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**GRAND FRIEND**

# References and sources on the benefits of Intergenerational Programs in Lifelong Learning Education and Agro-Entrepreneurship

## GrandFriend Project



**GRAND FRIEND**





## Deliverable Factsheet

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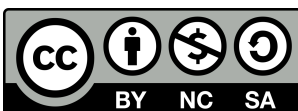
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## List of Contents

Introduction.....	3
1. Collection of sources on IP and AE development.....	4
1.1. Intergenerational relations and learning.....	5
1.2. Agricultural transition and generational renewal.....	8
1.3. Intergenerational entrepreneurship and senior entrepreneurs.....	9
1.4. Agricultural Innovation Platforms.....	10
1.5. Facilitating Innovation Platforms.....	13
1.6. Lifelong Learning for Farmers.....	14
1.7. Agricultural Entrepreneurship.....	15
1.8. Generational Turnover in Agriculture.....	17
1.9. Green Skills and Sustainable Development.....	18
1.10. Biodiversity Conservation and Fisheries.....	19
1.11. Entrepreneurship Education and Entrepreneurial Performance.....	19
1.12. Rural Development and Agriculture.....	21
1.13. Bioeconomy and Forest Sector.....	22
2. Current situation on IPs within Lifelong Learning Institutions and AE in Europe.	23
3. List of IPs within Lifelong Learning Institutions and AE in Europe.....	25
3.1 HIGGS - Association for Management and Conservation of Biodiversity in Agricultural Ecosystems.....	25
3.2 Sustainable Agricultural Production Systems and Climate Change.....	26
3.3 My Town Your Town.....	27
3.4 Intergenerational Mentoring and Learning in the Workplace.....	27
3.5 Community gardens: Forward-looking learning centres for democratic values	29
3.6 Bonding – Facilitating intergenerational solidarity and learning through building friendships between youngsters and the elderly.....	30
3.7 Education Voucher.....	31
3.8 Senior Citizen Study Program.....	32
4. Agricultural Innovation Platforms.....	33
4.1. The Case of Yatenga Province in Northern Burkina Faso.....	34
4.2. The Case of Lifelong Learning for Farmers in the Eastern German state of Brandenburg.....	36
4.3. The Case of The Integrated Agricultural Research for Development (IAR4D).	39
4.4 Lessons Learned from the Case Studies.....	42
Conclusion.....	44
References.....	45



# Introduction

Intergenerational programs (IPs) play a pivotal role in revitalizing the agricultural sector by bridging the gap between experienced Agri-Entrepreneurs (AE) and the emerging generation, thereby fostering sustainable practices and innovation. These programs facilitate collaboration among Lifelong Learning Institutes, educators, trainers, and stakeholders, offering a platform for knowledge exchange and skill development in agriculture. Access to reliable and up-to-date information is crucial for enhancing the effectiveness of IPs and driving meaningful progress in agricultural development.

In response to this need, Chapter 1 compiles 60 diverse sources on IPs and AE, offering insights into intergenerational cooperation, technological advancements, sustainability practices, and entrepreneurial initiatives in agriculture. These reliable and up-to-date sources shed light on IPs and their impact on agricultural development and the involvement of the younger generation in this sector.

In Chapter 2, an overview of the current situation and approaches to IPs across various European countries, with a focus on Türkiye, Cyprus, Greece, Germany, and Poland is done. Each country's unique challenges and strategies contribute to the broader landscape of lifelong learning and entrepreneurship, reflecting diverse approaches to address evolving societal and economic needs.

Chapter 3 presents a detailed list of IPs within Lifelong Learning Institutions in Europe, offering insights into initiatives that promote intergenerational collaboration and learning in agriculture. Each project showcases innovative approaches to fostering intergenerational cooperation and addressing key challenges in agriculture.

Chapter 4 explores Agricultural Innovation Platforms (AIPs) and their pivotal role in enhancing the agricultural landscape. By integrating such innovations, stakeholders unlock new synergies and possibilities for growth and sustainability, enriching processes with diverse perspectives and real-world insights. Through insightful case studies from Burkina Faso, Germany, and Africa, this chapter elucidates the transformative potential of AIPs in fostering intergenerational cooperation, improving production efficiency, and facilitating market access.



# 1. Collection of sources on IP and AE development

Within this chapter, a comprehensive compilation of sources on Intergenerational Programs in Lifelong Learning Institutes and Agro-Entrepreneurship is presented. To facilitate the reader, these have been organized into 13 distinct domains:

- Intergenerational relations and learning
- Agricultural transition and generational renewal
- Intergenerational entrepreneurship and senior entrepreneurs
- Agricultural Innovation Platforms
- Facilitating Innovation Platform
- Lifelong Learning for Farmers
- Agricultural Entrepreneurship
- Generational Turnover in Agriculture
- Green Skills and Sustainable Development
- Biodiversity Conservation and Fisheries
- Entrepreneurship Education and Entrepreneurial Performance:
- Rural Development and Agriculture
- Bioeconomy and Forest Sector

These domains encapsulate various sides of agriculture and intergenerational dynamics, offering invaluable insights into the collaborative efforts, technological advancements, and sustainable practices shaping the agricultural landscape. Each domain explores a unique aspect of intergenerational cooperation, providing stakeholders with actionable knowledge to drive progress and cultivate resilience within the agricultural sector.



## 1.1. Intergenerational relations and learning

The sources provided in this topic explore the dynamics of knowledge transfer and skill development between different age groups within the agricultural sector, this topic delves into how intergenerational interactions shape learning processes and foster innovation in farming practices.

#	Reference / Source	Summary
1	<b>Alexandra Withnall. "Intergenerational Relationships and Lifelong Learning: Missing Links." Journal of Intergenerational Relationships, 2017.</b>	This is an article about intergenerational learning. It discusses the importance of understanding how people learn at different ages. The author argues that there is a need to bridge the gap between cognitive psychology and neuroscience to better understand intergenerational learning. The article also discusses the impact of physical and sensory changes on cognition.
2	<b>Fidel Molina-Luque, Núria Casado, Ieva Stončikaitė. "University stakeholders, intergenerational relationships and lifelong learning: a European case study." Educational Gerontology, 2018.</b>	This article has tried to show the importance of the contribution of senior students to intergenerational communication, the construction of knowledge, social inclusion, and active ageing through the case of the Senior Programme of the University of Lleida. Teaching based on research provides an opportunity to develop research-orientated education programmes that focus on the student and facilitate the transmission of new information into society.
3	<b>Keyi Lyu, Ying Xu, Hao Cheng &amp; Jiacheng Li. "The implementation and effectiveness of intergenerational learning during the COVID-19 pandemic: Evidence from China." International Review of Education, 2020.</b>	The Shanghai Municipal Institute for Lifelong Education (SMILE) of East China Normal University (ECNU), conducted a two-month project that investigated intergenerational learning between grandparents and grandchildren (IL-GP&GC) across seven primary schools located in six areas of China. They explored topics such as pandemic prevention, health and fitness, traditional culture and information literacy. Four main findings emerged: (1) both generations gained more health knowledge, life skills and values; (2) the older generation changed their learning perspective and behaviours; (3) the younger generation understood their grandparents more and cultivated the concept of lifelong learning; and (4) the relationships between grandparents and grandchildren became closer.
4	<b>Liat Ayalon, Senjooti Roy, Omer Aloni, and Norah Keating. "A scoping review of research on older people and intergenerational relations in the context</b>	The findings suggest that both older and younger people are affected by age-based discrimination in the context of climate change and that generational differences in energy consumption and attitudes exist. Nonetheless, these can be overcome by stressing the solidarity between the generations and the ability of older people to contribute to the climate change movement as well as by the ability of each generation,



	<b>of climate change." The Gerontologist, 2022.</b>	young and old, to contribute and teach the other generation about sustainability issues.
5	<b>Linda A. Hartley. "Intergenerational engagement through experiential learning." Diverse Pedagogical Approaches to Experiential Learning, 2020.</b>	This article discusses the benefits of intergenerational engagement through experiential learning. Experiential learning is a pedagogy that involves learning by doing. In the context of intergenerational engagement, experiential learning can be used to build relationships, promote understanding, and foster lifelong learning.
6	<b>Othelia Eun-Kyoung Lee and Do-Hong Kim. "Bridging the Digital Divide for Older Adults via Intergenerational Mentor-Up." Research on Social Work Practice, 2019.</b>	The effectiveness of Intergenerational Mentor-Up (IMU), an innovative intervention that engages college students in tutoring older adults, was examined about eHealth literacy and social isolation. Older adults presented significant improvement between pre- and post-surveys in various outcomes such as eHealth literacy, technophobia, self-efficacy, and interest in technology. Intergenerational interaction brought about by IMU helped to decrease social isolation among older adults. Qualitative data revealed that individualized training, modifications, adaptations, and intergenerational interactions can decrease their anxiety and boost their confidence.
7	<b>Sara Santini, Barbara Baschiera &amp; Marco Socci. "Older adult entrepreneurs as mentors of young people neither in employment nor education and training (NEETs). Evidence from multi-country intergenerational learning program." Educational Gerontology, 2020.</b>	This paper reports the results of a study based on an intergenerational learning program, carried out in 2018 in Germany, Italy and Slovenia. Results indicated that, to a different extent in the study countries, mentors learned and enhanced mentoring competencies, e.g., active listening and the capability of orienting, improved well-being and self-esteem, social inclusion and active ageing attitude. Moreover, NEETs acquired entrepreneurial and socio-relational competencies by benefiting from the full exploitation of mentors' know-how and the trust relationship with them. Companies, trade unions, and educational and voluntary organizations should cooperate to adopt intergenerational learning programs as good practices for older adults and NEETs' lifelong learning promotion.
8	<b>Sacha Vieira and Liliana Sousa. "Intergenerational practice: Contributing to a conceptual framework." International Journal of Lifelong Education, 2016.</b>	This article discusses the emergence of intergenerational practice and its recent history. Intergenerational practice is a way to connect and exchange resources between older and younger generations. It is becoming increasingly important as the population ages. It also discusses the goals of intergenerational practice and the factors that contribute to its success.
9	<b>Shannon E. Jarrott, Rachel M. Scrivano, Cherrie Park, and Angela N. Mendoza.</b>	Intergenerational program researchers are responding to encouragement to measure how outcomes are achieved. The practices informed program content (e.g., using technology), program considerations (e.g.,



