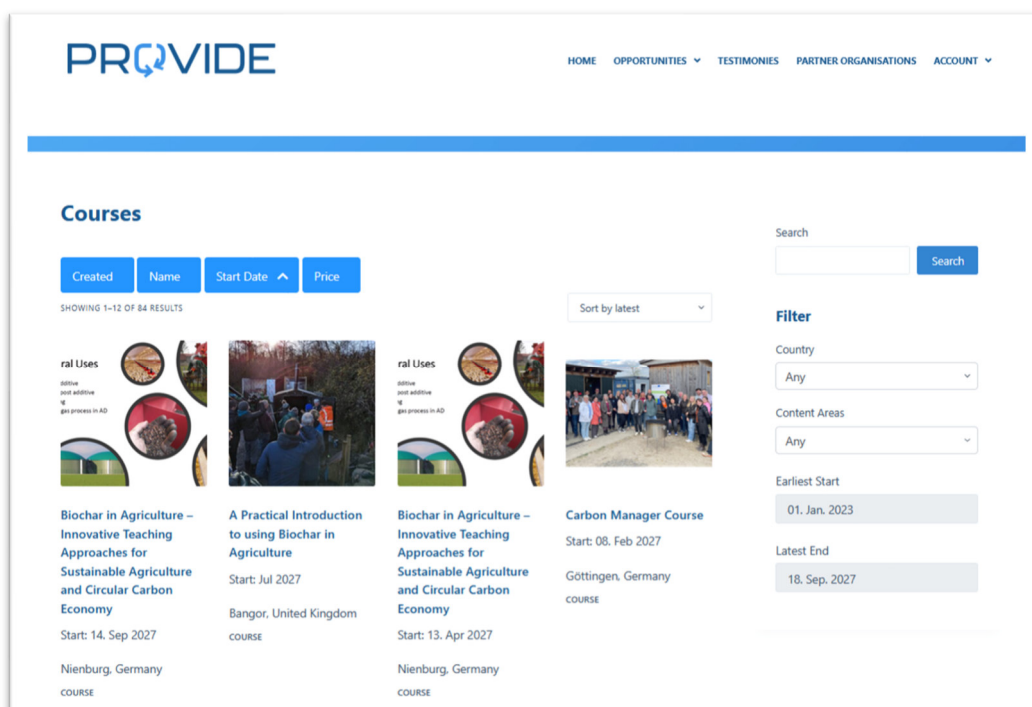




B4C KA1 Courses

Deliverable 4.3



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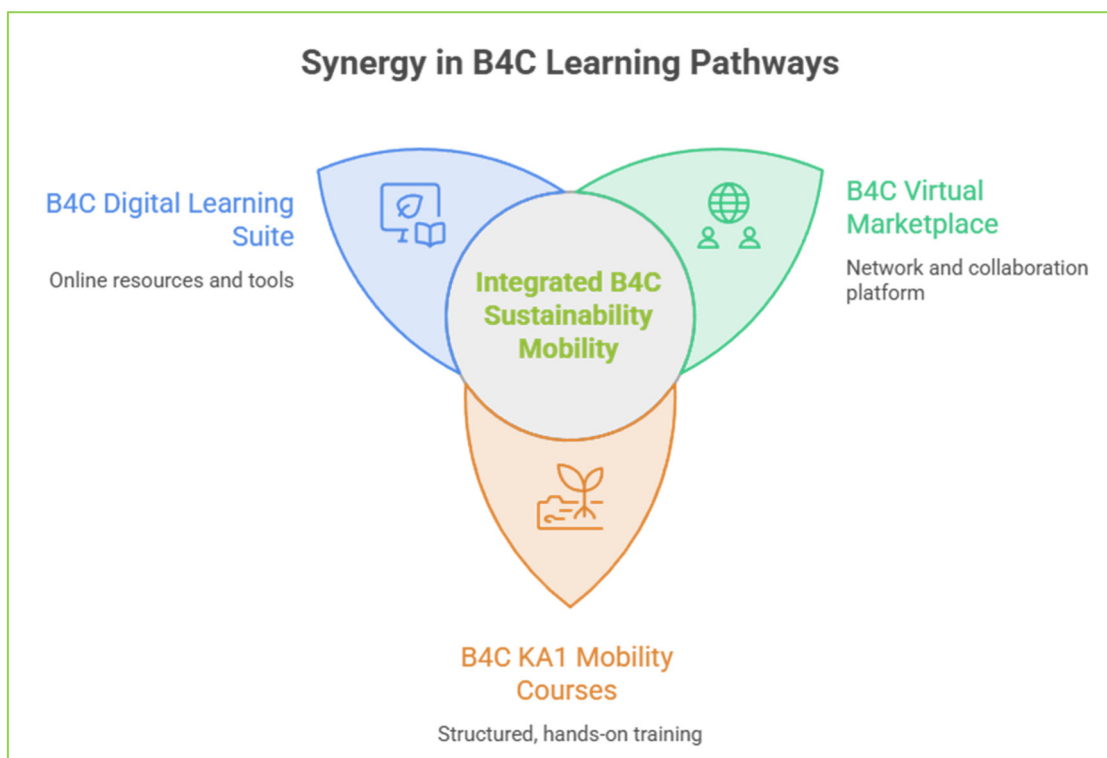
1. Introduction

