



## **INNOECOFOOD - Eco-innovative technologies for improved nutrition, sustainable production and marketing of agroecological food products in Africa**

Grant Agreement no: 101136739

### **Deliverable D1.10**

### **Relevant project identification and established collaborations**

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<b>Project co-funded by the European Commission within the Horizon Europe Programme</b>	
<b>Dissemination Level</b>	
<b>PU</b> Public	x
<b>SEN</b> Sensitive, only for members of the consortium (including the Commission Services)	



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## 1. Objective

This Deliverable identifies collaborations with relevant projects outside the consortium, enhancing the impact of INNOECOFOOD. For this purpose, Partners were asked to identify ongoing collaborative synergies with external projects aligned with INNOECOFOOD's objectives and further summarize the nature of the collaborations. At month-6, 13 out of the 20 Partners identified ongoing collaborations with other national or international projects related to INNOECOFOOD, totalizing 16 projects (Deliverable 1.8). At month-12, 15 out of 20 Partners identified new collaborations, totalizing 29 projects (Deliverable 1.9). Now, at month-18, 16 out of 20 Partners identified collaborations, totalizing 33 projects.

The established collaborations identified at month-18, were focus on the key areas:

- **Sustainable Aquaculture and Fisheries:** Many projects aim to improve aquaculture practices through renewable energy, breeding programs, traceability systems, and climate resilience. Examples include the "CeREA" project for renewable energy in aquaculture and "SUREFISH" for enhancing Mediterranean fish authenticity and traceability.
- **Innovative Food Systems and Nutrition:** Efforts are directed towards enhancing food systems for improved nutrition and sustainability. Projects such as "Small Fish for Small Children" tackle malnutrition, while others like "HEALTHYNSECT" focus on utilizing insects for food and feed.
- **Circular Economy and Bioeconomy:** Several collaborations emphasize waste reduction, co-product valorization, and the development of biobased solutions. For example, "Marine Co-Products Valorization Platform" promotes circularity in the blue bioeconomy. Project "Natur-Ext" is also focused on the use of renewable biological natural resources to boost circular economy and ecological sustainability.
- **Climate-Smart Technologies:** The development and implementation of technologies that mitigate climate impacts are evident in projects like "AIRTEA," which improves post-harvest processes with climate-smart technologies.
- **Agroecology and Sustainable Farming:** Projects such as "D4AgEcol" and "Agroecology-TRANSECT" focus on transitioning to agroecological farming practices, promoting methods that align with environmental and societal sustainability.
- **Educational and Consumer Awareness:** Initiatives like "Food4Thought" aim to change consumer perceptions and educate stakeholders about emerging food technologies, including aquaculture and insect farming. The project "Acuiconecta" is also aiming to reinforce the connection between research, industry and society for the promotion of sustainable, productive and resilient aquaculture. Project "Change Makers" will design a multi-component sustainable health intervention adapted to schools, healthcare workers, community members and urban planners.
- **Geographic Indication:** The project "Geographical Indications Local Foods" aims to link the geographical indication of foods with food safety supporting both consumer health and local producers.
- **Development of new materials:** The project "AERO2cycle" is working on the development of new materials using residues from fishery industry, as innovative solutions in circular economy.

We expect that such collaborations will increase the impact and visibility of INNOECOFOOD objectives and findings by reinforcing network and resource sharing among participating entities and improving dissemination and exploitation of project results through expanded partnerships and shared dissemination channels.



## 2. Established collaborations

Table D. 1.10 – Identification of relevant projects and established collaborations

INNOECOFOOD partner(s)	Collaboration with...								
	Project's name	Funding source	Leading institution	Country	Start and end date	Project summary	Partner's role within the project	Which WP of INNOECOFOOD relates more to the project?	Website (if applicable)
1. CIIMAR 13. B2E	InsectERA	PRR	Ingredient Odyssey, SA	Portugal	01/01/2023 - 31/12/2025	InsectERA aims to enable the industrialization and commercialization of innovative products based on insects, both in the food sector (for animal and human consumption) and in other industries (cosmetics or bioplastics) as well as in the innovative field of bioremediation. The Mobilizing Agenda covers the entire innovation cycle, from R&D to the manufacturing and marketing of products in the market, relying on technologically advanced production. It represents a set of projects and	PI in CIIMAR	WP 3	<a href="https://www.insectera.pt/">https://www.insectera.pt/</a>