	<p><b>"Implementation of Evidence-Based Practices in Intergenerational Programming: A Scoping Review." Research on Aging, 2021.</b></p>	<p>environmental modifications), facilitator and participant preparation (e.g., training), and quality interactions among participants (e.g., incorporating mechanisms of friendship). Our scoping review demonstrates that these practices translate across varied non-familial intergenerational contexts and may serve practitioners interested in developing new intergenerational programs. Stakeholders supporting intergenerational partnerships may find that continued investigation of the association between practice and outcomes advances the number and health of programs as diverse as the participants and programming involved.</p>
10	<p><b>Silvio Marchini and David W. Macdonald. "Can school children influence adults' behavior toward jaguars? Evidence of intergenerational learning in education for conservation." Ambio, 2020.</b></p>	<p>A school-based experiment was conducted in the Brazilian Amazon to examine the effects of passively received information versus active elaboration on the 'perceptions' of jaguars (<i>Panthera onca</i>) among students and the effects of information communicated via illustrated book on those perceptions among students' parents. The finding that students can influence their fathers' perceptions of jaguars suggests that conservationists can use rural schools to reach at once tens of students in a classroom, or hundreds on the school's soccer pitch, who will in turn transfer the conservation message to their fathers.</p>
11	<p><b>Skye N. Leedah, Melanie Sereny Brasher, Dara L. LoBuono, Bethany M. Wood, and Erica L. Estus. "Reducing Ageism: Changes in Students' Attitudes after Participation in an Intergenerational Reverse Mentoring Program." Sustainability, 2020.</b></p>	<p>Using data from students participating in an intergenerational digital learning program, Findings showed that: (1) Students' attitudes improved following participation in the program; (2) students used fewer negative words to describe older adults following participation; (3) answers to open-ended questions demonstrated that many students improved their perceptions of older adults; and (4) many students showed increased interest in working with older adults in their future careers. Programs that reduce age stereotypes should be promoted to reduce young people's harmful ageist stereotypes, ensure respectful treatment of older adults in all workplace and social situations, and increase interest in ageing-related fields.</p>
12	<p><b>Spais, G. Building Adult Educational Programs in Entrepreneurship Based on Mezirow: The Case of Agricultural Entrepreneurship (2010). DOI: 10.1108/S1479-3660(2010)0000011019</b></p>	<p>The chapter discusses the benefits of Integrated Education in Agricultural Entrepreneurship (IEAE) and its importance in fostering knowledge, skills, and attitudes for farmers to manage their businesses. It defines agricultural entrepreneurship as individual or collective efforts to produce agricultural products and meet market needs. The chapter emphasizes the role of lifelong learning and critical reflection in agricultural entrepreneurship education. IEAE is seen as vital for economic development, especially in rural Greek areas, and as a means to prepare individuals and teams for business creation and extension.</p>
13	<p><b>Szilvia Simándi. "Intergenerational learning – lifelong learning." Acta</b></p>	<p>This study explores intergenerational learning, emphasizing its importance in today's society. It aims to provide practical guidance for organizing study circles where different age groups can learn from each other</p>





	<b>Educationis Generalis, 2018.</b>	during leisure time. By reviewing existing literature, the study will create a methodological guide for implementing intergenerational study circles. These circles offer opportunities for collaborative learning and knowledge sharing, benefiting individuals of all ages.
14	<b>Teresa Martins, Luís Midão, Silvia Martínez Veiga, Lisa Dequech, Grazyna Busse, Mariola Bertram, Alix McDonald, Gemma Gilliland, Carmen Orte, Marga Vives, and Elísio Costa. "Intergenerational programs review: Study Design and characteristics of intervention, outcomes, and effectiveness." Journal of Intergenerational Relationships, 2018.</b>	This article reviews the literature on intergenerational programs (IPs) and identifies the methodological approaches, intervention characteristics, and outcomes associated with IP effectiveness. The authors conducted a systematic review of 172 studies published between 2000 and 2020. The review found that IPs are a promising approach for promoting social cohesion, reducing prejudice and discrimination, and improving the well-being of participants of all ages. However, the authors also noted that the methodological quality of the studies varied widely, and there is a need for more rigorous research to establish the true effectiveness of IPs.

## 1.2. Agricultural transition and generational renewal

Examining the shifts in agricultural practices and ownership over generations, the sources focus on how new generations adapt to changing technologies, market demands, and environmental factors, driving the renewal and evolution of the agricultural landscape.

#	Reference / Source	Summary
15	<b>Elisa Maini, Marcello De Rosa, and Yari Vecchio. "The Role of Education in the Transition towards Sustainable Agriculture: A Family Farm Learning Perspective." Sustainability, 2021.</b>	In this article, the results confirm the impact of education at the collective family level on the transition towards more sustainable agricultural practices. This is particularly true in remote rural areas, where the transition is realized with higher intensity concerning other territorial contexts. This brings about policy implications on enskilling farmers and upgrading their level of human capital.



16	<p><b>Shane Francis Conway, John McDonagh, Maura Farrell, Anne Kinsella. "Going against the grain: Unravelling the habitus of older farmers to help facilitate generational renewal in agriculture." Sociologia Ruralis, 2021.</b></p>	<p>Findings reveal that the attitudes and behaviour required to 'step aside' and retire from farming not only 'go against the grain' of the older farmers' habitus, appearing to be instinctively 'wrong', they also appear incompatible with what is necessary to earn recognition as a 'good farmer'. The article concludes by recommending that a shift in thinking towards succession and retirement must be confronted at an earlier life stage in order to inculcate a new farming habitus. In doing this, long-term resolutions through generating a regularised, accepted and well-regarded practice of intergenerational farm transfer within the farming community would be promoted.</p>
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### 1.3. Intergenerational entrepreneurship and senior entrepreneurs

This topic investigates the collaborative efforts between senior entrepreneurs and younger generations in agricultural ventures, exploring how diverse skill sets and experiences contribute to sustainable business practices and innovative solutions in farming.

#	Reference / Source	Summary
17	<p><b>Adriana Perez-Encinas, Isidro de Pablo, Yolanda Bueno, and Begoña Santos. "Intergenerational entrepreneurship to foster sustainable development: A methodological training proposal." Sustainability, 2021.</b></p>	<p>The article explores the potential of intergenerational collaboration in fostering sustainable development through entrepreneurship. The authors argue that intergenerational partnerships can bring together the skills, knowledge, and experiences of different generations to create new and innovative businesses that address social and environmental challenges. They propose a methodological training framework that can be used to facilitate intergenerational entrepreneurship initiatives.</p>
18	<p><b>Adriana Perez-Encinas, Yolanda Bueno, Begoña Santos, and Camila Nieto-Mejia. "Are there differences and complementarities between senior and young entrepreneurs? An intergenerational perspective." Sustainability, 2021.</b></p>	<p>Intergenerational entrepreneurship programs can be effective in bringing together senior and young entrepreneurs, leveraging their unique strengths to address social and environmental challenges. Senior entrepreneurs provide mentorship, guidance, and support, while young entrepreneurs contribute fresh ideas and energy. These partnerships can create businesses that create jobs, promote sustainability, address inequalities, and build stronger communities. Intergenerational entrepreneurship holds promise for fostering social cohesion and sustainable development.</p>



19	<p><b>Justyna Stypińska, Annette Franke, and Janina Myrczik. "Senior entrepreneurship: The unrevealed driver for social innovation." <i>Frontiers in Sociology</i>, 2019.</b></p>	<p>Senior entrepreneurship is a growing field that has the potential to address a number of social and economic challenges. This article explores the role of senior entrepreneurship as a driver for social innovation. The authors argue that senior entrepreneurs are uniquely positioned to contribute to social innovation, as they bring a wealth of experience, knowledge, and networks to the table. They also suggest that senior entrepreneurship can help to address the challenges of population aging by creating new jobs and opportunities for older adults.</p>
20	<p><b>Noemi Oggero, Francesco Devicienti, Mariacristina Rossi, and Davide Vannoni. "You can't be what you can't see: The role of gender in the intergenerational transmission of entrepreneurship." <i>Review of Income and Wealth</i>, 2022.</b></p>	<p>The study explores how intergenerational entrepreneurship differs between sons and daughters, especially in countries with high gender gaps. Using European survey data, it suggests that the influence of entrepreneurial parents varies by gender and gender inequality levels, indicating a role-modeling effect. Over time, there's evidence of convergence towards gender-independent transfer in more gender-equal nations.</p>
21	<p><b>Sara Santini, Barbara Baschiera, and Marco Socci. "Older adult entrepreneurs as mentors of young people neither in employment nor education and training (NEETs). Evidences from multi-country Intergenerational Learning Program." <i>Educational Gerontology</i>, 2020.</b></p>	<p>This article reviews the existing literature on intergenerational learning programs (ILPs) for young people who are not in employment, education or training (NEETs). NEETs are a group of young people who are not in education, employment or training, and who are at risk of social exclusion. ILPs are a type of intervention that aims to improve the outcomes of NEETs by providing them with opportunities to learn from and interact with older people.</p>
22	<p><b>Stavroula Laspita, Nicola Breugst, Stephan Hebllich, and Holger Patzelt. "Intergenerational transmission of entrepreneurial intentions." <i>Journal of Business Venturing</i>, 2012.</b></p>	<p>The study employs cross-cultural theory and data from the Global Leadership and Organizational Behavior Effectiveness project to develop a model of entrepreneurial intention transmission across diverse family cultures. Analyzing data from over 40,000 individuals across 15 countries, it finds that grandparents, either directly or indirectly through parents, influence the entrepreneurial intentions of offspring. Moreover, there's partial substitution between the influences of parents and grandparents, with varying effects across cultures, offering insights into intergenerational entrepreneurial intention transmission.</p>



## 1.4. Agricultural Innovation Platforms

Agricultural Innovation Platforms serve as forums for collaboration and knowledge exchange among stakeholders in the agricultural sector, fostering innovation, addressing challenges, and enhancing productivity and sustainability across the value chain.