The B4C KA1 course offer was developed as a transfer and sustainability pathway for the B4C learning approach. It builds on the pilot courses, learning designs, competence framework and practical project experiences developed during the project.

The KA1 courses translate B4C pilot experiences into structured European mobility offers. They allow teachers, trainers, facilitators, VET providers, adult education organisations and professional stakeholders to access practical training on biochar, Circular Carbon Economy and competence-oriented sustainability learning.

The KA1 course offer therefore extends the B4C Support Hub. While the Learning Suite provides digital learning materials and the Virtual Marketplace connects project examples, networks and implementation opportunities, the KA1 courses offer a concrete mobility-based training pathway.

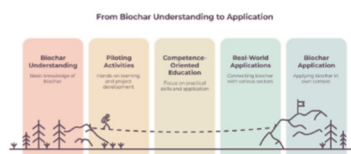
Through Erasmus+ KA1 mobility, organisations can use these courses for staff training, professional development and transnational learning. This gives B4C a practical route for further use beyond the original project partnership and supports the wider dissemination of biochar-based Circular Carbon Economy education across Europe.



B4C Courses and Learning Opportunities

The B4C courses introduce biochar and the Circular Carbon Economy as practical learning fields for vocational education, adult education, professional training and local sustainability projects. They show how climate action, green skills and innovation can be connected with real applications in agriculture, horticulture, construction, urban gardening and regional development.

Each course was developed from the B4C piloting activities and is based on hands-on learning, competence-oriented education and practical project development. The courses are designed to help learners, trainers and professionals move from understanding biochar towards applying it in their own context.



Through the course gallery below, you can explore different learning opportunities, including:

- biochar in agriculture and nutrient management;
- biochar in urban gardening and soil improvement;
- low-tech biochar production from garden waste;
- carbon-storing materials for sustainable construction;
- climate farming and regional carbon management;
- Design Thinking approaches for teaching biochar;
- Circular Carbon Economy applications in professional and community settings.

The courses can be used for Erasmus+ KA1 mobility, continuing professional development, vocational training, adult education or local sustainability workshops. They are suitable for educators, trainers, learners, professionals, municipalities, NGOs and community initiatives interested in practical climate action and circular carbon solutions.

Select a course from the gallery to learn more about its topics, target groups, learning outcomes, methodology and European dimension.



2. Purpose of the B4C/KA1 Course Offer

The main purpose of the B4C KA1 courses is to make the B4C learning approach transferable beyond the original project partnership.

The courses support organisations and professionals who want to:

- understand biochar and Circular Carbon Economy as practical sustainability topics;
- integrate biochar-related learning into VET, adult education or professional training;
- develop competence-oriented and learner-centred learning activities;
- explore biochar applications in agriculture, horticulture, construction, urban gardening and regional development;
- connect sustainability learning with hands-on experimentation, project development and reflection;
- use Erasmus+ KA1 mobility as a pathway for professional development and European exchange.

