



AMERICAN  
UNIVERSITY OF BEIRUT  
FACULTY OF AGRICULTURAL  
& FOOD SCIENCES

ENVIRONMENT  
AND SUSTAINABLE  
DEVELOPMENT UNIT

# Portfolio 2025

FACULTY OF AGRICULTURAL AND FOOD SCIENCES (FAFS)

AMERICAN UNIVERSITY OF BEIRUT





# Unit Overview

## 1. History & Background

Established in 2001, the Environment and Sustainable Development Unit (ESDU) is a regional research and development centre housed within the Faculty of Agricultural and Food Sciences at the American University of Beirut. Since its inception, ESDU has been at the forefront of sustainable rural development, working to enhance livelihoods across Lebanon through large-scale community development projects.

With a strong focus on participatory approaches, ESDU has championed capacity building, knowledge management, and the dissemination of appropriate technologies to support smallholder farmers, women, and youth in rural areas. Its initiatives prioritize social and economic empowerment, fostering resilience within vulnerable communities.

Over the years, ESDU has expanded its impact beyond Lebanon, actively engaging in regional programmes that strengthen rural livelihoods and food security. Through collaborative partnerships and evidence-based interventions, the Unit continues to play a role of paramount importance in promoting sustainable development across the region.

## 2. ESDU's Mission & Vision

### Mission

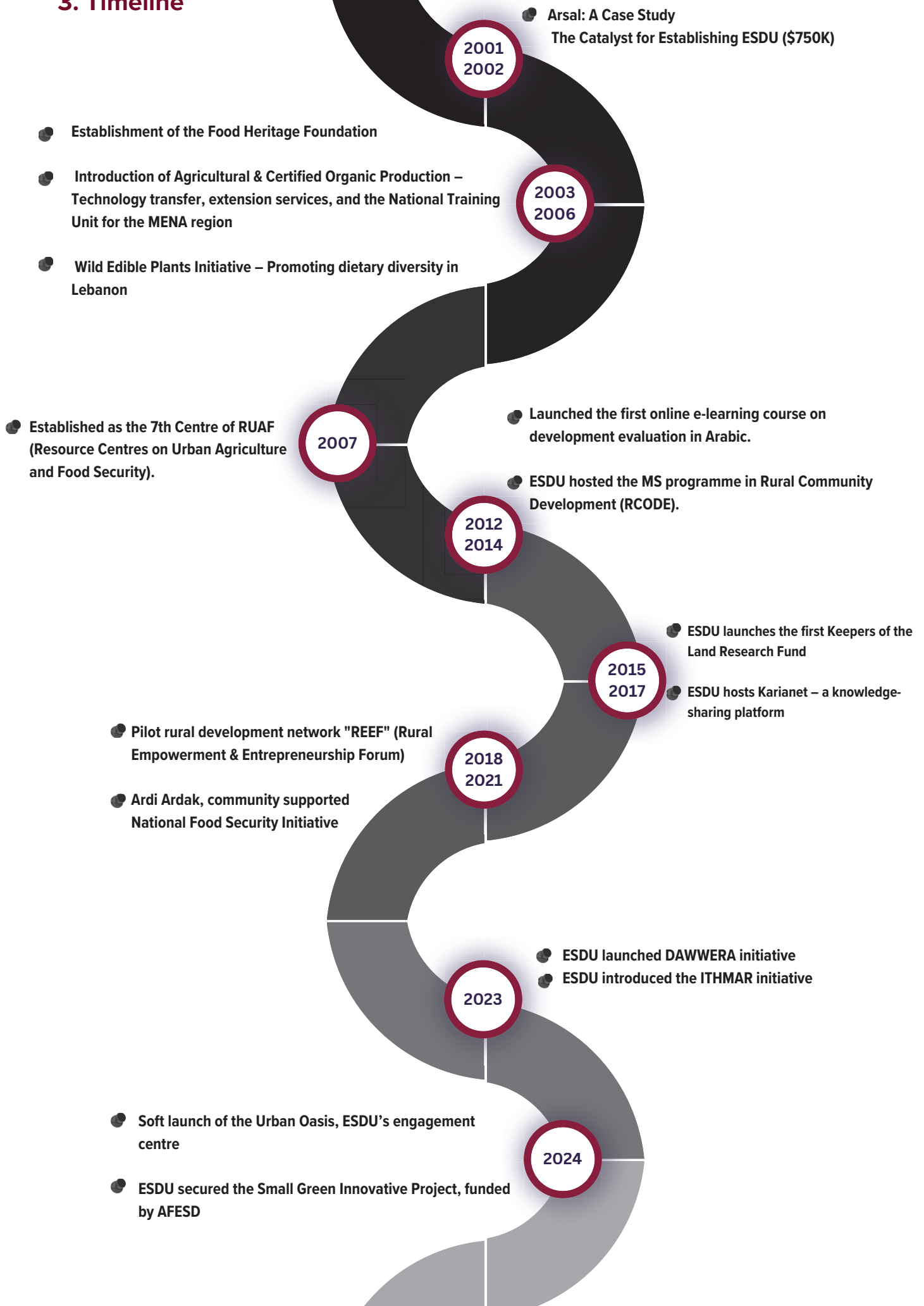
ESDU seeks to serve and empower marginalized and rural communities by delivering research, education, training and outreach programs designed to promote sustainable livelihoods.