#	Reference / Source	Summary
23	<b>Dror, I., Cadilhon, J.J., Schut, M., Misiko, M. and Maheshwari, S. Innovation platforms for agricultural development: Evaluating the mature innovation platforms landscape. (UK: Routledge. ISBN 978-1138181717, 2016).</b>	The book "Innovation Platforms for Agricultural Development: Evaluating the Mature Innovation Platforms Landscape" features case studies from Central Africa, Ethiopia, India, Kenya, Nicaragua, and Uganda, focusing on mature innovation platforms in agricultural systems research. The book critically reflects on the impact of innovation platforms and showcases their progress, providing an important sourcebook for students, researchers, and professionals.
24	<b>Oluwole, F., Youdeowei, A., Ohiomoba, S. I., Adewale, A. &amp; Yemi, A. (2016). Agricultural Innovation Platforms: Framework for Improving Sustainable Livelihoods in Africa. Forum for Agricultural Research in Africa (FARA), Accra Ghana</b>	The report discusses the Integrated Agricultural Research for Development (IAR4D) concept, which aims to transform the linear configuration of agricultural research and development (ARD) by using an innovation systems approach. The IAR4D concept involves continuous interaction among all actors along the specific agricultural system or commodity value chain, drawing on the knowledge of relevant actors at each stage, and utilizing feedback to generate innovations rather than research products or technologies. The report highlights the success stories of IAR4D in many agricultural innovation platforms, including those of the Sub-Saharan Africa Challenge program (SSA CP), the Dissemination of New Agricultural Technologies in Africa (DONATA), UniBrain, and PAEPARD. The report aims to provide comprehensive background information on the IAR4D concept and the innovation platform to inform FARA constituents and others.
25	<b>Teno, G. &amp; Cadilhon, J. (2016). Innovation platforms as a tool for improving agricultural production: the case of Yatenga province, northern Burkina Faso. Field Actions Science</b>	The study focuses on the impact of innovation platforms on improving agricultural production for the beneficiaries of a project in Yatenga province, northern Burkina Faso. The innovation platform was established in 2011 as part of the activities of the Volta2 project, operating jointly in Burkina Faso and Ghana. The study used Likert scales to measure the project beneficiaries' perceptions and qualitative surveys of various partners



	<p><b>Reports [Online], Vol. 9.</b> <a href="http://journals.openedition.org/factsreports/4239">http://journals.openedition.org/factsreports/4239</a></p>	<p>to determine the impact of innovation platforms. The results showed an improvement in agricultural production, which was attributed to the Volta2 project's innovation platforms. The study suggests that the innovation platforms increased the beneficiaries' social and human capital, empowering them to seek and find local solutions adapted to their problems.</p>
<p>26</p>	<p><b>Marc Schut, Josey Kamanda, Andreas Gramzow, Thomas Dubois, Dietmar Stoian, Jens A. Andersson, Iddo Dror, Murat Sartas, Remco Mur, Shinan Kassam. Innovation platforms in agricultural research for development: Ex-ante appraisal of the purposes and conditions under which innovation platforms can contribute to agricultural development outcomes. (Experimental Agriculture 55(4): 575-596. <a href="https://doi:10.1017/S0014479718000200">https://doi:10.1017/S0014479718000200</a>, 2019)</b></p>	<p>The article discusses the importance of innovation platforms in agricultural research for development projects. It highlights the need for a critical appraisal of when and for what purpose innovation platforms can contribute to achieving development outcomes. The article provides a decision support tool based on critical design principles to enhance critical thinking about the conditions under which innovation platforms can contribute to achieving agricultural development outcomes.</p>
<p>27</p>	<p><b>Schut, Marc &amp; Klerkx, Laurens &amp; Sartas, Murat &amp; Lamers, Dieuwke &amp; McCampbell, Mariette &amp; Ogonna, Ifeyinwa &amp; Kaushik, Pawandeep &amp; Atta-Krah, Kwesi &amp; Leeuwis, C. "Innovation platforms: experiences with their institutional embedding in agricultural research for development. Experimental Agriculture." 52. 537-561. <a href="https://DOI:10.1017/S001447971500023X">https://DOI:10.1017/S001447971500023X</a>, 2016)</b></p>	<p>The article reflects on the implementation and institutionalisation of innovation platforms (IPs) in agricultural research for development programs in sub-Saharan Africa. It explores the opportunities and challenges of the adoption and adaptation of IPs and the structural changes required for the transition from technology-oriented to system-oriented AR4D approaches. Niche-regime theory is used to understand challenges and anticipate how to deal with them. The article emphasizes the need for institutional change and investments in capacity development to ensure the success of IPs.</p>



28	<p><b>Dabire D, Andrieu N, Djamien P, Et Al.</b>  <b>“Operationalizing An Innovation Platform Approach For Community-Based Participatory Research On Conservation Agriculture In Burkina Faso. Experimental Agriculture.</b>  <b>2017;53(3):460-479.</b>  <b>Doi:10.1017/S0014479716000636</b></p>	<p>The article discusses the design and implementation process of innovation platforms in Burkina Faso to promote conservation agriculture (CA) to develop technical references and renew rules of interaction among stakeholders. The study finds that the platforms enabled farmers to actively participate in identifying cropping systems and improving their knowledge and mastery of CA, promoting networking among producers and facilitating the development of new rules for crop residue use. The article concludes that the platforms are relevant mechanisms for addressing complex innovations and suggests ways to ensure their sustainability and evolution beyond the project's scope.</p>
29	<p><b>Schut M, Cadilhon J-J, Misiko M, Dror I.</b> <b>Do Mature Innovation Platforms Make A Difference In Agricultural Research For Development? A Meta-Analysis Of Case Studies. Experimental Agriculture.</b>  <b>2018;54(1):96-119.</b>  <b>Doi:10.1017/S0014479716000752</b></p>	<p>The article evaluates the impact of mature Innovation Platforms (IPs) in agricultural research for development (AR4D) using meta-analysis of eight case studies across three continents. The study finds that while IPs generate enthusiasm and bring stakeholders together to achieve local impact, they rarely achieve impact at a higher scale. However, IPs can be effective if demand-driven, participatory, and based on collective investment and action. IPs need to be continuously measured for performance and compared to other approaches for cost-benefit analysis.</p>
30	<p><b>Sotirios Papadopoulos and Theodoros Markopoulos,</b> <b>“Factors affecting the implementation of integrated agriculture in Greece,”</b> <b>Procedia Economics and Finance, Vol. 33, 2015, pp. 269-276.</b></p>	<p>The paper examines the rise of integrated agriculture in Greece, attributing its growth to the Common Agricultural Policy (C.A.P.), market dynamics, and consumer preferences. Through ANOVA analysis of farmer survey data, the study identifies factors influencing both adoption and rejection of integrated farming systems. The findings shed light on the factors associated with subsidies and their impact on the implementation of integrated agriculture.</p>
31	<p><b>Suzanne Nederlof, Mariana Wongtschowski and Femke van der Lee (eds),</b> <b>Putting heads together: Agricultural innovation platforms in practice (Development, Policy &amp; Practice Bulletin 396, KIT Publishers, 2011).</b></p>	<p>The study highlights the need for new ways of doing things in the agricultural sector of sub-Saharan Africa to contribute to food security and poverty alleviation. It emphasizes that introducing new technologies to farmers is not enough, and changes in the way old and new technologies, ideas, and initiatives are put into practice, as well as how different actors work together, are needed to stimulate innovation. The book features twelve stories from the field about creating and working with innovation platforms in Africa. It is the result of practitioners analyzing their experiences and drawing lessons from them. The book offers insights into how innovation platforms work and the different options available to them, as well as suggestions on how to deal with their main common challenges.</p>



## 1.5. Facilitating Innovation Platforms

This aspect emphasizes the role of facilitators and intermediaries in Agricultural Innovation Platforms, examining how they enable dialogue, coordinate activities, and catalyze partnerships to drive transformative change and foster inclusive growth in agriculture.

#	Reference / Source	Summary
32	<b>Suzanne Nederlof and Rhiannon Pyburn (eds), One finger cannot lift a rock: Facilitating innovation platforms to trigger institutional change in West Africa (KIT Publishers, 2012).</b>	The study explores food security challenges among smallholder farmers in sub-Saharan Africa, noting institutional biases against them. It advocates for a shift towards addressing institutional constraints rather than relying solely on technology. The Convergence of Sciences program attempts to foster change in West African communities. The study underscores multi-stakeholder approaches to addressing poverty, climate change, and food security.

## 1.6. Lifelong Learning for Farmers

Highlighting the importance of continuous learning and skill development for farmers, these sources explore various educational initiatives, training programs, and knowledge-sharing platforms aimed at empowering farmers to adapt to new technologies and market trends.

#	Reference / Source	Summary
33	<b>Spais, G. Agricultural Entrepreneurship-Marketing of Agricultural Products: educational material for Lifelong Learning Centres (General Secretariat for Lifelong Learning) [Αγροτική Επιχειρηματικότητα-Marketing Αγροτικών Προϊόντων: Εκπαιδευτικό Υλικό Για Τα Κέντρα Δια Βίου Μάθησης (Γενική Γραμματεία Δια Βίου Μάθησης)]</b>	This report is part of learning material produced for Life Long Learning Institutes in Greece on the topic of agricultural entrepreneurship and marketing for agricultural products. It introduces the reader to the context of the agricultural economy and development in Greece, the concepts of agricultural entrepreneurship and agricultural marketing.



34

**von Muenchhausen, S. & Haering, A. (2012). Lifelong learning for farmers: Enhancing competitiveness, knowledge transfer and innovation in the eastern German state of Brandenburg. Studies in Agricultural Economics. 114. 10.7896/j.1217**

The study investigates the need for farmers to continuously adapt their production and management systems to maintain and enhance competitiveness and sustainability in their businesses. The paper presents the results from three transdisciplinary research projects that aim to establish a farmer-university network in the northeast of Germany, where economic and farming conditions are unfavorable. The network involves agricultural farms, organizations, and federal research institutes, with a team from Eberswalde University facilitating the network. The results suggest that lifelong learning approaches are promising tools to foster agricultural innovations and contribute to the resilience of the agricultural sector. The success of joint learning projects depends on the relevance and quality of offers, professional network management, and equal partnership among all involved. The paper highlights the importance of learning and knowledge transfer among farmers, technology developers, experts, and university teams to develop and apply innovative ideas for sustainable food and non-food production.

## 1.7. Agricultural Entrepreneurship

Agricultural entrepreneurship encompasses the entrepreneurial activities and ventures within the agricultural sector, ranging from farm diversification and value-added product development to agritourism and rural enterprise creation, driving economic growth and innovation in rural communities.

#	Reference / Source	Summary
35	<b>Ali, Asad &amp; Mehta, Ahmed Muneeb &amp; Naqvi, Shehzadi &amp; Raza, Syeda. Educating the Agri Entrepreneurs: Innovation and Improved Agricultural Performance through Risk Management. 2021.DOI: 10.24312/2020140204.</b>	The study examines how agritourism operators' entrepreneurial goals and work characteristics vary across different age groups in the United States. Using the Generational Cohort Theory, it compares four generations of operators and finds differences in values and preferences, particularly regarding workplace goals. The research highlights the need for tailored training and resources to meet the evolving needs of agritourism operators across generations.