The B4C KA1 courses are not designed as purely theoretical seminars. They are based on the project's competence-oriented learning approach and therefore combine knowledge input with practical application, collaborative learning, reflection and transfer planning.

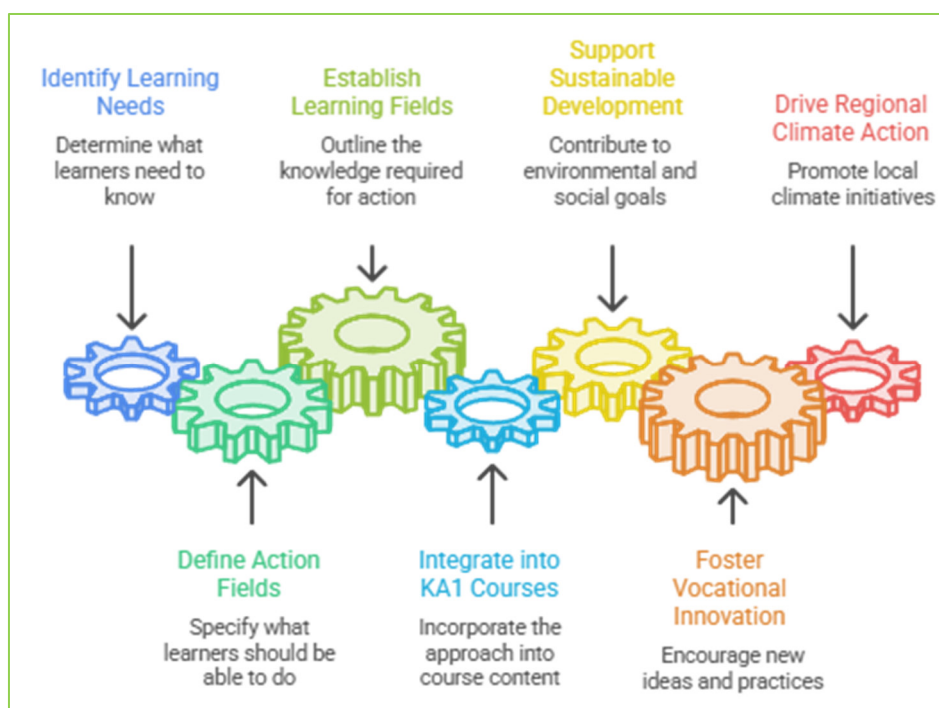
3. Link to the B4C Learning Approach

The KA1 courses are grounded in the B4C learning approach. This approach starts from the idea that biochar and Circular Carbon Economy are not only technical topics, but learning fields that can support Education for Sustainable Development, vocational innovation and regional climate action.

The B4C learning approach differentiates between action fields and learning fields. The action field describes what learners should be able to do in their professional, civic or regional context. The learning field describes what they need to learn in order to act competently in that context.

This means that B4C courses are built around real challenges and practical applications. Learners are encouraged to explore biomass resources, understand biochar production and quality, analyse application fields, develop ideas and reflect on how these ideas could be transferred into their own context.

The courses also follow the B4C competence logic. They support the development of knowledge, skills and attitudes related to biochar, Circular Carbon Economy, sustainability, project development, cooperation and innovation. Where appropriate, the courses can be connected to LEVEL5 reflection, self-assessment or validation.



3.1.From Pilot Courses to KA1 Mobility Offers

The B4C pilots provided the practical basis for the KA1 course offer. Across the project, partners implemented pilot courses and development projects in different sectors, including construction, horticulture, agriculture, urban gardening, climate farming and regional carbon management.

The pilot experiences showed that the B4C approach is adaptable to different target groups and learning environments. Participants gained technical knowledge on biochar production, application and carbon management, but also developed transversal competences such as systems thinking, teamwork, innovation, problem-solving and sustainability-oriented decision-making.

The KA1 course offer takes these pilot results and converts them into mobility formats that can be offered to external participants. This creates a direct exploitation pathway: project-internal learning experiences become reusable European training opportunities.

The courses are especially relevant for:

- VET teachers and trainers;
- adult educators;
- agricultural trainers and advisors;
- construction trainers and professionals;
- horticulture and gardening educators;
- sustainability managers;
- municipal and regional development actors;
- NGOs and civic initiatives;
- learners and professionals interested in green skills and Circular Carbon Economy.