						business initiatives aimed at promoting the circular economy and leveraging the development of new high-value-added products, services, and solutions.			
<b>1. CIIMAR</b>	CleanFish	FCT	IST-ID	Portugal	01-03-2023 - 28-02-2026	The project aims to disrupt the traditional processes involved in obtaining of fish products using cellular agriculture strategies based on innovative drivers.	Partner	WP 7	N/A
<b>1. CIIMAR</b>	Blue BioTech - Project FOOD WP4	PRR	COFISA	Portugal	01-01-2023 - 31-12-2025	The project aims to develop new, healthy, nutritious and environmentally sustainable canned products, using new ingredients and new packaging formats, giving them differentiating characteristics.	Partner	WP 6, 7	N/A
<b>2. KMFRI, 16. INNOTECH. 17. ISE</b>	SolCoolDry	German Federal Ministry for Agriculture and Nutrition	Fraunhofer ISE	Kenya	01-09-2018 – 31.08.2024	Development of a Solar Cooling and Drying Technology for the Milkfish (Chanos chanos) and Kimarawali (Stolephorus delectatus)	Community recruitment and capacity building in value addition	WP 2, 6, 8	<a href="https://www.ise.fraunhofer.de/en/research-projects/solcooldry.html">https://www.ise.fraunhofer.de/en/research-projects/solcooldry.html</a>
<b>2. KMFRI</b>	WorldFish Asia Africa Blue Tech	UK-AID	World fish and KMFRI	Kenya	1/3/2023-31/12/2030	The project has 4 work Packages. WP1: Digitizing small scale fisheries	County WP2 lead on IMTA	WP 3	<a href="https://worldfishcenter.org/project/asia-africa-bluetech-superhighway">https://worldfishcenter.org/project/asia-africa-bluetech-superhighway</a>



	Superhighway (AABS)					WP2 : integrated Multitrophic Aquaculture WP 3 : Post harvest loss reduction WP 4. Conservation of marine resources			
<b>3. TAFIRI</b>	AquaEco hatcheries	USADF	N/A	Tanzania	01-01-2024 - 31-12-2026		Partner	WP 2	N/A
<b>4. Makerere University</b>	Small Fish For Small Children	International Fund for Agricultural Development	University of Bergen (Norway)	Uganda	2020 - 2025	The project is funding a Zambian PhD student, co-supervised by staff from both institutions. This project addresses the nutritionally unique, but under-utilized small fish that are micro-nutrient laden, and are capable of combating the triple burden of malnutrition; undernutrition, micronutrient deficiencies and obesity. The project aims to examine the role of small fish in the diets of children in low-income households in Northern Uganda.	Research and student Co-Supervision	WP 7, 8	<a href="http://www.leap-agri.com/">http://www.leap-agri.com/</a>  N.B. The project is anchored within a bigger project whose website is given above.
5. CSIR-FRI	NATUR-EXT	Interreg MAC-EU	ITC, ES.	Spain	28-01-2025 - 27-01-2028	This project focuses on renewable biological natural resources as a source of extraction compounds to boost the industrial, scientific and technological sectors, within a framework of	Third country partner - Co-PI in CSIR-FRI	WP 6, 7	



						circular economy and ecological sustainability”			
<b>5. CSIR-FRI</b>	ACUICONNECT A	Interreg MAC-EU	ITC, ES	Spain	28-01-2025 - 27-01-2028	The project aims at strengthening the connection between research, industry and society for the promotion of sustainable, productive and resilient aquaculture	Third country partner - Co-PI in CSIR-FRI	WP 7	
<b>7. CLAR</b>	CENTRE FOR RENEWABLE ENERGY IN AQUACULTURE (CeREA)	NORAD - Norwegian Embassy in Cairo	WorldFish	Egypt	01-06-2023 - 31-05-2027	The main objective is to improve, test and scale up innovative renewable energy solutions that enable fish producers, processors and other actors in the fish value chain in Egypt to increase their productivity and income. The deployment of appropriate renewable energy technologies for aquaculture will support economic growth and the animal protein needs of the Egyptian consumer. This is done alongside effective training and planning in order to expand the growth of the country’s aquaculture sector in a sustainable and climate-friendly manner..	Partner	WP 2, 3, 8	<a href="https://worldfishcenter.org/project/center-renewable-energy-aquaculture-cerea">https://worldfishcenter.org/project/center-renewable-energy-aquaculture-cerea</a>