36	<p>Dias, Claudia S.L., Ricardo Gouveia Rodrigues, and João J. Ferreira, 'Agricultural Entrepreneurship: Going Back to the Basics', <i>Journal of Rural Studies</i>, 70 (2019), 125–38 <a href="https://doi.org/10.1016/j.jrurstud.2019.06.001">https://doi.org/10.1016/j.jrurstud.2019.06.001</a></p>	<p>This study analyses how the research in agricultural entrepreneurship is approached until 2012 and compares it with the period 2013-2017. It identifies 2 main themes until 2012: "Entrepreneurial Skills and Income sources" and "Market and Resources". Researchers state that farmers can be considered as entrepreneurs and as decision-makers who aim to maximize profits, developing various typologies of agricultural diversification, although conclude that entrepreneurial skills required for diversified farming are different from the ones required in conventional farming.</p>
37	<p>Dias, Claudia. <i>Agricultural Entrepreneurship: Entry, Diversification and Performance</i>. 2021</p>	<p>The study explores small farmers' entrepreneurial behavior, entry methods, and diversification strategies, emphasizing their impact on environmental and financial performance. Findings highlight the importance of family ties in portfolio entrepreneurship and emphasize Entrepreneurial Orientation (EO) and Environmental Sustainability Commitment (ESC) as key factors influencing performance. The study underscores the need for entrepreneurship training to address environmental challenges and market opportunities effectively.</p>
38	<p>Dollisso, Awoke, 'Integrating Agricultural Entrepreneurship into High School Agriculture Curriculum', <i>Journal of Agricultural Education</i>, 51.3 (2010), 125–33 <a href="https://doi.org/10.5032/jae.2010.03125">https://doi.org/10.5032/jae.2010.03125</a>.</p>	<p>The purpose of this study is to identify and describe high school agriculture teachers' perceptions regarding entrepreneurship and determine their entrepreneurial leanings toward and interest in integrating entrepreneurship concepts into their curricula. Respondents perceived that entrepreneurship is a learned skill, creativity and innovation can be nurtured, and almost everyone has the potential to research and create a business.</p>
39	<p>Nurlaela, Siti, Alia Bihrajihant Raya, and Sunarru Samsi Hariadi, 'Information Technology Utilization Of Young Educated Farmers In Agricultural Entrepreneurship', <i>Agro Ekonomi</i>, 33.1 (2022) <a href="https://doi.org/10.22146/ae.64524">https://doi.org/10.22146/ae.64524</a>.</p>	<p>The study reveals the personal characteristics of educated young farmers, their entrepreneurial characteristics, their behaviour in using Information Technology and their obstacles in utilizing it.</p>
40	<p>Pliakoura, Alexandra, Grigorios Beligiannis, and Achilleas Kontogeorgos, 'Education in Agricultural Entrepreneurship: Training Needs and Learning Practices', <i>Education + Training</i>, 62.7/8 (2020), 723–39</p>	<p>The study conceptualizes entrepreneurship and entrepreneurship education in agriculture, highlights the role and necessity of entrepreneurship education in enhancing entrepreneurship, and formulates relevant research proposals. It concludes that farmers/landowners have low levels of entrepreneurship education and thus have higher needs.</p>



	<p><a href="https://doi.org/10.1108/ET-04-2020-0095">https://doi.org/10.1108/ET-04-2020-0095</a></p>	
<p>41</p>	<p><b>Seuneke, Pieter, Thomas Lans, and Johannes S.C. Wiskerke, 'Moving beyond Entrepreneurial Skills: Key Factors Driving Entrepreneurial Learning in Multifunctional Agriculture', Journal of Rural Studies, 32 (2013), 208–19</b>  <a href="https://doi.org/10.1016/j.jrurstud.2013.06.001">https://doi.org/10.1016/j.jrurstud.2013.06.001</a></p>	<p>This paper explores the learning process towards the development of entrepreneurial skills in the context of multifunctional agriculture. It concludes that three major factors driving entrepreneurial learning: 1) re-developing an entrepreneurial identity, 2) crossing the boundaries of agriculture and 3) opening up the family farm.</p>
<p>42</p>	<p><b>Sujarwo, S, Dian Islami Prasetyaningrum, Yusri Fajar, Edlyn Khurotul Aini, Anisa Aprilia, Putri Budi Setyowati, and others, 'Agricultural Education: Investing Basic Agri-Food Education And Agriprenurship Knowledge To Early Age Students', Agricultural Social Economic Journal, 21.1 (2021), 33–40</b>  <a href="https://doi.org/10.21776/ub.agrise.2021.021.1.5">https://doi.org/10.21776/ub.agrise.2021.021.1.5</a></p>	<p>This paper argues that agri-food education and agriprenurship can be solutions to awaken the youth's awareness that the agricultural sector is a profitable one.</p>
<p>43</p>	<p><b>Ulvenblad, P., Barth, H., Per-Ola U., Ståhl, J. and Cederholm, J. 'Overcoming Barriers in Agri-Business Development: Two Education Programs for Entrepreneurs in the Swedish Agricultural Sector', The Journal of Agricultural Education and Extension, 26.5 (2020), 443–64 .</b></p>	<p>This study compares two education programs for agricultural entrepreneurs and concludes that the main challenges to business and personal development are time pressure and the need for better communication. The authors argue that entrepreneur education programs can help participants, program developers, and advisory organizations identify and manage business challenges and barriers.</p>



## 1.8. Generational Turnover in Agriculture

Addressing the transition of ownership and management of agricultural enterprises from one generation to the next, these resources below examine the challenges, opportunities, and implications of generational turnover for farm viability, succession planning, and intergenerational cooperation.

#	Reference / Source	Summary
44	<b>Ben White, “Agriculture and the generation problem: Rural youth, employment and the future of farming,” IDS Bulletin, Vol. 43, no. 6, 2012, pp. 9-19.</b>	Youth unemployment and underemployment pose significant challenges globally, particularly in rural areas where they are more acute. While small-scale agriculture holds promise as a sustainable employment option, there is a growing disinterest among young people in pursuing farming careers. The emerging field of youth studies sheds light on factors contributing to this trend, including rural youth deskilling, the devaluation of farming and rural life, and inadequate support for small-scale agriculture and rural infrastructure.
45	<b>Carbone, Anna, and Giovanna Subioli, ‘The Generational Turnover in Agriculture: The Ageing Dynamics and the EU Support Policies to Young Farmers’ (presented at the 109th EAAE Seminar ‘ The Cap After The Fischler Reform: National Implementations, Impact Assessment And The Agenda For Future Reforms’, Viterbo, Italy, 2008).</b>	The paper discusses the ageing process in the primary sector of the EU Member States. It also summarizes the main contents of the resolution approved by the European Parliament on the 5 <sup>th</sup> of June 2008. Additionally, it acknowledges the persistent problem within European agriculture, critiques the scarce efficacy displayed by the Common Agricultural Policy in counteracting the problem, but also points out the role that the CAP actively played in contributing to the cause of this situation.
46	<b>Martinho, Vítor João Pereira Domingues, ‘Agricultural Entrepreneurship in the European Union: Contributions for a Sustainable Development’, Applied Sciences, 10.6 (2020), 2080</b> <a href="https://doi.org/10.3390/app10062080">https://doi.org/10.3390/app10062080</a> .	The analysis shows that the realities across EU countries are different, where the instruments from the common agricultural policies, may play a crucial role in promoting more farming entrepreneurship more sustainably.



## 1.9. Green Skills and Sustainable Development

Focusing on the acquisition of green skills and the adoption of sustainable practices in agriculture, this area explores how farmers and agri-entrepreneurs can mitigate environmental impact, conserve natural resources, and promote ecological resilience while maintaining productivity and profitability.

#	Reference / Source	Summary
47	<b>Arasinah Kamis, Ramlee Mustapha, Norwaliza Abdul Wahab, Bushra Limuna Hj Isma. Arasinah Kamis et al. Green Skills as an Added-Value Element in Producing Competent Students. (Journal of Engineering Research and Application, 6 (11) 2016) pp.12-21.).</b>	The article highlights the importance of introducing the green skills topic for school students to promote the values of maintaining the environmental balance.
48	<b>Arasinah Kamis, Amarumi Alwi, Bushra Limuna Hj Ismail, Normah Zakaria, Faizal Amin Nur Yunus. Integration of Green Skills in Sustainable Development in Technical And Vocational Education. (Int. Journal of Engineering Research and Application. ISSN: 2248-9622, Vol. 7, Issue 12, (Part -3) December 2017, pp.08-12)</b>	The article discusses the integration of green skills into Technical and Vocational Education (TVET) in Malaysia to foster sustainable development. Green skills, linked to green technology, are crucial for environmental, economic, and social sustainability. By incorporating green skills into TVET, the education system can produce skilled labor while promoting sustainable development. The article emphasizes Education Sustainability Development (ESD) as a method for preserving and conserving the environment.
49	<b>Georgios Kountios, Athanasios Ragkos, Thomas Bournaris, Georgios Papadavid, and Anastasios Michailidis, "Educational needs and perceptions of the sustainability of precision agriculture: Survey evidence from Greece," Precision Agriculture, Vol. 19, no. 3, 2017, pp. 537-554.</b>	Precision Agriculture (PA) is gaining global attention as a dynamic production method with potential environmental and economic benefits. This study assesses Greek farmers' attitudes towards PA sustainability and their educational needs. Findings indicate limited familiarity with PA among respondents, with knowledgeable farmers showing a better appreciation of its sustainability aspects. Significant educational needs were identified, with preferences for group and individual education methods. The study's insights could inform targeted promotion efforts for PA under Common Agricultural Policy Pillar II measures.



## 1.10. Biodiversity Conservation and Fisheries

Biodiversity conservation and fisheries management play crucial roles in ensuring the ecological integrity and long-term sustainability of aquatic ecosystems. This topic examines strategies for conserving biodiversity, enhancing fishery sustainability, and promoting responsible stewardship of marine resources.

