UH European Bioeconomy University
- YSBF Estonian Union of Biology Teachers
- Let’s Do it World - Leading World Clean-up Day

These networks include wide communities of actors, both accessible via (internal) traditional media such as newsletters, mailing lists, websites etc., and via their massive social media communities – which also include young people and/or relevant experts and practitioners who are committed to the concerns of children and

young people in science communication and engagement. For this reason, these networks will then also be drawn on for the dissemination and communication of the BioBeo actions and all accompanying information.

2.7. Communication with target groups

Meeting the BioBeo objectives of improving access to high-quality education for all learners in all educational contexts and settings, funding initiatives for educating citizens about sustainability in formal and informal educational settings, and integrating sustainable bioeconomy and circular economy curricula into current curricula in consortium partners' countries and beyond requires the involvement of different stakeholder types. Stakeholders are grouped into six main categories. The following table shows these stakeholder groups as well as their roles:

Young People	preschool, primary and secondary, and third levels students
Teachers	teachers, including student teachers and school communities
Education Institutes	teacher education institutes
Parents	parents, guardians, and extended family
Schools	pre-schools, primary, and secondary schools
Policymakers	education policymakers and authorities
Industry	e.g., the bioeconomy industry
Projects	relatable H2020 and Horizon Europe projects
Organisations	e.g., organisations, foundations, networks

As part of action under WP4, stakeholder contacts from the partner countries: schools, university experts, industry/private sector partners, contacts from public administration, non-profit organisations, foundations several networks are being collected. This stakeholder collection is an ongoing task. As we will promote BioBeo through various channels, new contacts will be established and will feed into the database.

Although the parents are important stakeholders, it is not envisaged due to various reasons - mostly relating to privacy and legal issues - for the consortium to collect contacts of parents and children. The parents can therefore be addressed via the schools and the teachers as well as by social media.

Young people, teachers, education institutes, and policymakers are the primary beneficiaries of this project. Also, parents, businesses, and related projects and organisations are important stakeholders but not necessarily at the same level as the aforementioned groups. Raising awareness and engaging with each stakeholder type requires that the dissemination strategy differentiates the messages and communication channels to be used for each target group, as presented below. The plan for communicating with target groups is based on the Persona workshop with the whole consortium (Figure 8).