<b>7. CLAR</b>	Bringing next generation breeding into aquaculture	STDF - ASRT	CLAR & Maryland Univ. USA	Egypt	01-11-2019 : 31-08-2024	Establishing a fish breeding program through which three generations of improved fish are selected that are resistant to climatic conditions, especially cold conditions.	PI in CLAR	WP 3, 6	
<b>7. CLAR</b>	Fostering Mediterranean Fish Ensuring Traceability and Authenticity (SUREFISH)	PRIMA - STDF - ASRT	CLAR	Egypt	01-11-2020 : 30-11-2024	Deploy innovative solutions to achieve clear traceability of traditional fish in Mediterranean countries and confirm its authenticity and thus prevent fraud. Enhance innovation in supply chains and consumer confidence in Mediterranean fish.	PI in CLAR	WP 3	<a href="https://mel.cgiar.org/projects/surefish">https://mel.cgiar.org/projects/surefish</a>
<b>8. UDSM</b>	PROFISHBLUE	WorldFish	ABIST	Tanzania	01-04-2024 – 30-10-2024		Implement the Nutrition component of PROFISHBLUE Project in Tanzania	WP 3, 5	N/A
<b>9. JKUAT 2. KMFRI</b>	AIRTEA	ACP INNOVATION FUND-EU	FARAA/ASAR ECA/EAFF	Kenya	01-02-2023 - 01-08-2024	The project aims at Upgrading Silver Cyprinid ( <i>Rastrineobola argentea</i> ) value chain through multi-stakeholder partnerships and novel climate-smart postharvest processing technologies and practices for improved rural livelihoods	Systems development, evaluation of performance, and development of value added	WP 2, 6	<a href="https://www.jkuat.ac.ke/jkuats-airtea-project">https://www.jkuat.ac.ke/jkuats-airtea-project</a>



							products , and establishm ent of Multistake holder Innovation Platforms		
<b>9. JKUAT</b>	2. Legume Centre of Excellence in Food and Nutrition Security	VLIR- UOS	JKUAT	Kenya	January 2016- August 2027	The project was established at JKUAT to spearhead multi- disciplinary research in legumes from farm to fork	Research, masters and Student training, collaborati on with local partners	WP 5, 6	<a href="https://www.jkuat.ac.ke/centres/lcefons/?page_id=565#:~:text=The%20programme%20will%20focus%20on,on%20human%20nutrition%20and%20health.">https://www.jkuat.ac.ke/centres/lcefons/?page_id=565#:~:text=The%20programme%20will%20focus%20on,on%20human%20nutrition%20and%20health.</a>
<b>9. JKUAT 4. Makerere University 12. ICIPE</b>	HEALTHYNSECT: Insect farming for health and livelihoods	Ministr y of Foreign Affairs of Denmar k (danida )	JKUAT	Kenya	01-04-2020 – 30-12-2024	The overall aim of HEALTHYNSECT is to generate new knowledge for accelerating rural insect farming and insect consumption in Africa for improved nutrition, health, and livelihoods.	Farming of insects; product developme nt; consumer testing; efficacy studies on insect products on human health	WP 2, 5, 6, 7, 8	<a href="https://nexs.ku.dk/english/research/nutrition-health/sustainable-nutrition-and-health/healthynsect/">https://nexs.ku.dk/english/research/nutrition-health/sustainable-nutrition-and-health/healthynsect/</a>
<b>11. DENIZLI</b>	Geographical Indications Local Foods	Ministr y Of Industr y and Technol ogy	DENIZLI GOVERNORS HIP	Turkey	11.10.2023 – 04.08.2024	This project links geographical indication (GI) foods with food safety by conducting analytical tests to verify their unique qualities and ensure	Leading partner	NA	<a href="https://geka.gov.tr/tr/haber/denizli-nin-cografi-isaretli-urunleri-avrupa-yolunda">https://geka.gov.tr/tr/haber/denizli-nin-cografi-isaretli-urunleri-avrupa-yolunda</a>



