SHAPING SUSTAINABLE SOCIETIES: ARTIFICIAL INTELLIGENCE IN SOCIOECOLOGY

M. Kołodziejczak[1], T. Miller[2]

[1] University of Szczecin
[2] Institute of Marine and Environmental Sciences, Faculty of Physical, Mathematical and Natural Sciences, University of Szczecin. Polish Society of Bioinformatics and Data Science BIODATA, Szczecin

Abstract:
Artificial intelligence (AI) presents opportunities for understanding and addressing the complex interactions between human societies and ecosystems. This short communication explores the integration of AI in socioecology, focusing on urban planning, environmental justice, human-wildlife conflict management, sustainable consumption, community engagement, and policy development. By leveraging AI technologies, socioecologists can identify patterns and trends, inform decision-making, and promote sustainable and equitable development.
Keywords: Artificial Intelligence, socioecology

Introduction:

Socioecology is an interdisciplinary field that examines the relationships between human societies and ecosystems, seeking to understand how social, cultural, economic, and political factors influence environmental outcomes. As AI continues to advance, its integration into socioecological research and practice offers new insights and solutions for addressing pressing environmental and social challenges. This communication discusses the potential applications of AI in socioecology and their implications for sustainability and equity.

1. Urban Planning:

AI can support sustainable urban planning by analyzing large datasets on population growth, land use, transportation, and environmental conditions. AI-driven models can help urban planners design resilient and sustainable cities, optimize green spaces, reduce pollution, and improve overall quality of life for urban residents.

(Sanchez et al., 2022)

2. Environmental Justice:

AI can contribute to environmental justice by identifying patterns of environmental inequality, such as the disproportionate exposure to pollution and access to green spaces among marginalized communities. By analyzing socio-demographic and environmental data, AI can inform targeted interventions and policies aimed at reducing disparities and promoting equitable distribution of environmental benefits and burdens.

(Varadarajan et al., 2022)

3. Human-Wildlife Conflict Management:

AI-powered image recognition and predictive modeling can support the management of human-wildlife conflicts by identifying high-risk areas and providing early warning systems. By analyzing data on wildlife movement, land use, and human activities, AI can inform the development of mitigation strategies and promote coexistence between humans and wildlife.

(Bing Pan et al. 2022)

4. Sustainable Consumption:

AI can support sustainable consumption by analyzing patterns of resource use, waste generation, and consumer behavior. AI-driven models can provide insights into the environmental and social impacts of consumption, inform the development of sustainable products and services, and promote responsible consumption patterns among individuals and communities.

(Ahmad et al., 2021)

5. Community Engagement:

AI can enhance community engagement in socioecological research and practice by facilitating the analysis and visualization of complex data, making it accessible and understandable to a wide range of stakeholders. AI-driven platforms can also support citizen science initiatives and participatory decision-making processes, empowering communities to take an active role in shaping their environments.

(Havrda, 2020)

6. Policy Development:

AI can inform policy development by providing evidence-based insights into the effectiveness of various socioecological interventions and strategies. By analyzing large-scale data on policy outcomes, AI can help identify best practices and inform the design of adaptive and context-specific policies that promote sustainability and equity.

(Valle-Cruz et al., 2019)

Conclusion:

Artificial intelligence offers significant potential for advancing socioecological research and practice by providing insights into the complex interactions between human societies and ecosystems. By integrating AI technologies into socioecology, we can better understand and address pressing environmental and social challenges, ultimately shaping more sustainable and equitable societies for present and future generations.

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СПОСОБИ ОТРИМАННЯ ПРЕПАРАТІВ ГОРМОНІВ ДЛЯ ЗАСТОСУВАННЯ У ВЕТЕРИНАРІЇ

Н.В. Двінських, Н.В. Хохленкова

Національний фармацевтичний університет
begunova1203@gmail.com

Гормональні ветеринарні препарати з активними діючими речовинами як природного, так і синтетичного походження займають одне з найважливіших місць в медицині та широко використовуються і у ветеринарній практиці. Дефіцит будь-якого гормону в організмі негативно позначається на функціях систем та органів та може стати причиною розвитку