#	Reference / Source	Summary
50	<b>Krzysztof E. Skóra, Wojciech Górski, Iwona Pawliczka, Ocena i propozycje zmniejszenia negatywnego wpływu wywieranego przez polskie rybołówstwo na różnorodność biologiczną Morza Bałtyckiego – wybrane zagadnienia. Nature Conservation in Poland and Current Civilizational Challenges. Komitet Ochrony Przyrody PAN, Kraków: 257–275. 2014.</b>	The main focus of this contribution is on the cultural aspects and rationale for nature conservation, viewed as safeguarding life in its entirety and diversity. The paper draws upon reflections from ecoethics, ecoaesthetics, and ecotheology, along with broader understandings of human-nature relationships. It emphasizes the cultural nature of life and its environment, referencing Polish humanist thought and contemporary ecological knowledge. The discussion addresses risks such as profound worldview changes and instrumental treatment of nature, citing publications like "The end of man" and "The end of biology" to illustrate threats. The conclusion advocates for a return to ethical upbringing and the cultivation of human conscience in response to the ecological and human crises.

## 1.11. Entrepreneurship Education and Entrepreneurial Performance

Entrepreneurship education equips aspiring entrepreneurs with the knowledge, skills, and mindset needed to identify opportunities, navigate challenges, and succeed in the competitive business landscape. This topic explores the impact of entrepreneurship education on entrepreneurial performance and business outcomes in agriculture and related sectors.

#	Reference / Source	Summary
51	<b>Elert, Niklas, Andersson Fredrik, Wennberg, Karl. The Impact of Entrepreneurship Education in High School on Long-Term Entrepreneurial Performance (IFN Working Paper, No. 1063). 2015.</b>	This paper provides information regarding the long-term influence of introducing entrepreneurship training in secondary schools.



52	<p><b>Jarna Heinone Sari-Anne Poikkijoki. An entrepreneurial-directed approach to entrepreneurship education: mission impossible? (Journal of Management Development). 25(1)2006). pp. 80-94.</b></p>	<p>This paper focuses portrays the entrepreneurial approach to education and provides examples of techniques applied by teachers to help acquire entrepreneurial skills.</p>
53	<p><b>Oosterbeek, Hessel; van Praag, C. Mirjam; IJsselstein, Auke (2008): The impact of entrepreneurship education on entrepreneurship competencies and intentions: an evaluation of the junior achievement student mini-company program (IZA Discussion Papers, No. 3641). 2008.</b></p>	<p>This paper examines the impact of an entrepreneurship education program on college students' entrepreneurial competencies and intentions using an instrumental variables approach within a difference-in-differences framework. The study leverages the program's availability at one school location but not another, with location choice instrumented by relative distance to parents' residence. Results indicate that the program does not yield the anticipated effects: there is no significant improvement in students' self-assessed entrepreneurial skills, and the intention to pursue entrepreneurship actually shows a significant negative effect.</p>
54	<p><b>Zafeirios Thomakis and Irene Daskalopoulou, "Entrepreneurial views and rural entrepreneurial potential: Evidence from Greece," Journal of the Knowledge Economy, Vol. 13, no. 2, 2021, pp. 1611-1634.</b></p>	<p>The text explores rural entrepreneurship intentions in Greece amid the financial crisis, suggesting a potential for rural revitalization. Using data from Eurobarometer surveys and regional statistics, it identifies factors influencing rural entrepreneurship, including economic conditions and perceptions of crisis as an opportunity for private sector growth. The study underscores the importance of actor characteristics, community ties, civil services quality, and regional socio-economic structure in fostering rural entrepreneurship.</p>



## 1.12. Rural Development and Agriculture

Rural development initiatives aim to enhance the economic, social, and environmental well-being of rural communities, often through targeted interventions in agriculture, infrastructure development, and capacity building. This topic examines the role of agriculture in rural development and strategies for fostering inclusive growth and prosperity in rural areas.

#	Reference / Source	Summary
55	<b>Evagelia Koutridi, Dimitrios Tsiotas, and Olga Christopoulou, “Examining the spatial effect of ‘smartness’ on the relationship between agriculture and regional development: The case of Greece,” Land, Vol. 12, no. 3, 2023, p. 541.</b>	This paper aims to examine the transformation level induced by "smartness" in the relationship between agriculture and regional development in Greece. It builds a multilevel methodological framework describing both "traditional" and smart agriculture in terms of spatial demand, transportation cost, knowledge intensity, and economies of scale. The analysis applies regional data (NUTS 3) in Greece to detect significant spatial and functional changes in the thematic model developed within the proposed methodological framework. The findings offer insights into the effect of Smart Farming Technologies (SFTs) on sustainable regional development, drawing on relevant regional economic theories.
56	<b>Katarzyna Krot, Ewa Glińska, Uwarunkowania subiektywnej oceny sytuacji ekonomicznej indywidualnych gospodarstw rolnych w opinii ich właścicieli (Zeszyty Naukowe Szkoły Głównej Gospodarstwa Wiejskiego Ekonomika i Organizacja Gospodarki Żywnościowej nr 105, 2014)pp. 17–29. ).</b>	Depending on a number of factors, income from farms in Poland can vary significantly between different areas and households. Factors influencing this include for example the scale of production. This work depicts research regarding farmers' subjective assessment of their situation.
57	<b>Pardeep S. Shehrawat. Agro Processing Industries – A challenging entrepreneurship for rural development. (Journal of Asia Entrepreneurship and Sustainability 2(3). 2006.</b>	This paper discusses the constraints encountered by entrepreneurs and analyses their needs.
58	<b>Zbigniew, Wąsąg. Wpływ dofinansowania unijnego na modernizację techniczną gospodarstw rolnych w Polsce. Inżynieria Rolnicza 8(117). 2009.</b>	This paper analyses an impact of EU funding on the technical modernisation of farms in Poland.



## 1.13. Bioeconomy and Forest Sector

The bioeconomy encompasses the sustainable utilization of biological resources, including forests, for the production of food, fuel, materials, and energy. This topic explores the intersection of bioeconomy initiatives and forest sector dynamics, highlighting opportunities for innovation, value addition, and environmental stewardship in forestry-related industries.

#	Reference / Source	Summary
59	<b>Kleinschmit Daniela, Lindstad, Berit Hauger, Thorsen Bo Jellesmark, Toppinen, Anne, &amp; Baardsen Sjur. (2014). Shades of green: a social scientific view on bioeconomy in the forest sector. (Scandinavian Journal of Forest Research, 29(4), 2014.) pp.402-410.).</b>	The paper outlines the topic of bioeconomy and the society's shift towards it. Therefore, it portrays different frameworks regarding the bioeconomy field.
60	<b>S. Papadopoulos, C. Karelakis, E. Zafeiriou, and Th. Koutroumanidis, "Going sustainable or conventional? evaluating the cap's impacts on the implementation of sustainable forms of agriculture in Greece," Land Use Policy, Vol. 47, 2015, pp. 90-97.</b>	The study examines how CAP measures influence organic and integrated farming in Greece, focusing on factors like certification, product promotion, and subsidized support. It highlights the significance of CAP policies in promoting sustainable agricultural practices and improving environmental protection in the country.





## 2. Current situation on IPs within Lifelong Learning Institutions and AE in Europe

Intergenerational Programs in lifelong learning institutions and Agro-Entrepreneurship are pivotal for fostering innovation, sustainability, and socio-economic development across various countries. By analyzing the sources presented in the previous chapter, we can conclude the existing situations and approaches in Europe, but more specifically in Türkiye, Cyprus, Greece, Germany, and Poland. These countries emphasize knowledge exchange, collaboration, and skill development within their respective sectors. Each country's unique challenges and strategies contribute to the broader landscape of lifelong learning and entrepreneurship, reflecting diverse approaches to address evolving societal and economic needs.

In **Türkiye**, intergenerational programs not only aim to foster connections within the entrepreneurial sector but also bridge the gap between senior and young entrepreneurs. The exchange of experience, knowledge, and networks between these groups is crucial for fostering innovation and sustainability in the business landscape. Furthermore, the incorporation of findings from cognitive aging and neuroscience into teacher training can enhance the effectiveness of intergenerational learning by equipping educators with insights into the diverse learning needs of different age groups.

In **Cyprus**, the fragmented coordination among governmental bodies overseeing lifelong learning poses challenges to the effectiveness and quality of adult education. However, initiatives like the Cyprus Lifelong Learning Strategy 2021-2027 signal a commitment to reforming the adult education system and fostering collaboration among stakeholders. By creating new synergies and coordination mechanisms, Cyprus aims to address the diverse learning needs of adult learners and enhance the overall quality of lifelong learning programs.

In **Greece**, a comprehensive approach to lifelong learning involves collaboration between ministries, organizations, and educational institutions. Intergenerational programs serve as platforms for fostering communication, promoting citizenship, and



enhancing creativity across different age groups. The role of ELGO-DIMITRA in agricultural education underscores the importance of skills development and innovation in the agricultural sector, contributing to the country's sustainable development goals.

**Germany's** longstanding commitment to lifelong learning is evident in its diverse range of initiatives and programs targeting various sectors, including agriculture. Through education centres, associations, and vocational training programs, Germany provides tailored opportunities for farmers and rural communities to enhance their skills and adopt sustainable practices. The emphasis on continuous education and skill development reflects Germany's proactive approach to adapting to changing economic and environmental landscapes.

In **Poland**, the focus on green skills training, environmental protection, and agritourism initiatives highlights the country's efforts to support rural development and sustainability. Programs like the "Young Farmer" initiative and the Academy of Young Entrepreneurs aim to cultivate entrepreneurial skills among youth, empowering them to drive innovation and economic growth in rural areas. By investing in education and training, Poland seeks to build a skilled workforce capable of addressing the challenges and opportunities of the future.



## 3. List of IPs within Lifelong Learning Institutions and AE in Europe

### 3.1 HIGGS - Association for Management and Conservation of Biodiversity in Agricultural Ecosystems

HIGGS, an initiative managed since its establishment by TYTO – Organization for Biodiversity in Agricultural Ecosystems, aims to reinforce Nonprofit Organizations (NGOs) operating in Greece, through educational and supportive programs and activities that are carried out at its premises. In 2020, "TYTO" was selected by HIGGS and successfully attended the 13th Accelerator cycle, a 6-month program, and then excelled in national and Balkan competitions co-organized by HIGGS and the Balkan Green Foundation.

While HIGGS primarily focuses on supporting social entrepreneurship and innovation, its programs and initiatives can indirectly contribute to the development of agro-entrepreneurship and intergenerational programs in Greece. By fostering a culture of entrepreneurship and providing support services to social entrepreneurs, HIGGS creates opportunities for individuals and organizations working in various sectors, including agriculture. Through capacity-building workshops, mentorship programs, and access to funding, HIGGS helps aspiring agro-entrepreneurs develop their ideas, build sustainable businesses, and contribute to the growth of the agricultural sector.

