



AgriSCALE

Scaling agro-entrepreneurship
through problem-based learning

FIRST YEAR OF ACTIVITIES

FOREWORD

The first year of the AgriSCALE project has been unusual, to say the least. For the partner countries, universities and our collaborators, the COVID-19 pandemic has had an impact on all of us, also at a personal level. For this reason, I would like first of all to express my sincere gratitude to the faculties and staff of the partner universities of AgriSCALE for their continuous trust and commitment to the project. We have been able to start and move forwards with many project activities, and exceptional flexibility has been shown despite the struggles and challenges in our professional and personal lives in the midst of a pandemic.



Eija Laitinen
Project Manager

The project AgriSCALE was planned before the COVID-19 pandemic. The project objective is to revise agro-entrepreneurship curricula towards implementing student-centered pedagogics following the Problem-Based Learning (PBL) approach. Initially, it was planned that trainings and co-creation activities would take place in workshops. However, all the activities have been replanned to be web-based. There are bi-weekly web-meetings for the operational management of the project, and all trainings are online. Additionally, extensive accredited pedagogical training programmes are completely in open-distance-learning mode. The internet allows more people to participate, but sometimes the connectivity is challenged by the weak network.

The collaboration with industry and societal partners ensures learning through a network-based ecosystem. The universities' capacity to produce graduates with hands-on competencies in entrepreneurship is critical. Graduates are not only expected to think entrepreneurially but to become job creators. Integrating the PBL approach to the curricula requires close collaboration with enterprises to identify and address the gaps between academia and working life. This is a completely new way for universities to offer education; it is the universities' role to build a sustainable future, and this cannot be done without the industry.

Students are at the center of AgriSCALE. As soon as travelling is possible again, students will be able to participate in field courses to work in real-life cases with interdisciplinary and multicultural teams. Students will be the main beneficiaries of the new way of teaching and, at the same time, they will participate in the contextualization of PBL methods.

Moreover, AgriSCALE is building a network of experts and keen advocates of the PBL methodology in order to promote impactful education. The first project year has demonstrated the motivation of the partnership to work together, empower the teachers and the managerial staff, and share the experiences and lessons learned for sustainable and inclusive solutions for the quality of education.

In summary, the first year of AgriSCALE has been unique. The achievements and work completed by the partners are highly valued and deserve humble recognition. We can only look forward enthusiastically and with trust to the years ahead.



ABBREVIATIONS

Aalto: Aalto University

BSU: Bishop Stuart University

EGU: Egerton University

GU: Gulu University

HEI: Higher Education Institution

HAMK: Häme University of Applied Sciences

ICT: Information and communication technologies

JKUAT: Jomo Kenyatta University of Agriculture and Technology

LC: Local coordinator(s)

LMF: Logical Framework Matrix

MU: Mulungushi University

ODL: Open Distance Learning

PAB: Project Advisory Board

PAR: Participatory Action Research

PBL: Problem-Based Learning

PMT: Project Management Team

QCT: Quality Core Team

SSA: Sub-Saharan Africa

UNIPV: University of Pavia

UNZA: University of Zambia

WP: Work package

ABOUT AGRISCALE

The project AgriSCALE is a joint initiative for creating a new entrepreneurship learning ecosystem in Sub-Saharan Africa (SSA) by implementing problem-based learning (PBL) methods in food and agribusiness programmes in higher education institutions (HEIs). This project, which foresees a close collaboration between the academic sector, corporate partners, and societal actors, aims at modernizing the education of the agro-sector in SSA, encouraging curricula transformation, enhancing the capabilities of academic staff, and promoting learning through real-life cases. The project's main pillars are the following:

- 1. Inclusive change:** AgriSCALE supports the modernization of agricultural education in SSA to make it more responsive to the labor market demands and enhance the subjective well-being arising from it at the individual, regional and national levels.
- 2. Educational reformation:** The project also encourages curricula transformation processes at partner universities towards incorporating the PBL method and renewing the course offer by creating new courses or updating existing ones.
- 3. Guidance of the teachers:** AgriSCALE intends to develop and enhance the competencies of professors and staff at partner universities to be consistent with PBL method's requirements through trainings, co-created training materials on PBL, and the exchange of good practices related to the adoption of PBL.
- 4. Learning by doing:** The initiative supports the development of a sustainable learning ecosystem by implementing student challenges and establishing communities of practice to facilitate practical learning through real-life cases.