		South Aegean Development Agency				compliance with safety standards, supporting both consumer health and local producers.			
<b>12. ICIPE</b>	NESTLER HORIZON-CL6-2021-FARM2FORK-01-18	European Commission	SYNELIXIS LYSEIS PLIROFORIKIS AUTOMATIS MOU & TILEPIKOINON ANONIMI ETAIRIA	Greece	01-10-2022 – 31-09-2025	NESTLER is a joint project between the EU and African member states designed to promote One-Health sustainable partnership. The project aims to bring together interdisciplinary technological advances to effectively monitor the well-being of animals, plants, and humans in a holistic approach. The novelty of the NESTLER project lies in the development and integration of advanced remote sensing technologies.	Coordinate the work package on insect protein processing technology and contribution to circular economy.	WP 3, 5, 6, 7, 8	<a href="https://nestler-project.eu/">https://nestler-project.eu/</a>
<b>12. ICIPE</b>	FASA	NORAD	WorldFish	Malaysia	01-07-2022 – 30.06.2027	The project aims to develop low-cost, highly nutritious fish feeds based on novel ingredients and enable 5,000 smallholder fish farmers in 3 African countries [ Nigeria, Zambia, and Kenya] to test and adopt these ingredients and feeds, leading to increased income, improved food	Project coordinator in Kenya	WP 3, 5, 6, 7, 8	<a href="https://worldfishcenter.org/project/development-and-scaling-sustainable-feeds-resilient-aquatic-food-systems-sub-saharan-africa">https://worldfishcenter.org/project/development-and-scaling-sustainable-feeds-resilient-aquatic-food-systems-sub-saharan-africa</a>



						security, and reduced waste and pollution.			
<b>12. ICIPE</b>	PROTeinAfrica	ACIAR	ICIPE	Kenya	01.07.2021 – 30.06.2025	Leverage public-private partnerships to scale up utilization and profitability of insect-based feed innovations along poultry, pig, and fish value chains through community-led agro-enterprises for improved feed supplies in a gender equitable manner in Kenya, Rwanda, and Uganda.	Principal Investigator [PI]	WP 3, 5, 6, 7, 8	N/A
<b>12. ICIPE</b>	N/A	IKEA Foundation	ICIPE	Kenya	01.11.2022 – 30.10.2024	Scaling regenerative black soldier fly farming innovations with vegetable push-pull cropping systems for One Health in Rural Kenya, Rwanda and Uganda.	Co-PI	WP 3, 5, 6, 7, 8	N/A
<b>12. ICIPE</b>	BRIANS	Global Affairs Canada	CIAT	Kenya	01.02.2023 – 31.01.2028		Co-PI	WP 3, 5, 6, 7, 8	N/A
<b>12. ICIPE</b>	N/A	Novo Nordisk Foundation	DanChurchAid	Kenya	01-06-2024 – 31-05-26	Exploring the potential for climate-responsive and locally led production of novel & super foods for improved nutrition in protracted crisis contexts	Co-PI	WP 4, 5, 6, 7, 8	N/A
<b>13. B2E coLAB 1. CIIMAR</b>	Marine Co-Products Valorization Plataform	PRR	B2E CoLAB	Portugal	01-01-2023 - 31-12-2025	The project aims to create a Co-products Valorization Platform to help the main stakeholders of the blue bioeconomy to identify new value chains, new	Leader	WP 7	www.fishmatter.pt



	WP 8					actors in the sector and the most recent valorization technologies, thus defining exploitation and circularity strategies. The project also aims to find adopters of these technologies, identify or help to create companies transforming co-products, or simply find already developed technology that can be freely used to generate value.			
<b>13. B2E coLAB</b>	Blue BioTech - Project FEED WP 6	PRR	SEBOL	Portugal	01-01-2023 - 31-12-2025	Through pioneering approaches and cutting-edge technological solutions, the Pep4Fish project aims to drive aquaculture towards a more sustainable, healthier and more efficient future.	Partner	WP 6, 7, 8	<a href="https://www.pep4fish.pt/">https://www.pep4fish.pt/</a>
<b>13. B2E coLAB</b>	Blue BioTech - Project ALGA WP 5	PRR	NECTON	Portugal	01-01-2023 - 31-12-2025	It aims to provide the algae sector with competitive advantages by fuelling novel sustainable products, optimizing techno-scientific processes, and introducing innovative services.	Partner	WP 4	<a href="https://www.algaevertical.com/algaeverticalsubprojects/">https://www.algaevertical.com/algaeverticalsubprojects/</a>
<b>13. B2E coLAB</b>	Food4Thought: Deconstructing Myths Around	Internal Project Egas Moniz School	Egas Moniz School of Health & Science	Portugal	01-09-24 – 01-09-25	Project Food4Thought aims to design, implement and evaluate the effectiveness of an intervention that can	Partner	WP 8	



