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EMFSA November 2024 Newsletter

Marine Ecosystems



Photo by Jakob Owens on Unsplash

•Maritime 5G and Marine Ecosystems

Current implementations of 5G in marine contexts, such as in fisheries, tourism, and naval operations, might focus on economic and logistical benefits rather than studying **ecological impacts**. See our post

<https://www.emfsa.co.za/news/maritime-5g-and-marine-ecosystems/>

•Electromagnetic fields and diadromous fish spawning migration: An urgent call for knowledge

Highlights

- The number of subsea power cables (SPCs) emitting electromagnetic fields (EMF) will increase in the near future because of the demand for renewable energy.
- The impact of SPC-induced EMF on the spawning migration of diadromous fish species is unknown and requires urgent research covering knowledge gaps.
- Knowledge can be obtained through a combination of lab and *in situ* experiments.
- International policy guidelines on the practicalities of deploying SPCs need to be established.

Ref. Pieterjan Verhelst, Ine Pauwels, Lotte Pohl, Jan Reubens, Britte Schilt, Annemiek Hermans, Electromagnetic fields and diadromous fish spawning migration: An urgent call for knowledge, Marine Environmental Research, Volume 204, 2025, 106857, ISSN 0141-1136, <https://doi.org/10.1016/j.marenvres.2024.106857>

(<https://www.sciencedirect.com/science/article/pii/S014111362400518X>)

Environmental Illness: EHS/MCS

•Deadline extension

RT Individual Sensitivity to Wireless Radiation

Topic Editors
Dariusz Leszczynski, Frank de Vocht

**Frontiers in Public Health
Radiation and Health**

Topic Published 24/04/2024	Manuscript Summary Deadline 31/12/2024	Manuscript Deadline 28/02/2025
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The deadline for submission of manuscripts to Research Topic: Individual Sensitivity to Wireless Radiation has been extended to Feb. 20, 2025.

<https://www.frontiersin.org/research-topics/64593/individual-sensitivity-to-wireless-radiation>

<https://betweenrockandhardplace.wordpress.com/2024/11/27/deadline-extension-for-individual-sensitivity-to-wireless-radiation/>

•NC BOS nixes cell tower east of Snowflake

After two public hearings, the Navajo County Board of Supervisors denied the application for the White Antelope Wireless Communication Facility, a proposed 120-foot cell tower east of Snowflake, during their Nov. 12 meeting.

https://www.wmicentral.com/news/nc-bos-nixes-cell-tower-east-of-snowflake/article_83c4c49c-a691-11ef-bcbf-8719cf540071.html

5G Limits and Standards

•India explores relaxation in tower radiation limits – reports. The Indian government may increase the mobile tower radiation limits to help telcos improve the quality of the 5G experience in the country, the Financial Express has reported.

<https://www.lightreading.com/5g/india-explores-relaxation-in-tower-radiation-limits-reports>

•Constitutional Court backs the raising of radiation standards for 5G use in Brussels.

The Court ruled that the new standards violated neither the precautionary principle nor the right to protection of a healthy environment.

<https://www.brusselstimes.com/1322617/constitutional-court-backs-the-raising-of-radiation-standards-for-5g-use-in-brussels>

2024:12 Recent Research on EMF and Health Risk

Recent Research on EMF and Health Risk. Eighteenth report from SSM's Scientific Council on Electromagnetic Fields, 2023

The research review finds no need to adjust existing reference levels or recommendations. However, observed biological effects from weak radio wave exposure in animals reinforce the importance of precautionary measures under the Swedish Environmental Code. SSM continues to recommend hands-free use for mobile calls despite no evident increase in glioma risk, citing uncertainties about long-term effects. Similarly, the recommendation to limit low-frequency magnetic field exposure remains unchanged due to the continued association between such fields and childhood leukemia near power lines

<https://www.stralsakerhetsmyndigheten.se/en/publications/reports/radiation-protection/2024/202412/>

Direct to Cell: Cell Towers in Space



Image created using OpenAI's DALL-E 3*

Exploring Starlink's Next Frontier in Connectivity

•Starlink Direct to Cell: How It Works;

•Potential Impact on Traditional Telecommunications and more.

Link to our post

<https://www.emfsa.co.za/news/direct-to-cell-cell-towers-in-space/>

Iceland's Pursuit of Solar Energy in Space

(Article by Freya Cruz) Revolutionizing Solar Energy Production

With its expertise in geothermal technology, Iceland is now setting its sights on space to generate solar energy. By partnering with international companies like Space Solar, Iceland aims to construct the world's first operational space solar power plant. This ambitious project seeks to revolutionize energy production by utilizing satellites to capture sunlight continuously, promising a reliable source of clean solar energy. The article also includes environmental concerns and looks at the efficiency of wireless energy transfer.

Read more at:

<https://lanoticiadigital.com.ar/uncategorized-en/icelands-pursuit-of-solar-energy-in-space/3825/>

Cyanobacterial circadian clock uses an AM radio-like mechanism to control cellular processes

University of Cambridge: Cyanobacteria, an ancient lineage of bacteria that perform photosynthesis, have been found to regulate their genes using the same physics principle used in AM radio transmission.

<https://phys.org/news/2024-11-cyanobacterial-circadian-clock-radio-mechanism.html>

Photobiomodulation

History and Mechanisms: Photobiomodulation, with a Focus on Treatment of Brain Disorders

Dr. Mike Hamblin, PhD, Distinguished Visiting Professor at the Laser Research Centre, University of Johannesburg, presented his work at the MGH Brain PBM Clinic Rounds (09/27/24). His talk focused on the history, mechanisms, and potential of tPBM in treating brain disorders, contributing important insights to the field of photobiomodulation. **Note** by EMFSA: Despite the poor sound quality of the video, it remains an excellent presentation by Prof. Michael Hamblin, the world's most documented authority on Neuromodulation.

https://www.youtube.com/watch?v=XyO_ETeicE8

Mindful Gifting for Children: Beware of the Risks



Photo by Anastasiia Gudantova on Unsplash

•Avoid toys containing LEDs

Some children's toys – such as cuddly toys, dolls, drawing tablets, toy trucks, spinning tops and illuminated board games – contain LEDs. These emit blue light, which can have

illuminated effects on the retina and disrupt biological rhythms, including sleep, if exposure occurs in the evening or at night. Children, whose eyes do not fully filter blue light, are particularly at risk

<https://www.anses.fr/en/content/leds-toys-anses-calls-revision-eye-safety-section-european-standard>

•8 Dangerous Gifts That Could Be a Nightmare This Christmas

The Child Accident Prevention Trust has published an informative article highlighting gifts that might pose serious safety risks. Among the items discussed are:

- Super strong and button magnets
- Lithium-ion batteries in e-bikes, e-scooters, and hoverboards

For the full article, visit: <https://capt.org.uk/8-dangerous-gifts-to-avoid-this-christmas/>

If you are in the gifting mood:

ORSAA <https://buymeacoffee.com/orsaa>

and EMFSA <http://buymeacoffee.com/emfsa>

Please note that EMFSA and ORSAA are independent organizations.

Thank you for taking the time to read our newsletter.

Until next month!

The EMFSA Team