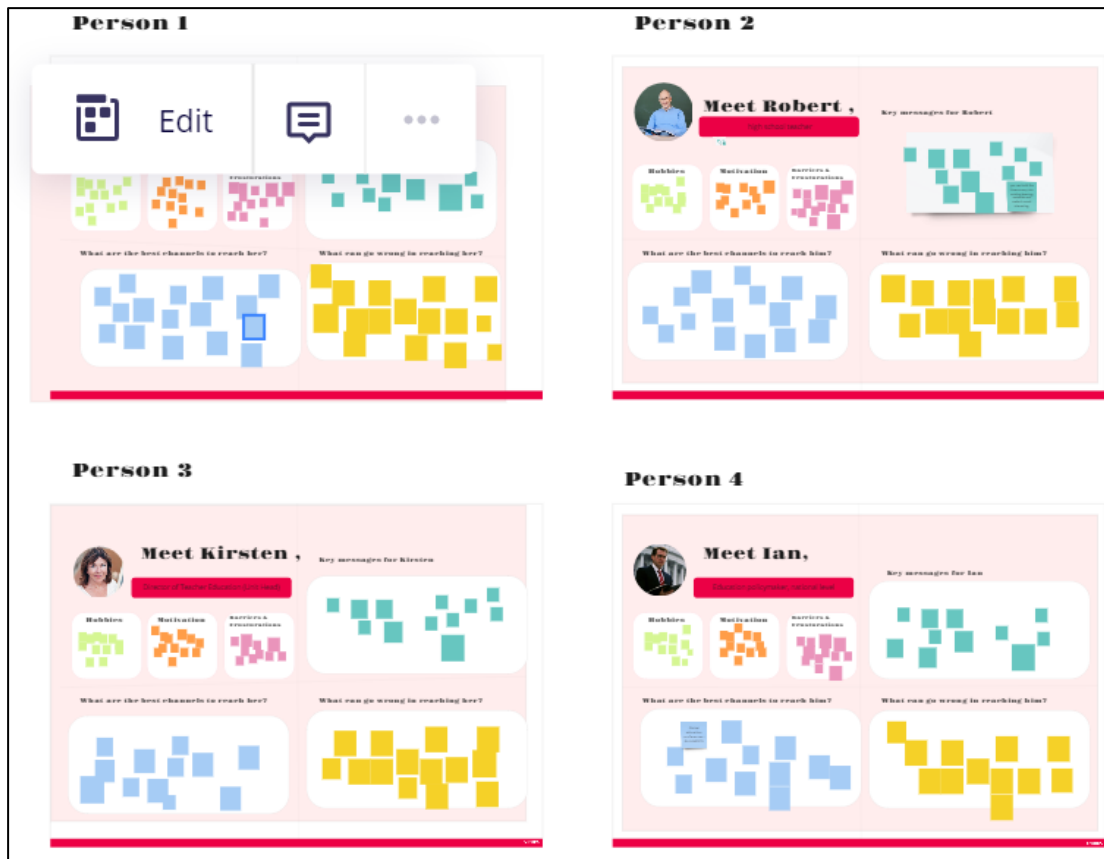


Figure 8. BioBeo Personas - screenshot from the workshop

Young people

Information Needs:

- Well-structured, straightforward information on sustainability and bioeconomy and their application to everyday life
- Career opportunities in sustainability and bioeconomy
- Easily accessible tools and recourses sparking and supporting their interests in bioeconomy
- Low threshold, low time-consuming, fun education programs, tools, and recourses
- Information on how they can personally make a measurable impact

Key Messages:

- There is hope for a better future, and bioeconomy is one of the ways to get there
- You can co-design a way toward a better future through bioeconomy
- We will enable the involvement of parents/guardians and schools in the co-creation of curricula and education materials
- We will give you the tools and support for implementing sustainability into your everyday life
- We will give you tools and support so your contribution to sustainability is heard
- We will help your school to adapt to current challenges
- Your voice matters and we will show how you can contribute
- Bioeconomy is the future, and here are your career opportunities
- Through our programme you will learn the real truth about sustainability

- Learning could be and should be fun, and here is how
- You can become a bioeconomy youth ambassador and have a role in the transition to a circular and sustainable bioeconomy
- We invite you to contribute to the policy from the local level
- You will have your say through the “Interconnectedness program”

Channels to reach them:

- Instagram, podcasts on Spotify, possibly BioBeo chat on the project’s website, school clubs, Twitter, local youth organizations, YouTube, sports clubs, through SM influencers, school information, events in the comedy club

Teachers

Information Needs:

- New effective ways to engage students and pass their knowledge
- Easily accessible, clear education tools on topics that are becoming more relevant
- Clear information on why is BioBeo more suitable than other similar projects and offers

Key Messages:

- BioBeo provides you with tools to upgrade your classes and for you to provide a positive outlook for your students in future
- We provide innovative educational approaches and materials that are relevant and speak to the youth and their concerns
- This is a toolkit co-created by real teachers and students, experienced professionals in the field, and educational experts
- These materials will not increase your workload – only your results
- You can build the bioeconomy into existing learning materials and make it sound interesting
- We have easy-to-implement materials, not time-consuming
- It is possible to teach bioeconomy in a fun way for both teachers and students
- These materials will show you how to inspire your students
- Bioeconomy can be integrated into almost any part of the curricula
- Observation and practical work and digital methods for delivery will provide more inspiration than textbooks and theory
- Engagement with young people is paramount in stimulating their educational experience, potential future career ambitions, and prospects within bioeconomy

Channels to reach them:

- Virtual environments for educational materials, Facebook, school newsletter, local journals and magazines on teaching and schools, principals, other teachers, and teacher association newsletters, directly through short online or/and F2F training sessions, through educational training videos on SM, webinars accessible through SM, Google search on education materials, via posters and brochures that partners will disseminate during various activities (such as local conferences, student excursions, can be posted at schools, teachers can distribute them to each other, etc.), through well-established

contacts in public administration in a particular partner country (national or regional authorities like ministries, municipalities, district administrators, etc.

Policymakers

Information Needs:

- Clear overview of the barriers in the education system for integrating new relevant curricula
- Understanding why economy and sustainability are important topics and priority
- Clear vision on how to integrate sustainability and bioeconomy into schools within reasonable budgets

Key messages:

- There is a need to strengthen cooperation and coordination between science and education in bioeconomy policy (i.e. they should not be in separate and disconnected silos)
- Co-creation (involving pupils, parents, and teachers) of educational materials and curricula necessary to achieve buy-in
- Bioeconomy will help to equip young people for the future and create a better future for us, and you can help make it so
- We offer a holistic approach to governance, and policies towards science and education brought together
- We enable greater involvement of youth in policy formation
- BioBeo allows for increased visibility between strategy/policy, and innovative governance models enabling sustainability and resilience notably to achieve better-informed decision-making processes, societal engagement, and innovation.
- We can create an innovation that is impressive
- This will help improve the quality of the education system in your country
- We support you to connect with people who can actually help you
- This is a prestigious project that the public will appreciate
- Clear information on why is BioBeo more suitable than other similar projects and offers