	Aquaculture and Insects for Food	of Health & Science				contribute to change attitudes and beliefs of high school and college students regarding food sectors with a negative public perception, specifically aquaculture and insects as food. Both these sectors are expected to grow in the next decade, and it's imperative that future consumers' awareness is improved, to ensure higher success.			
<b>13. B2E coLAB</b>	AERO2cycle - Desenvolvimento de uma tecnologia de aerogéis à base de poli(líquidos iónicos) para upcycling de CO2	COMPE TE2030	NOVA.ID.FCT - ASSOCIAÇÃO PARA A INOVAÇÃO E DESENVOLVIMENTO DA FCT	Portugal	01-01-15- 31-12-27	AERO2cycle is a research project involving a joint venture between the beneficiaries i3N (NOVAID), Universidade de Évora (UE) and Blue Bioeconomy CoLab (B2E), with the collaboration of Universidade Santiago de Compostela (USC) and Universitat Jaume I (UJI), that tackles the problem by developing advanced materials that integrate the high porosity of aerogels with the CO2 affinity of poly(ionic liquids) – AEROPILs. The INNOVATIVE NATURE of AERO2cycle relies on using AEROPIL composites that	Partner	Project as a whole – building new materials with innovative solution with circular economy in mind	



						will be produced from chitosan and PILs with the inclusion of biochar materials from fishery industry residues.			
<b>15. FSPN-Africa</b>	HealthyDiet4 Africa	EU	JUSTUS-LIEBIG-UNIVERSITÄT GIESSEN	Germany	01-01-2023-31-12-2028	The project HealthyDiet4Africa focus on the diversification of the food system to combat triple burden of malnutrition while minimizing its environmental footprint.	Scaling food system innovations by youth and women and food safety capacity through Living Labs. Physical and virtual community hubs adopted for healthy diets training and food safety awareness activities.	WP 6, 8	<a href="https://hd4a.eu/">https://hd4a.eu/</a>
<b>15. FSPN-Africa</b>	Change Makers	EU	KAROLINSKA INSTITUTET (KI)	STOCKHOLM 17177, Sweden		Changemaker objective: To implement & evaluate a sustainable health intervention program on health, nutrition, & environmental	To co-design with adolescent change makers	WP 6, 8	<a href="https://changemaker.ki.se/">https://changemaker.ki.se/</a>



						outcomes for the primary prevention of adolescent obesity & related non-communicable diseases (NCDs) together with adolescents in three rapidly urbanizing cities in Burkina Faso, Kenya, Tanzania.	and other key stakeholders (schools, healthcare workers, community members, urban planners) a multi-component sustainable health intervention that will be adapted for each of the three settings.		
<b>19. Peche Foods</b>	Peche	Private	N/A	Kenya	1/1/1992	Product Formulation of Products using alternative sources of protein	Production, Packaging and Marketing of the products	WP 6, 7, 8	N/A
<b>20. NKS</b>	D4AgEcol	EU and UKRI	ATB, Potsdam	Germany	01-09-22 – 31-08-25	The strategic objective is to provide knowledge to transition to agroecological farming by identifying digital tools and technologies	Collaborator	WP 2, 3, 4, 5, 8	<a href="https://d4agecol.eu">https://d4agecol.eu</a>



	Digitalization for Agroecology								
	Horizon CL 2021 Farm to Fork 01-03								
<b>20. NKS</b>	Agroecology-TRANSECT	EU and UKRI	INRAE	France	01-09-22 – 31-08-26	The project objectives are to understand farming practices that work with nature, effect of climate change on food production; to ensure that farming works for people, animals and the environment and to further the uptake of agroecological practices by farmers.	Collaborator	WP 2, 3, 6, 8	<a href="https://www.agroecology-transect.net">https://www.agroecology-transect.net</a>
	Horizon CL6 2021 Climate 01-05								

