

From: [Puco ContactOPSB](#)
To: [PUCO-Docketing](#)
Subject: public comment 22-0549
Date: Friday, June 30, 2023 1:02:08 PM
Attachments: [NREL-intro.pdf](#)

From: Gary Houser <garyhouser4@gmail.com>
Sent: Friday, June 30, 2023 12:55 PM
To: Puco ContactOPSB <contactopsb@puco.ohio.gov>
Subject: *AGRIVOLTAICS: Please pass to board these slides depicting its use all around the world [from webinar]

Hello Matt,

I appreciate your offer to pass on the recording of the webinar on agrivoltaics in Ohio. I have been told there will be a delay in the release of the link to that recording, which I believe is related to the website coordinator of Green Energy Ohio being away for some period of time.

But as it appears that the OPSB may be approaching a decision on Oak Run at any point in time, I have gone ahead and created a PDF file that contains many of the key slides from the main presentation. These slides contain high quality photos showing the implementation of agrivoltaics all around the world - including **Japan, Germany, France, the Netherlands, Israel, and China.** ***These photos contain irrefutable proof that agrivoltaics - in spite of the fact that it is only now spreading to the United States - has already evolved far beyond the theoretical stage and is being successfully utilized at a significant scale.***

I will still submit the full recording of the webinar as soon as it becomes available, but ask that this attached PDF file please be distributed to the board members - along with this

covernote - in the meantime. It is short at 23 images long, and can be viewed within only about 5 minutes.

Respectfully, Gary Houser

PS: I ask if you could please briefly confirm receipt of this PDF file and that this is happening?

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CAUTION: This is an external email and may not be safe. If the email looks suspicious, please do not click links or open attachments and forward the email to csc@ohio.gov or click the Phish Alert Button if available.



What is Agrivoltaics?

Agricultural activities performed underneath and around solar arrays:

- ❖ Crop production
- ❖ Grazing
- ❖ Pollinator Habitat and Apiaries
- ❖ Solar Greenhouses

“Throwing **Shade** Is Solar Energy's New Superpower”

‘The farming world is learning how to blend agriculture with renewable energy installations — and gaining on both ends.’



Photographer: Toru Hanai/Bloomberg

Adam Minter | Bloomberg | 10.02.2022

Matcha & Mustard Greens | Japan

AGRIVOLTAICS = CROPS + CRITTERS + CONSERVATION

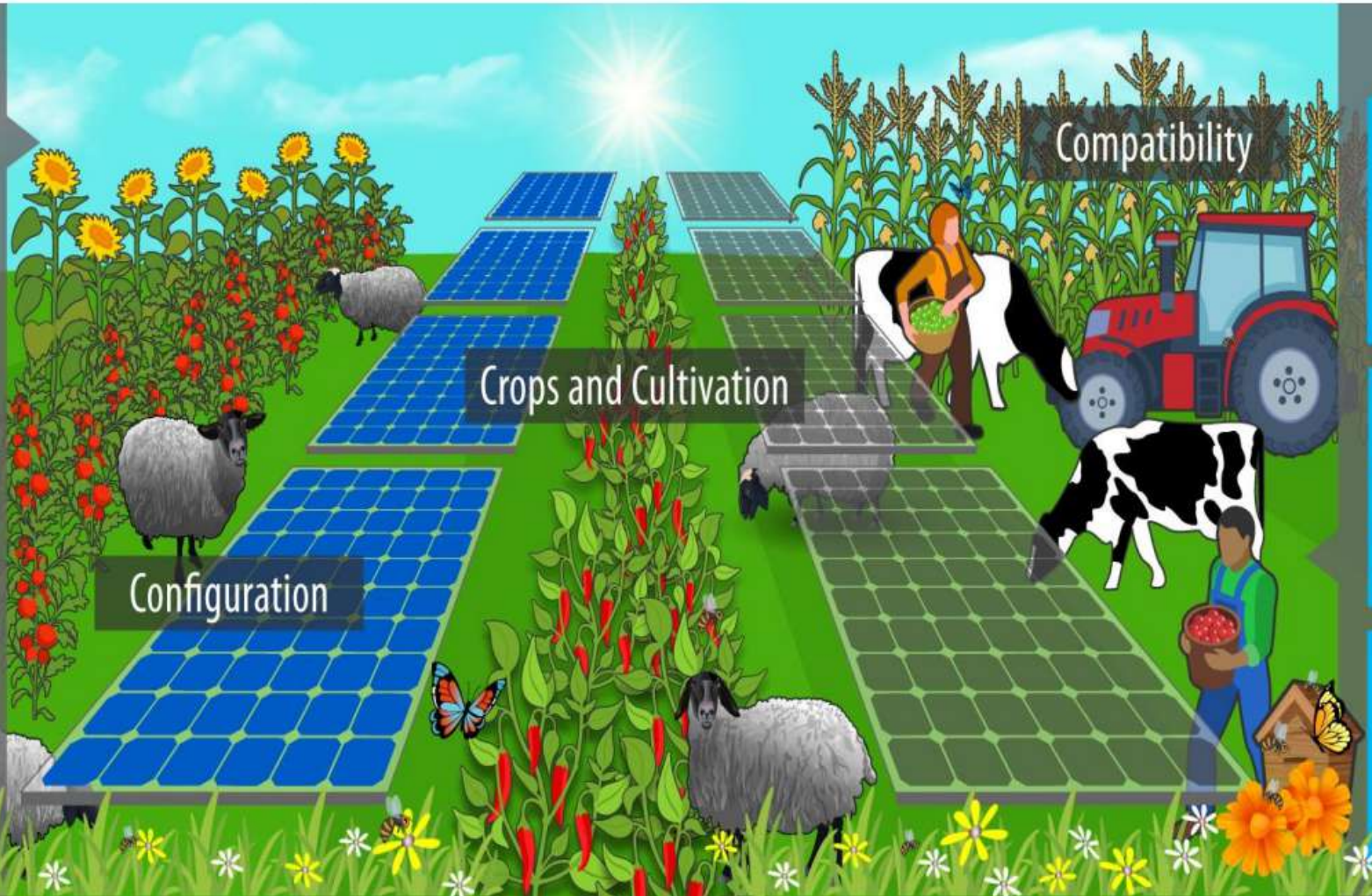
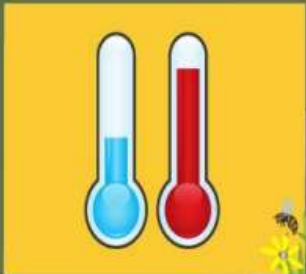
“The combination of photovoltaic and photosynthetic processes into a single synergized system”