4. Overview of B4C KA1 Courses

The following KA1 courses were developed from the B4C pilot and learning activities. They can be listed in the Learning Suite, linked to the Virtual Marketplace and made available through a KA1 course platform such as PROVIDE.

BIOCHAR FOR COMPETENCE DEVELOPMENT FOR THE CIRCULAR CARBON ECONOMY



[Home](#)
[The Project](#)
[LearningSuite](#)
[Virtual Market Place](#)
[News](#)

B4C Courses and Learning Opportunities

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BIOCHAR FOR COMPETENCE DEVELOPMENT FOR THE CIRCULAR CARBON ECONOMY



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Building with Carbon-Storing Materials



The course **Building with Carbon-Storing Materials** introduces participants to the potential of biochar as an innovative material for sustainable construction. It explores how biochar can be used to store carbon, reduce the environmental impact of building materials and support the transition towards circular and low-carbon construction practices.

Participants learn how biochar is produced, why it can act as a stable carbon carrier, and how it may be integrated into construction materials such as concrete. The course also addresses important technical questions, including material behaviour, workability, structural performance and the balance between sustainability benefits and construction requirements.

The learning approach combines theoretical input with practical experimentation. Participants explore real construction materials, discuss application possibilities and reflect on how carbon-storing materials could become part of future building practice. Through this combination of knowledge, observation and hands-on testing, the course supports both technical understanding and professional awareness of sustainable material innovation in the construction sector.

Project Priorities

Topics

Potential Participants

Expected Learning Outcomes

Methodology

European Dimension

Quality Assessment

The course contributes to several European priorities by linking sustainable construction, climate action and innovative vocational learning. It supports the development of green skills while encouraging learners and professionals to explore how the construction sector can become more circular and climate-conscious.

Relevant priorities include:

- Environment and fight against climate change
- Innovative learning and teaching practices
- Improving the competences of adult educators
- Strengthening employability
- Digitalisation
- Inclusion and Diversity
- Promoting active citizenship
- Common values and civic engagement & participation
- Creating and promoting learning opportunities among all citizens and generations

[Getting to the KA1 course](#)

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B4C KA1 example

4.1. Building with Carbon-Storing Materials: Biochar in Sustainable Construction

This course is based on the IFSB pilot in the construction sector. It introduces biochar as an innovative material for sustainable construction and explores how biochar can contribute to carbon storage, circular construction and low-carbon building practices.

The course combines theoretical input, professional discussion and hands-on experimentation. Depending on the participant group, activities may include material observation, biochar-concrete mixing, prototype production and reflection on technical performance and sustainability trade-offs.

The course is suitable for VET teachers and trainers in construction-related fields, construction professionals, engineers, architects, technicians, masons, apprentices and organisations interested in low-carbon construction and green skills.

4.2. Biochar Urban Garden Booster: Climate-Smart Gardening and Soil Learning

This course is based on the Folkuniversitetet / FUU pilot. It introduces biochar as a practical tool for soil improvement, water retention and climate-smart urban gardening.

Participants explore biochar through hands-on micro-experiments with garden beds, planters or demonstration plots. They compare biochar-amended soil with untreated control plots, formulate simple hypotheses, collect observations and reflect on possible applications in gardens, schools, community projects or urban green spaces.

The course is especially suitable for adult educators, VET trainers, gardening professionals, community garden coordinators, municipality staff, NGO actors and learners interested in practical climate action through soil and gardening.

4.3. From Garden Waste to Biochar: A Low-Tech Pyrolysis Approach

This course is based on the blinc local development pilot. It focuses on transforming garden waste, pruning residues and local woody biomass into biochar through a low-tech pyrolysis approach.

The course connects practical biomass use with circular carbon management and community-based sustainability action. Participants learn about local biomass streams, safe low-tech pyrolysis, biochar activation and possible application in gardens or community projects.

The course is suitable for adult educators, sustainability trainers, allotment garden members, community gardeners, environmental NGOs, municipal climate managers and local development actors.