Moreover, HIGGS' emphasis on collaboration and knowledge exchange aligns with the principles of intergenerational programs. By bringing together individuals from different age groups and backgrounds, HIGGS facilitates learning, mentorship, and skill development across generations. This collaborative approach can be particularly beneficial in the context of agro-entrepreneurship, where experienced farmers can share their knowledge and expertise with younger generations, fostering innovation and sustainability in the agricultural sector. Overall, while HIGGS may not directly focus on agro-entrepreneurship or intergenerational programs, its initiatives create an



enabling environment that supports the growth and development of these areas in Greece.

## 3.2 Sustainable Agricultural Production Systems and Climate Change

The “Sustainable Agricultural Production Systems and Climate Change” is a Postgraduate Program offered by the Aristotle University of Thessaloniki (AUTH), one of the oldest and most prestigious institutions of higher education in Greece. This Postgraduate course is aimed at addressing the complex challenges facing agriculture in environments with constantly changing climate conditions. With a focus on sustainability and resilience, the program seeks to equip students with the necessary skills and knowledge to navigate the complexities of modern agricultural practices.

The objectives of the Postgraduate Program include specialization in sustainable agriculture production, strengthening research in relevant fields, and meeting the needs of both the public and private sectors for specialized personnel and educators. Through a comprehensive curriculum spanning four semesters, students delve into topics such as biometry, climate change, plant physiology, ecology, and research methodology in plantation management, among others.

The program's structure allows students to gain theoretical knowledge and practical skills through coursework during the first three semesters, while the final semester is dedicated to conducting a diploma research thesis. This hands-on approach ensures that students not only understand theoretical concepts but also have the opportunity to apply their knowledge to real-world agricultural challenges.

By offering specialized training and fostering research in sustainable agriculture and climate change adaptation, Aristotle University of Thessaloniki plays a vital role in advancing agricultural innovation and addressing the pressing issues facing the agricultural sector in Greece and beyond.

Known for its strong academic programs and research excellence, the Aristotle University of Thessaloniki plays a significant role in advancing knowledge and fostering innovation across various fields.



### 3.3 My Town Your Town

My Town Your Town (MTYT) is a European Project (Project Reference: 2018-3-CY02-KA205-001387) focuses on training projects aimed at enhancing youth employability, skills, and inclusion through intergenerational tourism development. The project is an initiative coordinated by the Cross Culture International Foundation Cyprus Ltd (Cyprus), along with the association of social promotion Petit Pas (Italy), the scientific association Digital Idea (Greece), Association Murtilla (Croatia) and the European Development Innovation Network EDInet (Czech Republic).

Through the My Town Your Town initiative, the foundation seeks to bridge generational gaps and promote cultural exchange and understanding within communities. By leveraging the rich diversity of experiences and perspectives across different age groups, the project aims to create inclusive tourism opportunities that benefit both young people and older generations.

With a focus on intergenerational collaboration, the MTYT project equips young individuals with the necessary skills and knowledge to thrive in the tourism industry while fostering a deeper appreciation for cultural heritage and diversity. By promoting intergenerational tourism development, the foundation aims to enhance social cohesion and economic opportunities in Cyprus and beyond.

Through its coordination of the MTYT project, Cross Culture International Foundation Cyprus contributes to building bridges between generations, promoting cultural exchange, and creating sustainable pathways to employment and inclusion for youth and older adults alike.

### 3.4 Intergenerational Mentoring and Learning in the Workplace

Intergenerational Mentoring and Learning in the Workplace (LearnGen) is an European Project initiative (Project Reference: 2020-1-BG01-KA202-079064) that was developed from 2020 to 2022. It was coordinated by the Bulgarian-Romanian Chamber Of Commerce And Industry Association from Bulgaria along with the





CARDET – Centre For Advancement Of Research And Development In Educational Technology Ltd from Cyprus, Eurotraining Educational Organization from Greece, Future In Perspective Limited from Ireland, Mindshift Talent Advisory Lda from Portugal and Neophytos Charalambous (Institute Of Development Ltd) also from Cyprus.

The LearnGen project aims to address segregation, discrimination, and social exclusion among marginalized workers, focusing on both older and younger generations. It recognizes the need for intergenerational learning (IL) in the workplace to bridge the gap between different age groups and enhance access to training and qualifications for all workers.

By promoting IL, LearnGen facilitates the exchange of skills, experiences, and knowledge between older and younger workers. It acknowledges that younger workers often lack the life experience and soft skills of older adults, while older workers may need support in acquiring digital skills and adapting to technological challenges. Through initiatives like reverse mentoring, where younger individuals teach older generations, LearnGen encourages mutual learning and acceptance of age differences as a business advantage.

The project's objectives include supporting elderly and young workers in developing core skills necessary for teaching and learning from each other, as well as overcoming skills mismatches between different age groups. It provides training materials and modules for VET providers, managers, HR professionals, and in-service trainers to design inclusive policies and programs. Additionally, LearnGen offers a training package for employees to become mentors, emphasizing work-based learning to address skills gaps and mismatches.

LearnGen's outcomes, including intergenerational learning curriculum, training packages, and e-learning platforms, serve as valuable resources for VET providers and low-skilled individuals. They promote strategies for social inclusion at the workplace and innovative learning approaches tailored to the needs of different generations. Through collaborative efforts and dissemination activities across partner countries, LearnGen contributes to creating dynamic, committed, and professional organizational environments that combat social exclusion and promote diversity and inclusion in the workforce.



### 3.5 Community gardens: Forward-looking learning centres for democratic values

Community gardens: Forward-looking learning centers for democratic values (GarDem) is an European Project that aims to turn community gardens into local learning centers for adult education. The project was developed from 2021 to 2023 and was coordinated by Nabolagshager AS (from Norway) along with KENTRO MERIMNAS OIKOGENEIAS KAI PAIDIOU and ORGANOSI GI from Greece, POLICY CENTER ASBL from Belgium, PROVINCIA DI LIVORNO SVILUPPO SRL from Italy and UAB Theoria from Lithuania.

The GarDem project is dedicated to transforming community gardens into local learning hubs for adult education, with a focus on fostering democratic attitudes, promoting civic engagement, and addressing climate change challenges.

Recognizing the imperative to increase adult participation in lifelong learning activities, as highlighted by the OECD and the EU Commission, GarDem proposes utilizing community gardens as spaces for guided activities, non-formal learning, and peer interactions. Through this initiative, participants will develop essential skills, critical thinking abilities, and environmental awareness.

In alignment with the objectives of lifelong learning institutions, GarDem aims to meet the evolving needs of citizens, NGOs, and CSOs by providing support schemes, training curricula, and methodologies for establishing forward-thinking learning centers within community gardens. By offering guidance on repurposing existing spaces into educational environments, GarDem responds to the growing demand for alternative informal educational activities across Europe. Moreover, the project seeks to strengthen democratic values, promote social inclusion, and combat democratic backsliding by empowering individuals and communities through education and civic participation.

GarDem's objectives include the development of support schemes, training curricula, and awareness-raising activities to promote environmental sustainability and civic engagement. Through participatory research, training programs, and pilot testing phases, the project collaborates directly with target groups and stakeholders to



design effective learning environments and methodologies. The implementation phases focus on research, e-course development, methodology refinement, pilot testing, and the establishment of a European network for knowledge sharing and collaboration.

The project anticipates significant impacts, including the training of adult participants and educators, the establishment of learning centers in community gardens, and the creation of a European network for collaborative initiatives. By providing comprehensive training materials, e-courses, and a blueprint for transforming gardens into educational centers, GarDem empowers individuals and organizations to promote lifelong learning, environmental sustainability, and civic engagement. The project's outcomes will resonate beyond its lifespan, benefiting trainers, youth entrepreneurs, and community members across Europe by fostering increased awareness, participation, and networking opportunities in the realm of adult education and agro-entrepreneurship.

### **3.6 Bonding – Facilitating intergenerational solidarity and learning through building friendships between youngsters and the elderly**

BONDING – Facilitating intergenerational solidarity and learning through building friendships between youngsters and elderly is the European Project with the project reference 2021-1-PL01-KA220-YOU-000028897. Developed between 2022 and 2024, the project was coordinated by PCG Polska Sp. z o.o. from Poland, Anziani E Non Solo Societa Cooperativa Sociale from Italy, Centre For Advancement Of Research And Development In Educational Technology Ltd-Cardet from Cyprus, Family And Childcare Center - Branch In Skopje From North Macedonia, Fundacion Intras from Spain And Kentro Merimnas Oikogeneias Kai Paidiou From Greece.

The BONDING project addresses the challenges faced by older and younger generations in Europe, exacerbated by the COVID-19 crisis, such as loneliness and disrupted community engagement opportunities. It emphasizes intergenerational learning and solidarity by empowering youth to engage in volunteer befriending services for the elderly, aiming to alleviate isolation and promote active aging.





Through the development and piloting of resources and tools, the project facilitates youth involvement in activities like weekly calls, home visits, and social events for elderly individuals. These befriending services foster intergenerational exchange and combat age stigma while promoting active citizenship among youth. Additionally, volunteering enhances young people's skills, sense of purpose, and civic identity, contributing to social cohesion and solidarity in communities.

The objectives of the BONDING project include enhancing young people's capacity to establish and maintain volunteering services for the elderly, fostering active citizenship, and promoting intergenerational learning and solidarity. The project's impact includes the creation of e-publications, e-learning courses, toolkits, and networking platforms to support youth engagement and combat social isolation among the elderly.

Overall, the BONDING project aims to increase youth participation in community engagement, support vulnerable community members, and foster intergenerational understanding and cooperation across Europe. Through befriending services and digital platforms, it promotes social prosperity and wellbeing by empowering youth and enhancing the inclusion of elderly individuals.

### 3.7 Education Voucher

The Educational Voucher, originally Bildungsprämie, is a project ran by the German Federal Ministry of Education and Research, and it aims to support adults in continuing their education and training.

This project, commonly offered by many universities in Germany, enables senior citizens to attend lectures and seminars either for free or at a reduced cost. It is open to individuals aged 60 and over, providing them with an opportunity to continue learning and engage in intellectual pursuits. The program fosters intergenerational exchange and cooperation between older and younger students.

