

# Special Issue

## Renewable Energy Powered Irrigation Systems: Addressing the Challenge to Improve Performances, Sustainability and Economy of Agricultural Productions

### Message from the Guest Editors

In recent decades, the cultivation of agricultural products has been improved through more competitive management practices. Moreover, the agricultural phase uses the main quota of the total energy demand for the production of food, with irrigation as one of the main energy-demand activities. The need to promote more sustainable agricultural production with respect to natural resources and human health is leading farmers and stakeholders to invest in renewable energy systems. Recently, several renewable energy technologies have been implemented in pressurized irrigation systems to reduce energy requirements while also reducing the related greenhouse gas emissions. This Special Issue may include but is not limited to:

- Energy and environmental advantages of renewable powered irrigation systems;
- Precision irrigation technologies;
- Performances evaluation of renewable powered irrigation systems;
- Mathematical modeling of on-farm irrigation energy requirements;
- Solar-powered water pumping;
- Economic assessments associated to renewable powered irrigation systems.

---

### Guest Editors

Dr. Giuseppe Todde

Department of Agricultural Science, University of Sassari, Viale Italia 39, 07100 Sassari, Italy

Prof. Dr. Maria Caria

Department of Agricultural Science, University of Sassari, Viale Italia 39, 07100 Sassari, Italy



## Sustainability

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.3  
CiteScore 7.7



[mdpi.com/si/40059](http://mdpi.com/si/40059)

*Sustainability*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
sustainability@mdpi.com

[mdpi.com/journal/  
sustainability](http://mdpi.com/journal/sustainability)



---

Deadline for manuscript submissions



## Sustainability

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.3  
CiteScore 7.7



[mdpi.com/journal/  
sustainability](http://mdpi.com/journal/sustainability)

# About the Journal

## Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in Sustainability, an international open access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full articles) and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

---

## Editor-in-Chief

Prof. Dr. Steve W. Lyon

School of Environment and Natural Resources, Ohio State University,  
Columbus, OH 43210, USA

---

## Author Benefits

### Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

### High Visibility:

indexed within Scopus, SCIE and SSCI (Web of Science), GEOBASE, GeoRef, Inspec, RePEc, CAPIplus / SciFinder, and other databases.

### Journal Rank:

JCR - Q2 (Environmental Studies) / CiteScore - Q1  
(Geography, Planning and Development)