PARTNER UNIVERSITIES



AALTO UNIVERSITY



Aalto University

Aalto University is a community of bold thinkers where science and art meet technology and business. By merging three leading Finnish universities in 2010, Aalto was founded to work as a societally embedded research university. It consists of six schools: Arts, Design and Architecture, Business, Chemical Engineering, Electrical Engineering, Engineering and Science. The University aims at contributing to the solution of societal challenges, promoting social responsibility and sustainability across all of its activities. Aalto Global Impact is the unit that develops Aalto University's research and educational outreach for societal impact in Africa, Asia and Latin America. It does so by fostering international collaboration and projects, such as AgriSCALE, together with Aalto schools, faculties, and education programmes.

BISHOP STUART UNIVERSITY



Bishop Stuart University is a private, not-for-profit chartered University established by Ankole Diocese in 2002 located in Western Uganda 31/2 km from Mbarara City Headquarters. The University is one of the best and fastest-growing universities in Uganda ranked 10th by Webometrics (Ranking Web of Universities, July 2020). BSU offers PhDs, Masters, Post-Graduate Diplomas, Degree and Diploma programmes. In addition, the University runs short courses which are all designed to impart skills and develop professionals on entrepreneurship, leadership, critical thinking, innovations, academic excellence, integrity, Christian values and outstanding academic training that transform communities. The mission of the University is to produce multi-sectoral leaders/operators who know the way, show the way and go the way.

EGERTON UNIVERSITY



Egerton University is a premier agricultural university in Kenya. It is the oldest institution of higher learning in Kenya founded as a Farm School in 1939 by Lord Maurice Egerton of Tatton, a British national who settled in Kenya in the 1920s. The institution was founded to create a center of agricultural knowledge in the country and, up to this date, it has furthered this mandate by establishing itself as the top agricultural learning institution in the country with continental and global recognition and accreditation. In addition to Agriculture, the University also houses faculties of Arts and Social Sciences, Education and Community Studies, Engineering and Technology, Environment and Resource Development, Science, Veterinary Medicine and Surgery, Commerce and Health Sciences. Currently, the University has nine faculties and fifty-one academic departments offering a wide range of programmes at the diploma, undergraduate, and postgraduate levels.

GULU UNIVERSITY



Gulu University was established in Uganda in 2001. Initially, the academic offer of the institution focused on agricultural mechanization, but it progressively expanded to other fields to produce high-level human resources capable of solving the social and economic problems of the country. The University opened with the Faculty of Science Education and Institute Human Resource Development. However, from 2002 the University has steadily increased its intake, faculties, and programmes. The University has now six faculties and two institutes. Its mission is to expand access to higher education, conduct applied research, and provide quality professional training for the delivery of appropriate services directed towards social transformation and the conservation of biodiversity.

HÄME UNIVERSITY OF APPLIED SCIENCES



Häme University of Applied Sciences is a multidisciplinary university with 27 bachelor, 10 master, and 4 professional teacher education programs, over 7000 students and over 600 staff. HAMK's mission is to provide professional higher education geared to support students' professional development, the requirements and developments of the world of work, and to carry out important applied research and development activities at the regional, national and global levels. In addition, HAMK conducts high-quality research in close collaboration with the business sector. HAMK's roots lie in agriculture, as it has provided agricultural education since 1840. HAMK's seven campuses are situated centrally in the greater Helsinki metropolitan area of southern Finland.

JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY



JKUAT is one of the leading public universities in Kenya, the fifth to be established, and the fifth in student numbers. JKUAT was established in 1981 as a middle-level college to build capacity in Agriculture and Engineering. It became a fully pledged university in 1994. The mission of the University is to offer accessible quality training, research, and innovation in order to produce leaders in the fields of Agriculture, Engineering, Technology, Health Sciences, other Applied Sciences and Enterprise Development to suit the needs of a dynamic world. The current strategic Plan (2018-2022) emphasizes the role of JKUAT as a research and entrepreneurial University. JKUAT currently has a student population of 46,000 and has eight campuses within Kenya and the Region.

MULUNGUSHI UNIVERSITY



Mulungushi University was established by the government in 2008 as the third public University in Zambia. The University works toward providing knowledge, technology, skills, competencies, and attitudes required to steer the country towards achieving the economic, social, and political goals, enshrined in the national development plans and vision 2030. The University has seven faculties namely: School of Agriculture and Natural Resources; School of Social Sciences; School of Business Studies; School of Science, Engineering and Technology; School of Medicine, and Directorate of Research and Postgraduate Studies. The University has approximately 8,000 students, consisting of 3000 full-time students and 5000 students on distance learning. There are 350 academic and support staff employed by the University.

UNIVERSITY OF PAVIA



UNIVERSITÀ
DI PAVIA

The University of Pavia was founded in Italy in 1361. It is one of the oldest and most prestigious academic institutions in Europe. The University is composed of 18 departments offering a wide variety of study programmes in all subject areas and at all levels from bachelor's degrees to PhDs. Today over 24,000 students, from both Italy and overseas, study at UNIPV. Close attention is paid to each student by nearly 900 professors and researchers. The University has extensive experience in developing research for supporting international cooperation projects and agricultural initiatives; it is part of various research and professional networks such as NOHA, EADI, Cooperation and Development Network and NAF International Research Network. UNIPV has been ranked second best at the national level by the CENSIS Italian university ranking 2021.

UNIVERSITY OF ZAMBIA



The University of Zambia (UNZA) is the largest public University in Zambia established in 1966 with three major mandates: teaching, research, and community service. UNZA's mission is to provide relevant, innovative, and demand-driven higher education for socio-economic development. Currently, the University has 13 schools and 30,000 students, inclusive of both regular and distance learning students. The School of Agricultural Sciences, which is the one involved in the project AgriSCALE, is uniquely positioned to contribute to Zambia's national development through an economically and sustainable agricultural sector.





WORK PACKAGE 1: PREPARATION

The first work package of AgriSCALE is dedicated to the preparation activities of the project which aim to create a joint understanding of the PBL methodology as a first step towards curricula development. This joint understanding is also at the basis of the activities for identifying teacher training needs and establishing a community of practice to support the exchange of knowledge and the participation of the corporate sector in the learning ecosystem. During the first year of the project, the following results have been achieved in the framework of WPI:

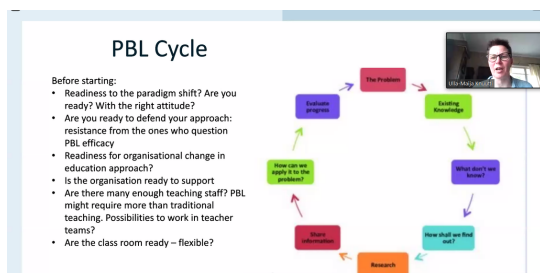
- **Pre-training survey:** AgriSCALE carried out a focus group discussion to collect general information about the pedagogical practices of partner universities and their possibilities for the implementation of open distance learning activities. This action highlighted infrastructural challenges in terms of information and communication technologies. Additionally, the information collected from partner universities on approaches to teaching and learning paved way for understanding the issues to be addressed with the project and is going to be used for an article.
- **Feasibility study:** A survey on staff competencies was implemented at the partner universities, especially in the faculties related to the fields of Agriculture and Pedagogy. This activity was led by Egerton University and Jomo Kenyatta University of Agriculture and Technology, and Häme University of Applied Sciences supported it. There was a large participation of the staff of partner universities, which led to an appropriate sample for data analysis. The results of this survey will also be used for a publication.
- **Curricula revision:** A diversified schedule for curricula revision was planned according to the needs of partner universities. As the project supports this process, it established December as the date of the beginning of trainings.
- **Trainings for curricula reform:** HAMK delivered two sessions on curricula transformation which were offered to higher education institutions on an individual basis. These training activities fostered a participative environment and facilitated a better understanding of the specific situation of each HEI. The last training took place during the last week of April with Mulungushi University. Numerous participants have attended the trainings, not only from agro-entrepreneurship departments but also from other disciplines.
- **JKUAT trainings:** The University considered the curricula adaptation trainings so relevant and useful that a special session was organized for the deans and academic leaders of all the eighteen schools of JKUAT to support the curricula reform.
- **Sharing ODL methods:** The PBL trainings focus on classroom teaching and the use of web for these capacity-building activities makes the training programme an example of how to successfully train large student groups in online; this gives an authentic experience to the participants.
- **Sharing the content of PBL trainings:** Partners participating in different work packages of the project can access the training materials, which are available in the official online folder of the project. This facilitates the use of PBL concepts in other work documents of the project.





WORK PACKAGE 2: DEVELOPMENT

Work package 2 on development is dedicated to the implementation of peer-to-peer teacher training and field activities. These activities are implemented following the **Participatory Action Research** approach which generates spaces for researchers and participants to work together in order to understand a problematic situation and change it for the better. The main activities planned in the framework of this work package are student field pilots and challenges and the PBL pedagogy workshops. The silver lining of the pandemic was that it was possible to organize credited trainings following the European Qualifications Framework for levels 6 and 7 (EQF 6-7). HAMK prepared the plan in cooperation with Aalto. Numerous participants attended the trainings, which started in April. The trainings are expected to contribute to building a network of PBL facilitators. During the first year of the project, the PBL trainings were organized in eight sessions covering the following topics:



- Introduction session
- The role of a teacher in PBL
- The role of a student in PBL
- How to orchestrate PBL activity
- Good PBL problems
- PBL learning materials
- Learner-centric tools and learning activities
- Assessment of PBL-based learning



The project has established an online platform for the PBL trainings thanks to the kind collaboration of UNZA, which made available its Moodle platform. The training participants can access online training materials and submit their assignments through this virtual space.

The first sessions implemented have greatly benefited from the large-scale participation of university professors, lecturers, researchers, and management employees, with nearly 100 participants present in each session. Moreover, attendants have been given the opportunity to obtain a certificate at the end of the training sessions on the condition that they complete all the assignments presented in the Moodle platform.

After the teacher training programme, the participants are expected to be able to explain online learning approach to produce work-life relevant learning outcomes and to design and prepare online courses. Additionally, they will be prepared to create online learning environments and learning materials, and to support student-centered learning processes. Finally, they will be able to identify themselves as facilitators of the students' learning process.

The PBL trainings are not only a great opportunity for professors and university staff to enhance their teaching capacities but also to expand their networks as they are engaged in multiple group activities with partners from their institutions and from other universities. So far, the trainings have been carried out successfully, and they have received very positive feedback from the attendants.



WORK PACKAGE 3: QUALITY PLAN

Work package three focuses on the implementation of the project's quality assurance processes. Its purpose is to ensure that AgriSCALE reaches its objectives by carrying out relevant interventions which generate sustained results over time. This WP is also in charge of monitoring the progress of the project activities and providing recommendations to the consortium for an optimal performance of the project. The quality WP follows the activities of other work packages and collects data for both internal and external quality assurance purposes. The main achievements of the quality work package during the first year of the project are the following:

- **Development and approval of the AgriSCALE quality plan:** The WP3 team developed a quality plan that outlines the main reasoning and methodology behind the project's quality approach and provides recommendations for the consortium on monitoring and evaluation issues. This document aims to ensure that the project meets its goals and objectives timely and that it has a positive impact on its stakeholders.
- **Elaboration of a work plan for WP3:** To put into action the AgriSCALE quality plan, the WP3 team generated a work plan that summarizes the main WP deliverables and organizes them in order of urgency or precedence. This document guides the activities of WP3 and clarifies the expected contributions from project partners.
- **Revision of the logical framework matrix:** The WP3 team also carried out a revision of the LFM in order to refine the indicators of the project based on the specific needs and work plans of each work package. For this activity, the WP3 leader had bilateral meetings with the other WP leaders in order to jointly design accurate indicators which measure both quantitative and qualitative aspects.
- **Development of data collection practices:** During the first year of the project, various data collection practices were developed, including indicator reporting and baseline collection. Moreover, a Common Quality Platform was developed to ensure effective data collection and the continuous improvement of project activities with data-informed practices.
- **Continuous evaluation and reflection on project practices:** These activities are continuously carried out to improve the project's commitment to PBL and PAR methodologies, as outlined in project documentation. Additionally, WP3 leads reflection sessions after each team meeting in order to continuously improve the performance of the project and the collaboration tools of the consortium. These sessions are organized through Flinga, a software that puts a collaborative whiteboard at the disposal of the project partners, generating a space for providing anonymous feedback to the project activities and methods. The information collected with this tool is later shared with the PMT to ensure that the observations and suggestions of partners are considered in management activities.
- **Feedback questionnaires for activities in WP2:** The WP3 team also collects information to measure the progress and continuously improve the teaching and learning activities of the project. In this context, a feedback questionnaire was developed for the PBL teacher trainings organized in the spring of 2021 to collect sufficient participant data to improve and adjust the project activities.
- **Development of a complaint mechanism:** This tool was developed to ensure that project activities and funds are conducted appropriately, and to allow the public to report suspicions of misuse to the project consortium.
- **Development of documentation and providing recommendations** for the Project Management Team and the Project Board on matters of project management, in order to improve the streamlining of quality, monitoring and evaluation into all parts of the project work.





WORK PACKAGE 4: DISSEMINATION AND EXPLOITATION

The fourth work package of the project AgriSCALE focuses on the dissemination and exploitation of project results. To have a clear strategy for the development of this activity, the members of the WP4 team formulated a dissemination and exploitation plan which explains in detail all the communication, dissemination and visibility activities foreseen by the project. Additionally, the communication and dissemination team elaborated a work plan which establishes clear deadlines and responsibilities for project partners. Thanks to the collaborative work of the universities of the AgriSCALE consortium, multiple deliverables were generated in the framework of WP4:

- **Project website:** AgriSCALE has generated an official website to share news and relevant information about the project. In the context of the ongoing global pandemic, it is an excellent tool for reaching large audiences without compromising the safety of the project's stakeholders.
- **Facebook page:** The project has its own Facebook page, which promotes the community's involvement in the actions of the project. This page is continuously updated with information about meetings and other relevant news.
- **Twitter page:** AgriSCALE also owns a Twitter account, which presents the main news of the project in a summarized format and encourages the target audiences to engage with the project and to access the project website for additional information on project activities.
- **Project brochure:** To share information about the project with donors, stakeholders, and the general public, the project AgriSCALE generated project brochures that describe the main aspects of the project and invite the public to access the project website and its social media channels.
- **Project templates:** The WP4 team also generated templates to harmonize the layout of the project documents, such as templates for minutes and news.
- **Project news:** The different partner universities generate pictures and news articles about the project activities which are then shared through the multiple online channels of the project.
- **Dissemination of the first year of activities of the project AgriSCALE:** The WP4 team also develops a yearly publication about the main activities of the project AgriSCALE to keep the donors and stakeholders informed about the activities of the project and to highlight the efforts of the project partners.
- **Project video:** HAMK is currently leading the production of a video for the presentation of AgriSCALE, which is carried out in coordination with the dissemination team.

Moreover, the communication and dissemination team is already planning the content of the next deliverables of the project, such as a PBL manual including content for teacher training which should be completed on the third year of the project.

