

Background Note

Integrating Renewable Energy into Agri-food and Health Value Chains

Background

1. An integrated approach based on the deployment of sustainable, efficient, and cost-effective renewable energy solutions into the agri-food and health value chains is crucial to meet several Sustainable Development Goals (SDGs)¹ as well as the objectives of the Paris Climate Agreement, particularly in the context of climate adaptation action. The dramatic cost reductions and technological improvements of renewable energy technologies in the past decades make renewables an economically and technically viable solution that can be easily deployed and scaled in the agri-food and health sectors, according to recent IRENA findings.
2. Energy is essential for irrigation, primary production, processing, and storage, and for raising productivity and incomes, reducing food losses, enhancing climate change adaptation and resilience for farmers and agri-enterprises. However, access to energy is limited in the rural areas of many developing countries, where agriculture is the main source of livelihoods. Furthermore, where energy is accessible, high dependence on fossil fuel-based energy solutions, with high price volatility and logistical challenges, along with inefficient and unsustainable biomass use have made the current pattern of energy use in the agri-food systems untenable. An integrated approach for energy and agri-food systems based on renewable energy solutions can help meet current and future demand for food in a fair, affordable, equitable, environmentally sound, and inclusive manner.
3. Access to energy improves the quality, accessibility, and reliability of health services. Energy is essential to power vital medical devices, including vaccine refrigerators and emergency-surgical, laboratory and diagnostic equipment. Energy is important for basic amenities like lighting, cooling, ventilation, communications, clean and hot water. Decentralised renewable energy solutions present a key opportunity to provide clean, reliable, affordable, and tailored electricity services to health care facilities currently lacking access or facing unreliable supply, in both rural and urban areas.
4. IRENA has been steadily increasing its focus on the crucial nexus between energy, health, and agri-food, shifting from a simple electrification approach to one aiming at improving livelihoods, stimulating economic activity, reducing poverty and enhancing the quality of social services. This has culminated in the offering of lines of support to IRENA Members through:

¹ Including SDG 7 on sustainable and clean energy, SDG 6 on access to clean water, SDG 3 on health, SDG 2 on food security, and SDG 1 on poverty alleviation.

- conducting country specific viability assessments for integrating renewable energy solutions into agri-food and health service value chains;
- translating these assessments into specific investment project proposals that can benefit from IRENA's project facilitation framework.

This approach has been tested in the Hindu Kush Himalayas and in West Africa, with great potential to roll it out to additional regions and countries.

Objective of the session

The objective of the session is to discuss and collect views of IRENA Members on the opportunities of integrating renewable energy into agri-food and health value chains – especially in rural and remote settings – based on IRENA's analytical work and the outcomes of regional and country level assessments undertaken by IRENA, in collaboration with governments and partners. Members are invited to share country specific experiences and best practices and offer guidance on how IRENA can scale up such crucial support.

Guiding questions

- What policies, regulation, and financial frameworks are needed to enhance the deployment of renewable energy in agri-food and health value chains?
- How can collaboration between public, private and community stakeholders be strengthened to scale up deployment of renewable energy in agri-food and health sectors?
- What are the experiences and best practices IRENA Members can share to foster sustainable, efficient and affordable renewable energy solutions for agri-food and health?
- How can IRENA further contribute to the initiatives of Members to enhance their undertakings to integrate renewable energy into agri-food and health value chains?

Associated Publications

[Decentralised solar electricity for agri-food value chains in the Hindu Kush Himalaya region](#) (2022)

[Renewable energy for agriculture: Insights from Southeast Asia](#) (2022)

[Powering Agri-food Value Chains with Geothermal Heat: A Guidebook for Policy Makers](#) (2022)

[Assessment and Design of Renewable Energy Systems for Enhancing Healthcare Delivery in Burkina Faso](#) (2022)

[Renewable Energy for Agri-food Systems: Towards the Sustainable Development Goals and the Paris Agreement](#) (2021)