### Vision

Attaining a network of self-generative eco-communities through a multi-faceted/multi-sectorial approach integrating climate smart agriculture, circular economy and local food systems.



### 3. Timeline





## 4. Keepers of the Land

A Keeper of the Land is anyone dedicated to preserving and protecting our land.

These individuals play a crucial role in safeguarding our heritage, agriculture, and natural resources for future generations.

The Keepers of the Land Initiative:

Led by ESDU, this initiative supports and empowers those committed to land preservation.

The programme focuses on providing resources, recognition, and education to land stewards.

Key Areas of Support:

- Fundraising for Research & Land Guardians
- Access to Knowledge & Awareness
- Student Support & Project Awards

By fostering a community of Keepers of the Land, ESDU ensures that the traditions, knowledge, and practices that sustain our environment continue to thrive.





## 5. Thematic Areas

**Empowering Local Communities  
Through People-Centered Approaches**



**Promoting Resilient Local Food Systems  
and Addressing Challenges of  
Small-Scale Farmers**



**Enhancing Resilience of Vulnerable  
Local Communities and Refugees  
through Sustainable Agriculture and  
Food Production**



**Recognizing the Stewardship Role of  
Local Communities, Especially  
Women, in Land Preservation**





## Projects & Initiatives

### 1. Development & Research Projects:

**Resource Empowerment and Sustainability for Overall Community Vitality and Environmental Resilience (RESOLVE):** Fostering food security within Lebanese communities by empowering local food systems through regenerative agriculture.



**Arab Fund for Economic and Social Development (AFESD):** This project focuses on financing through the Arab Fund for Economic and Social Development innovative sustainable development solutions in sectors like energy efficiency, water management, waste, and reforestation while prioritizing the empowerment of marginalized groups and promoting social inclusion.



**Fostering Rural areas through Enhancing the Efficiency of Legumes value chain for Agribusinesses and small-scale Farmers (RE-LEAF):** Promoting growth in the agri-food sector by improving the efficiency of development initiatives and strengthening the capacities of small-scale farmers and agri-businesses.

**Waste Management Adapted Solutions Tackled Through Youth Engagement For A Healthier Environment (WASTE):** Raising awareness about the health risks of improper waste management, promoting youth involvement in waste management decisions, and advocating for healthier waste management and environmental policies in the upcoming municipal elections.

**Transforming Waste Management (Med4Waste):** Collaborating across Mediterranean countries to revolutionize urban waste management policies for a cleaner and more efficient environment.