4.4. From Circular Carbon Economy to Sustainable Construction

This course is based on the blinc sustainable construction pilot. It explores the potential of biochar-clay materials and natural building materials within a Circular Carbon Economy perspective.

Participants learn how biochar can be used as a carbon-storing component in earthen building materials. Practical activities may include preparing biochar-clay mixtures, producing samples, testing material properties and reflecting on applications in renovation, education or sustainable construction practice.

The course is suitable for adult educators, construction trainers, craftspeople, builders, architects, engineers, planners, municipal climate managers and sustainability actors interested in climate-friendly building materials.

4.5. Climate Farming Project

This course is based on the blinc climate farming pilot. It focuses on farm-level biochar applications, adapted technologies, biomass assessment and carbon management.

Participants explore how biochar can support climate-resilient agriculture, water retention, soil improvement, co-composting, renewable heat use and carbon sequestration. The course combines input, expert exchange, farm-oriented analysis and collaborative project development.

The course is suitable for agricultural trainers, VET teachers, farm managers, climate farmers, agricultural practitioners, sustainability consultants, municipal climate managers and project developers.

4.6. Biochar in Slurry: Nutrient Management and Manure Systems

This course is based on the DEULA pilot on nutrient management and manure systems. It introduces participants to the role of biochar in slurry management, nutrient retention and emission reduction.

The course combines theoretical input, farm-system analysis, practical experimentation and Design Thinking. Participants explore agricultural sustainability challenges and develop ideas for integrating biochar into manure and slurry systems.

The course is suitable for agricultural VET teachers, trainers, apprentices, farm managers, livestock practitioners, agricultural advisors, sustainability consultants and environmental educators.

4.7. Biochar in Agriculture and Circular Carbon Economy

This course is based on the DEULA agricultural learning pathway. It introduces learners to biochar, biomass resources, carbon cycles, sustainable farming systems and Circular Carbon Economy principles.

The course can be used as an introductory or awareness-raising format in agricultural VET and adult education. It connects theoretical input with practical examples, biochar samples, group discussion and reflection on future farming practices.

The course is suitable for agricultural VET learners, apprentices, vocational teachers, adult learners, farmers, agricultural advisors and organisations working on soil, climate action or circular economy topics.

4.8. Design Thinking Workshop – Teaching Biochar in Agriculture

This course is based on the DEULA Design Thinking pilot. It is designed as a teacher-training format for educational professionals who want to make biochar, sustainability and Circular Carbon Economy more practical and motivating for agricultural learners.

The course introduces Design Thinking as a method for developing learner-centred activities. Participants explore agricultural sustainability challenges, identify learner needs, develop teaching ideas, create prototypes and plan transfer into their own educational context.

The course is suitable for vocational school teachers, agricultural trainers, adult educators, VET course designers, curriculum developers and educational teams working on biochar, agriculture or climate action.

5. Quality and Accreditation Logic

The B4C KA1 courses are connected to the quality logic developed in the project. The B4C course repository defines quality-labelled courses as competence-oriented, needs-driven, constructive, interactive and innovation-oriented learning offers.

The basic quality criteria include a competence-oriented approach, collaborative learning, learner orientation, constructive learning, innovation and creativity, interdisciplinary learning, blended learning and the development or use of open educational resources.

This quality logic is important for the KA1 platform because it ensures that the courses are not only thematically relevant, but also pedagogically aligned with B4C. The courses should help participants develop practical competences, not only receive information.

In this sense, the B4C KA1 courses can be described as:

- competence-oriented;
- practice-based;
- transferable;
- learner-centred;
- linked to real sustainability challenges;
- suitable for European professional development;
- connected to B4C learning materials and tools;
- open for adaptation to different educational and professional contexts.