SOLARFARMSUMMIT.COM

NREL's 5 C's of Agrivoltaic Success

Climate



Collaboration



https://openei.org/wiki/InSPIRE/5_Cs



PV + Wheat | Japan



PV + Wheat | Japan



PV + Lettuce | Japan





Next2Sun



PV + Apples | Kressbronn, Germany



Next 2 Sun



PV + Hay | Donaueschingen-Aasen, Germany



PV + Pears | Bierbeek, Flanders

**Agrivoltaics:
to replace
plastic poly
tunnels**

10°C Cooler

Solar + Redcurrant | Wadenoijen, the Netherlands



BayWa r.e.

r.e.think energy



PV + Raspberry | Babberich, the Netherlands



PV + Asparagus | Mallemort, France



PV + Raspberry & Strawberry | Conthey, Switzerland

BBC: “The Italian farmers saving an ancient fruit with solar power”

Agostino Petroni | 24th April 2023



PV + Citron | Scalea, (southern) Italy

Solargik

PV + Olives | Israel

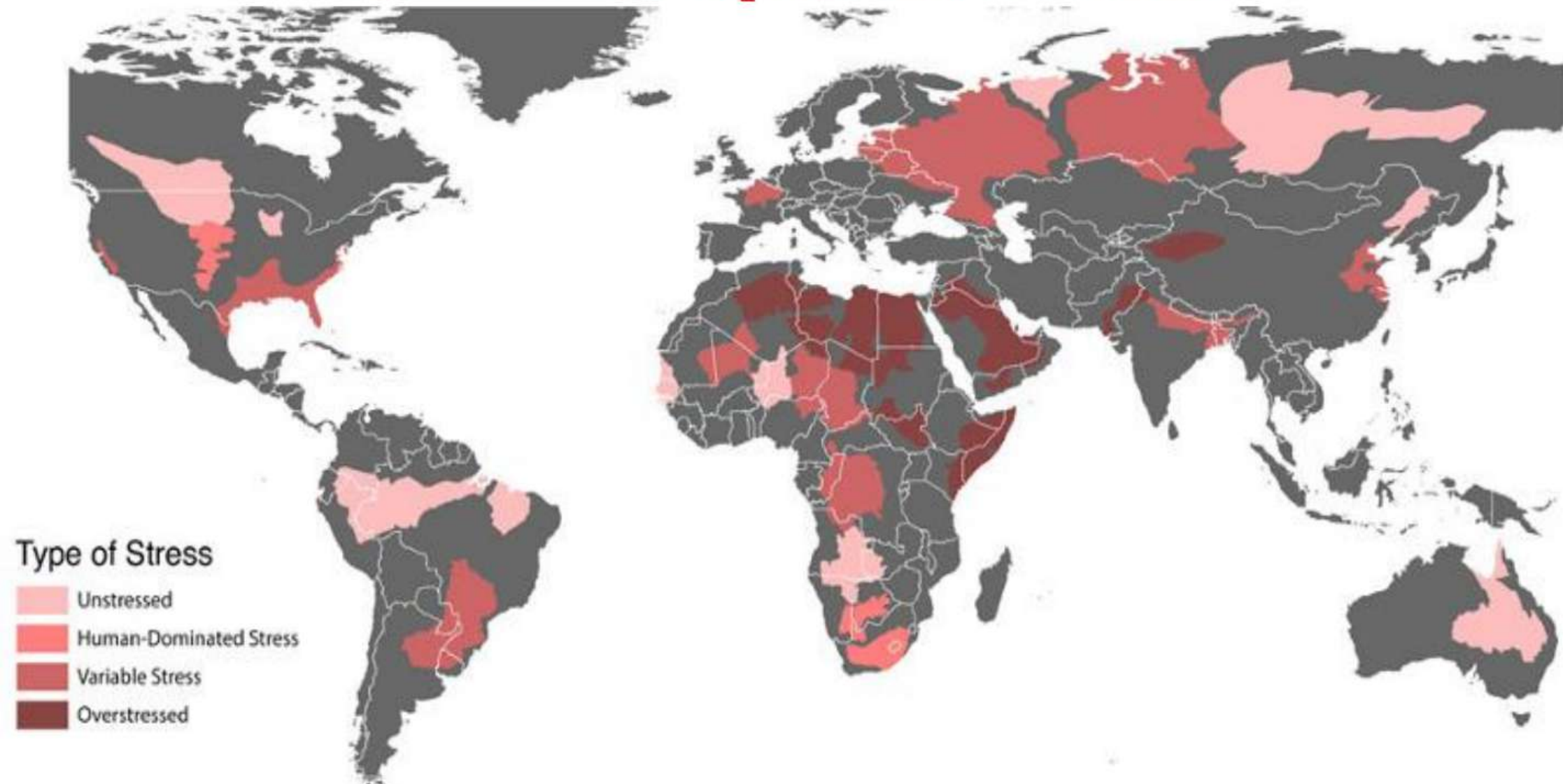


2018

Goji, China

Agrivoltaics to combat desertification

GLOBAL AQUIFER STRESS



AGRIVOLTAICS INDEX

Foundational Resources

[AgriSolar Clearinghouse](#)

[Events Calendar](#)

[AgriSolar Atlas](#)

[AgriSolar Clearinghouse Podcasts](#)

[American Solar Grazing Association \(ASGA\)](#)

[ASGA Webinars & Calls](#)

[Solar Grazing Map](#)

[Fact Sheets](#)

[Sample Solar Grazing Contract](#)

[Sample Solar Beekeeping Contract](#)

[Solar Grazing Budget](#)

[Research Roundup](#)

[American Farmland Trust](#)

[Smart Solar Principles](#)

[Farmer's Powering Communities](#)

[University of Arizona](#)

[Bee and Butterfly Habitat Fund](#)

[Colorado Agrivoltaic Learning Center](#)

[Cornell Cooperative Extension](#)



AGRIVOLTAICS ALMANAC



The 2023 Agrivoltaics Almanac is FREE!

All the intellectual capital in SF523's high-impact program, including every presentation, is aggregated with other reference materials submitted by event speakers, experts and sponsors into the SF523 Agrivoltaics Almanac, a comprehensive digital compendium prepared after the event and published free to all! The 2023 Agrivoltaics Almanac is jam-packed with key concepts, conceptual outlines, working materials and links to other organizations with extremely useful info for anyone interested in developing solar energy and agrivoltaics projects from the student, to the novice, to the seasoned professional!