**Innovations in Ruminants Feed (SUROFLY):** Pioneering sustainable ruminants feed enriched with olive pomace and polyphenols for enhanced animal welfare and environmental stewardship.

**Assessment of grazing trends and interaction between livestock farming and olive production in Nabatieh, Lebanon – University Research Board (URB):** Lebanon's small-ruminant sector faces major challenges, including limited grazing land and costly feed alternatives, keeping herders in poverty. This study aims to improve livelihoods, promote sustainable resource management, and enhance resilience to climate and economic shocks.

**Collaborative Research for Rural Sustainability (CORUSUS):** Strengthening research and education through cross-regional cooperation to address the sustainability of rural livelihoods.

**Climate-Resilient Livestock Farming (CLIMAT2):** Boosting rural community resilience to climate change in Akkar, Baalbek, and Hasbaya, with a special focus on sustainable livestock practices.

**Women's Economic Participation (WEP):** Empowering women and women-led enterprises in Bekaa and the South, facilitating their active engagement in the Lebanese economy.

**Cultivating Agro-Food Value Chains (MedSNAIL):** Fostering the development of small-scale traditional agro-food value chains in the Mediterranean, including Lebanon's Shouf and West Bekaa.

**Empowering communities through capacity building and creation of new job opportunities within the agri-food sector (ECO):** The project focuses on promoting the resilience of vulnerable communities in Beirut and Mount Lebanon Governorates by enhancing food security and creating income-generating activities within the agri-food sector. This involves capacity building and the generation of new job opportunities.





## 2. Initiatives:

### Designing Alternatives for Water, Waste, and Energy in Rural Areas (DAWWERA):

By integrating the circular economy approach that encompasses the social, economic, and environmental aspects, we aim to empower stakeholders within the water-energy-waste and food nexus by recognizing the connections among these sectors.



### The Food and Environment in Islamic and Arab Culture Initiative (ITHMAR):

This initiative aims to revive traditional local food systems in the MENA region to promote people's well-being and food sovereignty, aligning with local, Arab, and Islamic traditions. Its primary objective is to form a consortium of academic, public, and private partners to incorporate adapted local diets into modern health guidelines and to promote sustainable food systems through research, advocacy, and policy development.









# Achievements

## 1. Territorial coverage

### Esdu's Regional Presence

**EvalMENA** is a regional network in the Middle East and North Africa with 143 members from 22 countries, focused on advancing evaluation practices.

**KariaNet**, originating in 2005, is dedicated to Knowledge Management and sharing in agriculture and natural resources.

**RUAFMENA**, established in 2006, serves the MENA region in urban agriculture and food security.

**EcoMENA**, founded in 2013, focuses on eco-villages, emphasizing knowledge sharing and sustainable development.

### Esdu's Geographical Presence



## 2. Awards & Certifications

- In 2019, ESDU was selected by Food Tank as one of the initiatives Redefining Food and Agriculture across the Middle East.
- In 2020, the CLIMAT project – funded by the German Cooperation through WFP and implemented by ESDU in partnership with Cooperation without Borders – was nominated winner of the Khalifa Date Palm Award for the category Pioneering Development and Productive Projects.
- In 2020, ESDU's Ardi Ardak Initiative was featured by FAO as an Enabling Agricultural Innovation System (AIS) Actor for Covid-19 Response. (Learn more)
- In 2021, ESDU's FHF was selected by the University of Guelph's Arrell Food Institute (AFI) as the winner of the "Arrell Global Food Innovation Award" for the Community Engagement Innovation category.
- In August 23, 2023 ESDU-AUB has secured the prestigious First Place award in the PRIMA S1 2023 – NEXUS AWARD competition.
- In October 2024, ESDU was named CHAMPION of Plastic Pollution Prevention in the Mediterranean for its voluntary efforts in combating plastic pollution. The recognition was part of the EU-supported WES project, in partnership with the Union for the Mediterranean and UNEP's Mediterranean Action Plan.