In addition to university programs, the Education Voucher, known as the Bildungsprämie in Germany, offers financial assistance for participation in training courses or seminars. Covering up to 50% of the costs with a maximum subsidy of



500 euros per year, the Bildungsprämie aims to make lifelong learning more accessible and affordable for workers in Germany. Administered through counseling and certification centers nationwide, it provides guidance on eligible courses and aids with the application process.

The Bildungsprämie significantly supports individuals in their pursuit of further education and skills development, enhancing career prospects and personal growth. By facilitating lifelong learning opportunities, it contributes to the competitiveness of the German workforce and the country's economic advancement.

### 3.8 Senior Citizen Study Program

The Senior Citizen Study Program, originally known as Seniorenstudium, is a program offered in German universities that allows individuals aged 60 and above to participate in university lectures and seminars. While the specifics may vary by institution, the program generally offers senior citizens the opportunity to engage in academic pursuits either at no cost or with reduced fees. By participating in university-level courses, seniors can continue their education, explore new subjects, and enrich their intellectual lives.

One of the significant benefits of the Senior Citizen Study Program is its promotion of intergenerational interaction within the university setting. Older learners have the chance to share their life experiences and insights with younger students, fostering a dynamic exchange of ideas and perspectives. Likewise, younger students may benefit from the wisdom and perspective offered by their senior counterparts.

Overall, the Senior Citizen Study Program contributes to the diversity and inclusivity of university education in Germany, ensuring that individuals of all ages have access to lifelong learning opportunities.



## 4. Agricultural Innovation Platforms

Intergenerational programs and agricultural innovation platforms (AIP) are two complementary approaches that together enrich the agricultural landscape, fostering collaboration, knowledge exchange, and sustainable practices.

Intergenerational programs serve as the cornerstone of agricultural development, emphasizing the importance of interpersonal connections and shared learning experiences across different generations. These programs facilitate dialogue, mentorship, and skill development, enabling individuals to leverage their collective wisdom and experiences for the benefit of the entire agricultural community.

On the other hand, innovation platforms provide a technological framework for harnessing creativity, experimentation, and problem-solving and can be integrated within the agricultural sector. These platforms offer tools, resources, and collaborative spaces where individuals can explore new ideas, co-create solutions, and adapt to emerging challenges and opportunities (AF Bureau, 2020).

By integrating AIP, agricultural stakeholders can unlock new synergies and possibilities for growth and sustainability. Intergenerational programs equip innovation platforms with diverse perspectives, traditional knowledge, and real-world insights, enriching the innovation process and ensuring that technological advancements are rooted in the needs and realities of agricultural communities.

There are several examples of innovation platforms utilized in agriculture, especially in Africa (Youdeowei et. Al, 2016), and detailed accounts of case studies on the topic can be found in the literature (Cadilhon et al., 2016).

Conversely, innovation platforms enhance intergenerational programs by providing access to cutting-edge technologies, data analytics, and digital resources that amplify the impact of intergenerational collaboration (. Through AIP, participants in intergenerational programs can explore novel approaches to agricultural production,



resource management, and market integration, driving continuous improvement and resilience across the agricultural value chain.

In summary, the integration of intergenerational programs and innovation platforms represents a powerful driver for positive change in the agricultural sector. By fostering collaboration, creativity, and shared learning, these complementary approaches enable agricultural communities to thrive in a rapidly evolving world, ensuring a sustainable future for generations to come.

## 4.1. The Case of Yatenga Province in Northern Burkina Faso

Agricultural productivity in Africa is lower compared to other developing regions and needs to be improved to adapt to changing production environments. Hence, Agricultural Innovation Platforms (AIP) have the potential to become spaces that bring together different stakeholders to share knowledge and find solutions to common problems and be effective in improving production and income for small rural producers in Africa.

A study conducted by Teno & Cadilhon (2016) aimed to determine if the Volta2 project's AIPs had a positive effect on improving crop and livestock production in four villages in Burkina Faso. The Volta2 project was a three-year initiative launched in 2010 to improve rainwater management and small dams in Burkina Faso and Ghana, to reduce poverty and improve the resilience and means of subsistence for beneficiaries. The project focused on four value chains: black-eyed beans, corn, sheep, and poultry, and used an AIP as the main development tool to achieve its targets of improved access to inputs, credit, markets, and information, as well as increased production and improved water and soil management. The AIP brought together farmers and other stakeholders to share knowledge and experience through innovative approaches. The study aimed to determine the impact of the Volta2 project's AIP on crop and livestock production in four villages in Burkina Faso. The region has a Sudano-Sahelian climate with a long dry season and a short wet season and is characterized by low and irregular rainfall, erosion leading to soil fertility loss, and a lack of fauna. The main crops are black-eyed beans, corn, millet, and sorghum,



and the main livestock include sheep, goats, and poultry. The upstream stakeholders in the value chains are input and agricultural service suppliers, while the downstream stakeholders are mainly traders. The marketing streams in the region are either direct sales between farmers and rural households or a modular distribution mode with small local entrepreneurs handling input distribution, product collection and transformation, and marketing links with urban wholesalers or other rural households.

The outcomes of the study are listed below as bullet points:

- Joint planning of activities by value chain stakeholders through the AIP contributed significantly to improving agricultural production.
- The AIP facilitated closer working relations and information exchange among members in the same village, enabling them to solve shared problems together.
- AIP members learned the importance of maintaining connections with various partners and stakeholders, such as microcredit institutions, livestock and agricultural services, and veterinary services, and how these connections can be mutually beneficial.
- Through the AIPs, farmers learned to prepare for the sale of their products in advance by contacting traders and understanding their needs, reducing uncertainty around product market values at harvest time and improving production.
- AIP members also learned to plan their activities with institutions such as the Ministry of Agriculture to access inputs and other useful services.
- The AIPs introduced farmers to new technologies and techniques, such as improved seed and irrigation systems, which they may not have been aware of or had access to otherwise.
- The AIPs also provided training on topics such as business management, market access, and credit.
- The AIPs helped farmers to develop group selling strategies, which enabled them to negotiate better prices for their products and increased their bargaining power.
- The AIPs facilitated the creation of networks and relationships among farmers and traders, enabling them to share information and resources and improving their ability to access markets.



## 4.2. The Case of Lifelong Learning for Farmers in the Eastern German state of Brandenburg

In a study by von Muenchhausen & Haering (2012), it was found that lifelong learning approaches are effective in fostering agricultural innovations and improving the resilience of the sector. The research, which was conducted in the north-east of Germany, involved three transdisciplinary projects and a farmer-university network facilitated by Eberswalde University. The network included agricultural farms, agricultural organizations, and federal research institutes. The results showed that the success of joint learning projects depends on various factors, including the relevance and quality of offers, professional management of the network, and facilitation of activities. It is important for all involved parties to see themselves and work together as equal partners in order for the farmer-university network to function effectively.

The authors stress the fact that conditions and requirements for agricultural production are changing globally, including in the European Union, due to factors such as population growth, climate change, and shifts in dietary preferences. Farmers must adapt their production and management systems to maintain the competitiveness of their businesses and address sustainability and resource efficiency issues. Agricultural information, knowledge, and the ability to learn are crucial to successfully navigate and adapt to these changes, and agricultural knowledge and information systems exist to facilitate the exchange of knowledge between farmers, technology developers, researchers, and other experts. Effective knowledge exchange requires interested participants, relevant and appropriate knowledge, and a supportive environment for the exchange to take place.

The goal of the research presented in this paper is to understand the impacts of changing conditions on farms in the Federal State of Brandenburg, a region in northeastern Germany, and to develop and evaluate strategies for building agricultural knowledge and innovation networks for organic farming. The research consists of several action research projects and monitoring and evaluation activities



using qualitative and quantitative social science research tools. The Eberswalde University for Sustainable Development (HNEE) is an independent non-profit institution focused on sustainability that is facilitating the creation of a farmer-university network in the region. The research presents the first results from three projects with different orientations that contribute to the network, including data from an initial evaluation round and a preliminary identification of the factors that enable or inhibit the success of farmer-university networks and lifelong learning initiatives. The paper discusses the lessons learned so far from HNEE's involvement in farmer-university networks.

The findings of the study can be listed as follows:

- The content of learning opportunities must be perceived as important and useful to farmers for them to be effective. Farmers are primarily concerned with economic pressures and may not prioritize topics such as climate change adaptation.
- Lifelong learning initiatives in the agricultural sector need to be relevant to farmers' needs and trusted by the participants to be effective. These initiatives can help engage farmers who may not normally be reached by extension services or industry. Habits and traditional routines can be challenges in implementing innovative ideas in farming, but lifelong learning can encourage people to try new approaches. The success of these initiatives also depends on the quality of the information and the reliability of the network organization.
- Students' research projects can be integrated into the farming industry and contribute to the success of cooperative projects. Such partnerships can lead to the development of new innovative ideas and technologies, with around 30% of partners expressing new innovation needs after completing a project and about 50% returning with new ideas within a year. Universities and transdisciplinary research projects, including Bachelor and Master projects, can be valuable in these networks.

Discussing these findings, the authors propose the following steps to be taken:

First, the shift towards more networked approaches, particularly through farmer-university networks, is necessary to address the complex challenges facing agriculture and to enhance the resilience of agricultural systems. Universities can



play a key role in implementing these network-driven approaches, and lifelong learning can help engage farmers who may not normally participate in these initiatives. The success of these projects depends on factors such as the relevance and quality of the learning offerings, the professional management of the network, and the facilitation of activities. Trust is also crucial for the transfer of knowledge and the adoption of innovative ideas and technologies. Habits and attitudes towards trying new approaches can also be barriers to innovation in agriculture, but lifelong learning can help overcome these challenges. The integration of students' research projects can also be beneficial for farmers, with approximately 30-50% of cooperation partners expressing new innovation needs or returning with new ideas within a year of completing a project.

Second, the authors discuss limiting and enabling factors of farmer-university networks. They argue that the establishment and functioning of farmer-university networks can foster innovation in agriculture by facilitating the sharing of knowledge. They also note that several factors are important for the success of these networks, including farmers' interest in innovations, their information needs, the structure of the farm, professional management of the network, the use of appropriate learning methods, and trust between farmers and researchers. They suggest that transdisciplinary approaches and the inclusion of farmers as active partners in research projects can enhance trust and increase participation in the network, particularly among small and part-time farmers.

