

Renewable energy, agriculture and forestry for sustainable development

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Thanks to a study on the reorganization of food and energy systems, Lamiaa Chab (University of Tuscia) received a special mention among the non-agricultural theses in the first edition of the AgriFood Future Award.

The award was presented on May 9th in Salerno during Agrifood Future Research, a moment of in-depth analysis connected to the national AgriFood Future event promoted by Unioncamere in collaboration with the Chamber of Commerce of Salerno. In just two editions, this event has become one of the main forums for discussing the future of agri-food systems.

The AgriFood Future event, under the scientific direction of Professor Alex Giordano, in 2024 and 2025, created a series of meetings among businesses, institutions, and trade associations to promote dialogue among technology, communities, and food production based on the concept of FoodSystem 5.0. A concrete stimulus to ensure that it is not innovation that drives our future, but that technological solutions ensure sustainable development from environmental, social, and economic perspectives.

With the AgriFood Future Award, the goal was to further encourage research by rewarding, in collaboration with Image Line, those projects capable of proposing innovations aimed at bridging the gap between scientific production and the needs of the agri-food system. Concrete studies that address problems and propose solutions implementable by the industry.

Chab's work, titled *"Nexus of Renewable Energy, Agriculture, and Forestry: Synergies and Challenges for a Sustainable Energy Transition"*, earned a special mention in the Non-Agricultural category for highlighting the need to align energy, agricultural, and forestry policies in order to optimize land use and improve ecosystem resilience.

Problems Addressed

- Need to reduce CO₂ emissions and fight climate change.
- Dependence on fossil energy sources and poor integration of agriculture, forestry, and renewable energy.
- Lack of coordinated strategies for a sustainable energy transition in the agricultural and forestry sectors.
- Difficulty in quantifying the environmental and economic benefits of renewable energies in the agroforestry sector.

Proposed Solutions

- Econometric analysis of the interaction between renewable energy, agriculture, and forests in nine countries (France, Germany, Italy, Sweden, the Netherlands, Ghana, Kenya,

Morocco, and South Africa).

- Use of the DPSIR (Driver-Pressure-State-Impact-Response) framework to examine environmental and economic factors in the energy transition.
- Highlighting the importance of bioenergy as a solution to reduce CO₂ emissions and stimulate economic growth.
- Identification of synergies between renewable energy and agricultural added value, focusing on integration policies between sectors.

Target Companies

- Agroforestry companies aiming to invest in bioenergy and sustainable energy solutions.
- Renewable energy companies interested in the agricultural and forestry sectors.
- Government organizations and research institutions developing environmental sustainability policies.
- Agri-food producers with high energy consumption seeking energy efficiency solutions.

[Read the full article on Lamiaa Chab's work on Agronotizie.](#)

Fonte: <https://www.ruralhack.org/en/renewable-energy-agriculture-forestry/>