Winnie Kokwon, a MSc. student in Agrienterprise of Egerton University, was the winner of the logo competition of AgriSCALE, earning a prize of 100 euros. His beautiful design was incorporated into the brand image of the project with minor adjustments to match the general layout of the project image.



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WORK PACKAGE 5: MANAGEMENT

The fifth work package corresponds to project management. The activities of this WP focus on successfully planning and organizing the implementation of the project activities to ensure the achievement of the project objectives and the efficient use of the project resources. The main achievements of this work package are listed below:

- **Project Kick-Off Meeting:** The WP5 team successfully organized the kick-off meeting of AgriSCALE, where project partners had the opportunity to meet each other and have a detailed overview of the project. University authorities, Advisory Board members, local coordinators, teaching staff, finance managers, student representatives and other relevant stakeholders attended this event to learn more about the project, the WP activities and the expected outcomes.
- **Project Advisory Board:** AgriSCALE established an Advisory Board integrated by senior management representatives of the partner universities. This body gives guidance and support to the organization of project activities. The first meeting of the Advisory Board was carried out as a videoconference. During this encounter, partners discussed the role of the PAB and expressed their interest in receiving regular updates about the project. They were also granted access to the project online folder. Presence-based meetings of the PAB are expected to occur as soon as international regulations allow it.
- **Project Management Team:** The local coordinators who constitute the PMT hold bi-weekly meetings to discuss the project operations. These meetings are also open to a wider range of project staff from partner HEIs for openness and transparency. Local coordinators participate actively; if they cannot attend a meeting, they send someone from their team to represent them. Despite the connectivity problems faced by certain partners, the team always manages to cooperate and share information with all the partners through the elaboration of minutes.
- **Establishment of core teams for dissemination, finance management and quality:** Following the objectives to support project management and operations, core teams with representatives of all partner universities have been established for specific work packages. These teams organize themselves, setting meeting schedules, work agendas and work methods. Regarding finance management, the financial procedures required by the donor require deep understanding; in this sense, HAMK provides support to partners in terms of financial management and shares information regarding the roles of local coordinators.
- **Successful management by the HAMK AgriSCALE team:** HAMK is responsible for coordinating and implementing the project. This comprises internal dissemination at HAMK, including blogs, materials in Finnish, embedding the project to HAMK activities, providing information to HAMK students, and working with HAMK project stakeholders from the public and private sector for goodwill activities and project support.
- **Revision of the action plan:** The COVID-19 pandemic forced the project activities to become web-based. In this context, a revised action plan was prepared by the management team and approved by the EACEA. This document was elaborated with the expectation that the project would be able to carry out "normal" presence-based activities on the first half of 2021. Workshops were replaced with online activities.
- **Resilience in the context of COVID-19:** The project was suspended for five months but it resumed its activities to continue working online with the best possible speed during a pandemic. During the first year, all the partner countries faced coronavirus peaks at different periods. Daily life struggles and the closure of public spaces and institutions, including universities, slowed the project activities. However, partner universities have worked on the curricula revisions foreseen by the project and this process has been supported through trainings.
- **Project reporting:** The EACEA requires project information by means of mid-term and final reports. To be prepared for these monitoring processes, the consortium reports its activities regularly to compile all the relevant information available in due course. The reporting activities are also supported by the quality management team of the project.
- **Partnership:** Although the consortium members have not met face-to-face yet, the collaboration bonds established between partners are strong. LC and HEIs are committed to the achievement of the project goals. The project has decided to move forwards as fast as the pandemic context allows it. This context has highlighted the importance of implementing curricula changes as AgriSCALE is a needs-based project. All the project partners hope that the opportunity to get together, spend time together and be physically in the same place will come soon.





THE PROJECT IN A NUTSHELL



LEARN MORE ABOUT THE PROJECT



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If you want to know more about the actions of the project AgriSCALE, please visit our website and our social media channels.



Website

<https://www.agriscale.net>



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