Channels to reach them:

- Global education conferences – EU/UNESCO, Communication through official (EU or national) channels, Media pressure, then personal meetings, through trusted shared personal contacts or/end existing programs (e.g., Eco-schools), annual teacher conferences and policy meetings, through media (news)

Education Institutes

Information Needs:

- Concrete ways on how curricula can become more relevant
- Information on how to prepare the teachers for teaching in constantly changing educational needs
- Possibilities on how to provide high-quality teaching education within lacking the budget

- Understanding why bioeconomy and sustainability are important to get into curricula and how to get them into schools in a flexible way

Key messages:

- There is a need to strengthen cooperation and coordination between science and education in bioeconomy policy (i.e., they should not be in separate and disconnected silos)
- We can provide ready-made materials that will interest your students (future teachers), and they will be more equipped for future teaching jobs
- We have an influence on policymakers and therefore can increase the possibility that public authorities include our tools in schools
- We can help you prepare your teachers to be part of the transition
- We support you and your students in modernizing education
- Our materials are useful for teachers – the teachers first need to be taught about the bioeconomy before they teach the students
- We anticipate very clear impacts of our project (...)
- There is hope for a better future, and bioeconomy is one of the ways to get there
- Bioeconomy can be integrated into almost any part of the curriculum
- Our program will help increase in uptake of future careers in bioeconomy,
- Our program will help develop better university course content and education materials including earth observation and digital tools
- Co-creation (involving pupils, parents, and teachers) of educational materials and curricula necessary to achieve buy-in
- Engagement with young people is paramount in stimulating their educational experience, potential future career ambitions, and prospects within bioeconomy

Channels to reach them:

- Through friends and colleagues from the same professional group, in-person meetings, seminars, conferences and events, teachers' representative organizations, and teachers' unions, presenting the handbook highlighting the benefits, F2F meetings, newsletter through the teacher union and Teacher sustainability networks and teacher conferences, official emails

Industry and relevant organizations:

Information Needs:

- Possibilities of cross-fertilization and co-ordination of their outcomes with BioBeo

Key messages:

- More young people are expressing interest in careers in bioeconomy
- Key enabler of sustainability performance and competitiveness in the domains covered by Cluster 6 is the further deployment of digital and data technologies

- There is an increase in job take-up in the bioeconomy sector and in the number of more informed and engaged stakeholders and end users, including primary producers and consumers

Channels to reach them:

- via Twitter, via posters and brochures that partners will disseminate during various activities (such as bioeconomy/sustainability events and fairs), via networks: local business chambers, NGO associations, incubators, innovation associations, unions of municipalities, unions of ministries of education, etc., using local magazines for business and innovation

General Public:

Information Needs:

- Information that is easily available and is related to daily routines in order to get closer to achieving EU targets regarding sustainability
- Understand circularity and the circular bioeconomy and their individual response-ability
- Environmental, social, and economic benefits of sustainable and circular bioeconomy and its sectors

Key Messages:

- The wide advantages that BioBee methodology has in the meeting European sustainability goals
- You can have a role of personal responsibility in ensuring sustainable bio-systems

Channels to reach them:

- Newsletter, social media, conventional media (press, TV, radio, newspapers), Twitter, YouTube, knowledge articles and videos on the project website and third-party media networks, press releases

Besides communicating the messages through specific channels to the target audience, the BioBee consortium will also work on connecting the target groups through workshops and other activities. The Consortium will put effort into maintaining the core relationship between educators, parents, and learners and support the teaching and learning of scientific concepts. By maintaining buy-in from all stakeholders and ensuring all stakeholders see the value and impact of learning about the bioeconomy through the BioBee program, it will ensure meaningful and sustainable change in the future. The goal is that the parents will feel confident in supporting their children in their learning about scientific concepts; teachers will feel they have the capacity to guide and support learners directly in school and indirectly at home; while learners will develop their understanding and scientific vocabulary and reasoning skills to make a meaningful impact on the bioeconomy in the future.

3. Conclusion

This Dissemination and Communication Plan of the BioBeo consortium sets out the measures under the coordination of BioBeo partner SYNNO to disseminate the mission and approach, to communicate its activities as well as the interim and final outcomes. The Plan highlights all the required methods through which these measures contribute to widening the impact of the project.

These actions take into consideration a variety of communication channels and target groups: young people, parents, teachers, teacher training institutes, businesses, relevant projects and organizations, policy and decision-makers, and the general public.

The Plan serves as a management tool for the BioBeo consortium to ensure that the BioBeo dissemination and communication activities are adequately and timely planned and implemented. It is intended as an evolving document that will be systematically consulted, reviewed, and updated by the Steering Committee. The updates of this deliverable will be made in M15 and M30.