



Virtual Workshop on The Water-Energy-Food Nexus

28th April 2022

The Group on Earth Observations (GEO), the GEO Community of Activity on Earth Observations for (the) Water-Energy-Food (EO4WEF) nexus, and Future Energy Center at Mälardalen University (Sweden) are pleased to invite you to join a virtual workshop of the WEF nexus (also referred to as the WEF systems [WEFS] nexus), which will focus on the role of measurements, data, technology, and policies within the nexus. The goal of these applications is to enable greater productivity for the WEF nexus and its individual sectors and to facilitate the broader implementation of the nexus concept using this framework for planning, managing, and coordinating policy development.

The aims of this workshop include strengthening the cooperation of the WEF nexus activities on the national and international levels and developing an inventory of activities that relates applications of Earth observations to aspects of the WEF nexus, and to understanding how the WEFS nexus is being used in addressing climate change and UN Sustainable Development Goals (SDGs).

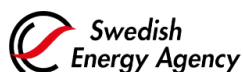
This WEF nexus is a growing area of research at the Future Energy Center at Mälardalen University, mostly for applications connected to new technologies, such as agrivoltaic and floating PV systems, as well as irrigation, and urban farming. GEO is hoping to increase the activity, stature, and visibility of its EO4WEF Community Activity to become an Initiative in the next two to three years. In addition to having participants share their research and applications activities in some or all their WEF nexus activities, this workshop will provide background to these institutional interests.

This workshop has been organized under the auspices of the following projects:

Evaluation of the first agrivoltaic system in Sweden, funded by the Swedish Energy Agency

Avoiding conflicts between the sustainable development goals through agro-photovoltaic systems, funded by Formas - The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning

SnowSat-an AI approach towards efficient hydropower production, funded by Vinnova

Swedish
Energy Agency**FORMAS****VINNOVA**

Programme

* All times are given in Eastern Daylight Time (EDT).

Presenters will have 15 minutes (12 for the presentation and 3 for questions)

<p>8:00 – 8:15</p>	<p>Introduction to the workshop and its sponsors</p> <p>Pietro Elia Campana and Richard Lawford</p>
<p>8:15 – 9:45</p>	<p>Session 1: Water-related aspects of the WEF nexus</p> <p>Junguo Liu <i>Hydropower-Irrigation Nexus Under Climate Change</i></p> <p>Jie Zhang <i>Snowsat-An Integrated Effort to Improve Snow Monitoring for Efficient Hydropower Production</i></p> <p>Pietro Elia Campana <i>Towards An Operational Irrigation Management System for Sweden with A Water–Food–Energy Nexus Perspective</i></p> <p>Discussion</p>
<p>9:45 – 10:00</p>	<p>Break</p>
<p>10:00– 11:30</p>	<p>Session 2: Applications of Earth observations to WEF nexus issues</p> <p>Stephanie Schollaert Uz and Mukul Sonwalkar <i>Maximizing the Use of Earth Observations to Inform Decisions around the Water Energy Food Nexus through Open Science</i></p> <p>Jennifer Wei <i>A Newly Developing Community-Oriented Data System from NASA GES DISC</i></p> <p>Silvia Ma Lu <i>Satellite-Derived Data of Photosynthetically Active Radiation For The Assessment Of Agrivoltaic Systems</i></p> <p>Discussion</p>
<p>11:30 – 12:30</p>	<p>Lunch Break</p>

	Session 3: Approaches to Addressing information needs for the WEF Nexus.
12:30 – 14:00	Aavudai Anandhi, Puneet Srivatsa, Rabi Mohtar and Richard Lawford <i>Developing FEW Nexus Definitions and Conceptualizations</i>
	Richard Lawford and Aavudai Anandhi <i>WEF Stakeholder Profiles and their Use in Developing Implementation Strategies and Assessing Data Needs for the WEF Nexus.</i>
	Sushel Unninayar and Richard Lawford <i>EWVs for Monitoring Integrated Sustainable Development of the Water-Energy(R)-Food Nexus</i>
	Discussion
14:00 – 14:15	Break
14:15 – 14:45	General Discussion (Including Audience Examples)
14:45 – 15:00	Workshop Conclusions

This workshop is open for participation from researchers, practitioners, policy makers, industry representatives, stakeholders, educators, and interested public. There is no fee for participation.

The workshop will use Zoom as a platform. Please connect to Zoom through this [link](#). The workshop will be recorded.

If you have questions or suggestions for this event, please contact Richard Lawford at richard.lawford@eo4wef.org or Pietro Elia Campana at pietro.campana@eo4wef.org.

More information about the GEO EO4WEF Community Activity is available at the GEO EO4WEF nexus [website](#).