Third, a discussion on better measures for evaluation in innovation processes and networks are given. They argue that evaluations of farmer-university networks should consider the level of active engagement of farmers in network activities, as well as the intensity of cooperation between farmers and researchers. They suggest using formal evaluation procedures, such as surveys and interviews, to gather data on the diffusion and implementation of innovations in the region. They propose using tools for network analysis to examine the linkages and intensity of information flow within the network.

Finally, they conclude that lifelong learning should play a much bigger role and it is necessary for the farming sector to adapt to the current challenges it faces, and that effective lifelong learning strategies involve strong partnerships and transdisciplinary





networks that focus on knowledge exchange and innovation. These strategies also require reliable organizational structures that provide facilitation. It is argued by the authors that farmers need access to ongoing learning opportunities to stay current with new developments, identify new opportunities, and adapt to changing conditions. This is particularly important given the complex challenges facing the agricultural sector. Lifelong learning strategies that involve strong partnerships and transdisciplinary networks focused on knowledge exchange and innovation can be effective in supporting this learning. However, it can be difficult to engage some farmers in these types of activities, and it is important to use methods that are tailored to different levels of professional education and areas of interest. Traditional methods of education and training may need to be reevaluated to ensure that farmers can participate in lifelong learning. Mixed groups of farmers can be both challenging and beneficial, as successful and innovative farmers can contribute valuable knowledge to the group and serve as multipliers of innovative know-how.

### **4.3. The Case of The Integrated Agricultural Research for Development (IAR4D)**

The Forum for Agricultural Research in Africa (FARA) is a continental organization, which was established in 1997 by the Sub-Regional Organizations, it coordinates and advocates for agricultural research for development (AR4D) and serves as the technical arm of the African Union Commission on matters related to agriculture science, technology, and innovation. In a detailed report titled “Agricultural Innovation Platforms: Framework for Improving Sustainable Livelihoods in Africa” (Oluwole, et al., 2017), the authors extensively discuss, among other things, the concept of Agricultural Innovation Platforms (AIPs). As a precursor for the development of these platforms and to address the extensive challenges of agriculture in African communities, they summarize the concept of IAR4D (Innovation Systems in Agricultural Research for Development) in their report.

The IAR4D is a multi-stakeholder approach to addressing the complex challenges in agricultural research and development in order to improve the livelihoods of stakeholders, particularly smallholder farmers. It involves ongoing collaboration and



partnerships to identify, analyze, and prioritize challenges and find and implement solutions using feedback and reflection mechanisms. The IAR4D creates a network of actors that facilitates learning and addresses technical, social, and institutional constraints to growth in AR4D. The goal of IAR4D is to generate innovative solutions rather than just research products or technologies, and it may also result in fundamental changes to policy and institutional frameworks. It is an iterative process that involves integrating the technological, natural resource management, policy, and institutional dimensions in resolving development challenges and finding innovative solutions in response to changing market and policy conditions. It involves engaging policy and market actors and fostering systemic linkages among actors in diverse contexts, empowering actors in technical, social, and economic terms. The IAR4D is a framework for engagement and partnership among multi-stakeholder actors along the commodity value chain to share and apply knowledge and information to address challenges increase productivity and enhance livelihoods.

The principles of IAR4D can be summarized as follows (Oluwole, et al., 2017, p. 23-25):

- IAR4D integrates the perspectives, knowledge, and actions of different stakeholders around a common theme or "entry point."
- The framework enables engagement by actors around a mutually accepted theme as an "entry point."
- IAR4D is a mutual and interactive learning process, with stakeholders learning from each other and from their joint experiences.
- Learning takes place at the individual, organizational, and institutional levels.
- IAR4D integrates a holistic analysis of change, considering economic, environmental, social, and technological aspects.
- The approach emphasizes the importance of context and the need for flexibility and adaptability.
- IAR4D integrates gender and social equity considerations.
- The approach promotes the use of locally available resources and the strengthening of local capacities.
- IAR4D integrates the use of appropriate methodologies and approaches, including action research, participatory approaches, and gender-responsive approaches.



The report also delves deep into the principles for establishing agricultural innovation platforms. Agricultural innovation platforms are established to support research and development in the agriculture industry. These platforms are suitable for a range of agricultural technologies, from basic to complex. Participating in innovation platforms allows farmers to communicate and learn from others and negotiate for sustainable improvements in agricultural production and productivity through access to technical information and social interaction with various partners in the agricultural value chain, such as finance, input supply, agricultural extension, value addition, capacity strengthening, and markets. Agricultural innovation platforms serve as a forum for fostering interactions and learning among groups of stakeholders with shared interests. Therefore, the principles for establishing and managing these platforms should consider factors that promote successful interaction and collaboration among diverse, but equal, partners. In this regard, they propose (p. 39) seven core principles which govern the establishment of agricultural innovation platforms.

- **Type:** The type of agricultural innovation platform should be determined at the start of its creation. The platform can operate at a village, district, regional, or national level. There are two main types of innovation platforms that can be found at each level: strategic and operational platforms.
- **Focus:** The purpose of an agricultural innovation platform is to support the development and implementation of improved agricultural technologies and innovations within a specific commodity chain. The scope of the platform can be defined based on themes, geographic location, sector, or value chain. It is common for the focus of an agricultural innovation platform to be based on geographic location and sector.
- **Engagement:** The engagement of stakeholders is a key aspect of agricultural innovation platforms. It is important to identify and involve all stakeholders with a shared interest in the focus of the platform, ensuring that each member has something to contribute and something to gain from participation. These stakeholders should work together as partners, each taking on complementary tasks in the development, sharing, and implementation of new ideas, technologies, and knowledge for the benefit of the community. This collaborative approach creates a win-win situation for all involved.



- **Agenda:** The goals and objectives of the innovation platform should be clear and geared towards improving the social and economic well-being of all involved parties through the focus on a specific commodity or value chain.
- **Mode of operation:** The agricultural innovation platform should have a clear set of guidelines for making decisions, resolving conflicts, and allowing new organizations to join. These guidelines ensure that the platform is flexible and adaptable, with a membership that changes and brings in relevant expertise as needed. Stakeholders can participate or leave as they choose, and the roles of actors may change over time as the focus of the platform shifts in response to changing agricultural practices and policies.
- **Mix of skills:** Agricultural innovation platforms bring together various skills and expertise in order to promote innovation in technology, processes, and social-organizational arrangements along the value chain. These platforms foster strong partnerships and bring together actors with complementary skills to support producers and service providers. The combination of scientific, technical, managerial, and entrepreneurial skills is necessary for ensuring that the outcomes of the platform are beneficial to all involved.
- **Involvement of research:** Innovation platforms should involve researchers to continuously provide research outputs that can improve agricultural technologies, natural resource management, markets, and gender equity. This research can include both technical and socio-economic studies.

## 4.4 Lessons Learned from the Case Studies

In conclusion, the case studies outlined in this report provide valuable insights into the role of innovation platforms in agricultural development and the importance of lifelong learning for farmers facing diverse challenges. Innovation platforms serve as collaborative spaces where stakeholders from various sectors converge to address agricultural issues and devise solutions. These platforms foster the implementation of projects aimed at enhancing agricultural practices and improving the livelihoods of smallholder farmers and other actors across the value chain. The knowledge and expertise acquired through these initiatives are crucial for the sustainable



advancement of the agriculture sector and the overall well-being of communities involved.

The agriculture sector is dynamic, continually evolving with emerging technologies and practices while older ones become obsolete. Therefore, it is imperative to reinforce the knowledge and expertise gained through innovation platform projects with lifelong learning efforts. Lifelong learning encompasses continuing education, training, and information exchange through networking and collaboration. It ensures that the insights acquired through innovation platform projects are integrated into ongoing practices and decision-making processes, enabling stakeholders to remain abreast of the latest developments and adapt to emerging challenges.

The case studies underscore the multifaceted benefits of innovation platforms and lifelong learning initiatives. In Burkina Faso, agricultural innovation platforms empower farmers with technical and business skills, reduce uncertainty, improve production, and facilitate market access through networking. Lifelong learning efforts in Brandenburg emphasize the importance of relevant content, networking, and trust-building among farmers and researchers. The integrated agricultural research for development (IAR4D) approach by FARA emphasizes the principles of engagement, mutual learning, and the involvement of diverse stakeholders along the agricultural value chain.

To summarize, the lessons gleaned from these case studies highlight the pivotal role of innovation platforms and lifelong learning in agricultural development:

- Innovation platforms empower farmers, reduce uncertainty, and foster market access through networking.
- Lifelong learning initiatives must be relevant, trustworthy, and tailored to farmers' needs to be effective.
- Farmer-university networks and transdisciplinary approaches enhance knowledge exchange and innovation in agriculture.
- Lifelong learning is essential for farmers to adapt to evolving challenges and embrace innovative practices.
- The principles of engagement, mutual learning, and interdisciplinary collaboration are critical for the success of agricultural innovation platforms.



In conclusion, the synthesis of these case studies underscores the transformative potential of innovation platforms and lifelong learning in advancing agricultural development and enhancing the resilience of farming communities. By embracing collaborative approaches and prioritizing ongoing learning, stakeholders can navigate complex challenges and unlock new opportunities for sustainable agricultural growth.

## Conclusion

In summary, the compilation of 60 sources presented in this report underscores the significance of intergenerational collaboration in advancing agricultural innovation, sustainability, and socio-economic development. Through IPs, stakeholders are able to harness the collective wisdom, experience, and creativity of both seasoned AE and aspiring agro-entrepreneurs, addressing pressing challenges and seizing emerging opportunities in the agricultural landscape.

By facilitating dialogue, knowledge exchange, and skill development, IPs act as catalysts for transformative change, enabling individuals and communities to adapt to evolving market dynamics, technological advancements, and environmental considerations. The diverse range of topics covered in the sources reflects the multifaceted nature of intergenerational cooperation in agriculture, encompassing lifelong learning, entrepreneurship, biodiversity conservation, and climate change resilience.

Additionally, by integrating AIPs, stakeholders unlock new synergies and possibilities for growth and sustainability, enriching innovation processes with diverse perspectives and real-world insights. The integration of intergenerational programs and innovation platforms represents a powerful driver for positive change in the agricultural sector, enabling communities to thrive in a rapidly evolving world and ensuring a sustainable future for generations to come.

Looking ahead, it remains imperative to prioritize and invest in intergenerational programs that empower individuals of all ages to contribute to a thriving and sustainable agricultural sector. Embracing innovation, collaboration, and inclusivity will allow us to build resilient agricultural communities capable of navigating the challenges and opportunities of the 21st century and beyond.



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