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European Dimension

Quality Assessment

General Quality Criteria

Criterion	-	+
1. Have a competence-oriented approach		x
2. Reach out beyond formal education		x
3. Collaborative Learning / learning culture communities		x
4. Be Needs Driven (learner oriented)		x
5. Promote Constructive learning		x
6. Foster Innovation and creativity		x
7. Promote Interdisciplinary (intersectoral) learning	x	
8. Promote Interactive learning		x
9. Offer a blended learning concept (mixed methodologies)		x
10. Develop and use OER		x

General COL criteria fulfilled? **yes**

	not at all	just a little	quite a bit	rather much	much	very much
Specific Quality Criteria	---	--	-	+	++	+++
Criterion	1	2	3	4	5	6
1. Variability					5	
2. Productivity					5	
3. Adjustment to the given situation (of the learners)					5	
4. Productivity and utility					5	
5. Self motivation: for teaching and learning persons				4		
6. Development of learners' abilities (competences)				4		
7. Consistency/Clarity				4		
B4C specific Score						76%
	1	2	3	4	5	6
EQF level range						
LEVELS range						

Getting to the KA1 course

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B4C



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B4C KA1 Example – Quality Assessment

6. Connection to the PROVIDE / KA1 Platform

The B4C KA1 courses can be made visible through European KA1 course platforms that provide access to international training opportunities offered by qualified organisations in different locations.

For B4C, this platform function is important because it creates a practical route for mobility-funded professional development in the field of biochar and Circular Carbon Economy. Organisations applying for Erasmus+ KA1 funding can use such platforms to identify suitable training opportunities for teachers, trainers, facilitators, learners or professional staff.

The platform entry should link the KA1 courses with the B4C Support Hub, Learning Suite and Virtual Marketplace. This allows interested users to move between course offers, learning materials, application examples and project-development resources.

The platform function therefore supports two objectives:

1. increasing the visibility of B4C course offers beyond the project partnership;
2. creating a practical route for European exchange, staff training and professional development.

PRQVIDE

HOME OPPORTUNITIES TESTIMONIES PARTNER ORGANISATIONS ACCOUNT

Courses

Created Name Start Date Price

SHOWING 1-12 OF 85 RESULTS

Sort by latest

Biochar in Agriculture – Innovative Teaching Approaches for Sustainable Agriculture and Circular Carbon Economy

Start: 14. Sep 2027

Nienburg, Germany course

A Practical Introduction to using Biochar in Agriculture

Start: Jul 2027

Bangor, United Kingdom course

Biochar in Agriculture – Innovative Teaching Approaches for Sustainable Agriculture and Circular Carbon Economy

Start: 13. Apr 2027

Nienburg, Germany course

Carbon Manager Course

Start: 08. Feb 2027

Göttingen, Germany course

Narrative Crossings in Education

Start: Oct 2026

Thessaloniki, Greece course

Designing Intergenerational Citizen Science Projects for Sustainable Households

Start: 22. Sep 2026

Göttingen, Germany course

[TRAIL Certified] Accessible communication

Start: Jun 2026

Peniche, Portugal course

Training in Sustainable Mediterranean Diet

Start: Jun 2026

Peniche, Portugal course

Designing Intergenerational Citizen Science Projects for Sustainable Households

Start: 23. Jun 2026

Göttingen, Germany course

Fighting our Dragons: A Folktale Work Counsellor Training Course

Start: 15. Jun 2026

Rute, Spain course

Outdoor Teambuilding Training: Want to improve your team performance?

Start: 01. Jun 2026

Rute, Spain course

[TRAIL CERTIFIED] Inclusive Practices by the Sea

Start: May 2026

Peniche, Portugal course

1 2 3 4 ... 8

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Content Areas

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Earliest Start

01. Jan. 2023

Latest End

18. Sep. 2027

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Provide Platform

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B4C courses
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Added Value of the KA1 Course Offer

The KA1 course offer adds value to B4C because it transforms project results into concrete training opportunities.

It supports the long-term use of the project results by allowing external organisations to participate in structured mobility courses after the project lifetime. It also strengthens the European dimension of B4C by enabling exchange between educators, learners, professionals and stakeholders from different countries.

The KA1 courses contribute to:

- professional development of teachers, trainers and facilitators;
- transfer of B4C pilot results into new educational contexts;
- visibility of biochar and Circular Carbon Economy as green skills topics;
- European mobility and exchange;
- practical experimentation and competence development;
- wider uptake of B4C learning materials;
- long-term exploitation of the B4C Support Hub.

The courses also create a bridge between learning and implementation. Participants can use the KA1 training experience to develop their own learning activities, pilot projects, community initiatives or professional applications.