### 3. Impact in number for the year 2024-2025:



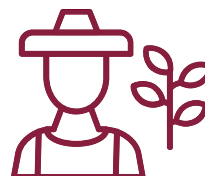
50 farmers / 28 women  
Beneficiaries who  
received capacity building



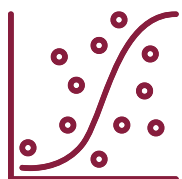
8,200 platters to internally  
displaced people



25 MSMEs/18 women-led  
Cooperatives (coops) /  
SMEs assisted



275 farmers/landowners  
were supported technically  
in the sustainable  
management of their lands



10 established  
demo-plots/living labs



Businesses engaged in  
marketing channels



14 Student  
Employment/URVP,  
GAs/GRAs, Interns



4 Publications

# ESDU's Engagement Center

## The KHALIFA INNOVATION AWARD URBAN OASIS



The Urban Oasis, initially serving as AUB's animal house, is now ESDU's newest engagement center.

It was renovated by ESDU into an engagement center through the Khalifa International Award for Date Palm and Agricultural Innovation.

Launched in July 2021 by the Environment & Sustainable Development Unit (ESDU), the Landscape Design and Ecosystem Management department (LDEM), the Khalifa Innovation Award Urban Oasis Competition saw participation from fifteen groups comprising students and alumni from landscape architecture, architecture, and agriculture disciplines. Elements from the top three designs were integrated into the final master plan, which was implemented with the support of the Physical Plant and the ESDU team, marking a significant milestone in the development of our Urban Oasis project.









# Key Donors

- Food and Agriculture Organization of the United Nations (FAO)
- International Fund for Agricultural Development (IFAD)
- Near East Foundation (NEF)
- RUAF Foundation (Resource Centres on Urban Agriculture and Food Security)
- United Nations Development Programme (UNDP)
- The World Food Programme (WFP)
- U.S. Agency for International Development (USAID)
- Bureau of Population, Refugees, and Migration (BPRM)
- Concern Worldwide (CWW)
- Arab Fund for Economic and Social Development (AFESD)
- International Development Research Centre (IDRC)
- KHALIFA INTERNATIONAL AWARD FOR DATE PALM AND AGRICULTURAL INNOVATION
- Partnership for Research and Innovation in the Mediterranean Area (PRIMA)
- Interreg NEXT MED
- DROSOS
- Porticus



# Team & Leadership

## 1. ESDU's Executive Committee



Prof. Hamadeh, Shadi  
Director



Dr. Jaber, Lina  
Assistant Director



Bou Harb, Christelle  
Executive Officer



Abi Said, Diana  
Liaison Officer

## 2. Key Team Members



El Solh, Maha  
Marketing and Quality  
Specialist



Morkos, Samar  
Project Coordinator



Imad, Marybel  
Communications  
Coordinator



Fleyfel, Leila  
M&E Officer



Chebab, Nizar  
IT Officer



El Khechen, Sarah  
Project Coordinator



Akkouch, Reine  
Communications Officer



El Masri, Bouchra  
Project Coordinator



Dergham, Jana  
Registered Dietitian



Ibrahim, Yara  
Agricultural Engineer



Hajjar, Taline  
Logistics Officer



Hammoud, Jana  
Field Officer





# 25

As ESDU marks its 25th anniversary, We envision a future where we bridge global innovation with local impact. We strive to be a **global player with a local touch**, advancing food security and AI, while also remaining a **local player with a global touch**, the Smart Urban Oasis—our engagement centre at AUB—aims to evolve into a dynamic, data-driven hub by 2025, offering interactive experiences and real-time insights to engage the AUB community in sustainable practices.

Through cutting-edge technology and participatory learning, we will showcase innovative urban agriculture models, circular economy solutions, and AI-driven sustainability practices, reinforcing ESDU's role as a catalyst for change at both local and global levels. Our mission is to drive sustainable solutions, empower communities, and shape resilient food systems for the future.

~ Shady Hamadeh



# Contact Information



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<https://www.aub.edu.lb/fafs/esdu>