[SF523 AVAILABLE ON OUR BLOG >>](#)

MAY 31ST, 2023

HEINRICH, BRAUN INTRODUCE BIPARTISAN BILL TO SUPPORT AGRIVOLTAICS RESEARCH AND DEMONSTRATION

Reference:
S.1778 –
“Agrivoltaics
Research and
Demonstration
Act of 2023”

WASHINGTON - U.S. Senator Martin Heinrich (D-N.M.), Chairman of the Senate Appropriations Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies, and U.S. Senator Mike Braun (R-Ind.), a member of the Senate Agriculture Committee and the Ranking Member of the Subcommittee on Food and Nutrition, Specialty Crops, Organics, and Research, are introducing the bipartisan Agrivoltaics Research and Demonstration Act of 2023.

“Agrivoltaics keeps farmland in production, generates clean energy, and strengthens rural economies,” **said Heinrich.** “The systems offer producers a way to diversify their income and make their operations more resilient. I’m proud to be introducing this legislation alongside Senator Braun – to support agrivoltaics research and scale these systems on farmlands from the Southwest to the Midwest.”

“When we can help farmers and producers get more income out of their croplands, it’s a win,” **said Braun.** “This bill will research agrivoltaics – solar panel systems that can be deployed over crops that can benefit from partial shading during the day – and how they can help farmers get more out of their fields.”

ENERGY & ENVIRONMENT

COMMENTARY

Central Ohio solar project can be model for solar, farming mutual benefits



GARY HOUSER

JUNE 21, 2023 3:25 AM



Photo by Xuanyu Han/Getty Images

While the world's science community implores governments to speed the transition away from fossil fuels before a tipping point of no return is reached, the process of approving clean energy projects has gotten bogged down in local disputes. Some reports say Ohio is actually [leading all states](#) in this regard. ¹⁰

**This foregoing document was electronically filed with the Public Utilities
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6/30/2023 2:29:08 PM

in

Case No(s). 22-0549-EL-BGN

Summary: Public Comment of Gary Houser, electronically filed by Docketing Staff
on behalf of Docketing.