



BioRisk

Biodiversity & Ecosystem Risk Assessment

BioRisk 20 ♦ 2023

ACTUAL PROBLEMS OF ECOLOGY
 Edited by Stepka Chankova, Kalina Danova, Michaela Beltcheva, Galina Radeva, Ventsislava Petrova, Kiril Vassilev

The annual "International Seminar of Ecology – 2022" was held online on the 29–30th of September, and was dedicated to the International Year of Basic Sciences for Sustainable Development 2022. It brought together students, early-career researchers, and experienced scientists. Contributions on the following topics were presented at the Seminar:

- Biodiversity and Conservation biology;
- Biotic and abiotic impact on the living nature; Ecological risk; Bioremediation;
- Ecosystem research and services; Landscape ecology;
- Ecological agriculture; Ecological education.

Over the two days, there were discussions on problems concerning biodiversity and conservation biology, biotic and abiotic impact on the living nature, ecological risk, ecosystem research and services, as well as ecological agriculture and ecological education.

A total of eight plenary lectures, nine oral presentations, and twenty posters were presented by scientists working in Bulgaria, Egypt, Italy, Russia, and Hungary.

Full texts of the contributions presented at the Seminar which were recommended by the reviewers will be published in a special issue of BioRisk entitled "Actual problems of Ecology".

The "International Seminar of Ecology – 2022" was organized by the Union of Scientists of Bulgaria, Section "Biology" and by the Institute of Biodiversity and Ecosystem Research of the Bulgarian Academy of Science, with the financial support of Ltd Pensoft and BULGAP Ltd.

ACTUAL PROBLEMS OF ECOLOGY

EDITED BY

STEPHKA CHANKOVA, KALINA DANOVA,
 MICHAELA BELTCHEVA, GALINA RADEVA,
 VENTSISLAVA PETROVA, KIRIL VASSILEV



BioRisk 20 ♦ 2023
 Special Issue

<http://biorisk.pensoft.net>



<http://biorisk.pensoft.net>

 PENSOFT



A peer-reviewed open-access journal

BioRisk
Biodiversity & Ecosystem Risk Assessment

For those who want their work rapidly known to the World !

Editor-in-Chief

Josef Settele
Helmholtz Centre for
Environmental Research-UFZ
Theodor-Lieser-Street 4, D 06120, Halle
Germany
E-mail: josef.settele@ufz.de

Managing Editor

Lyubomir Penev
Institute of Biodiversity and Ecosystem Research
Bulgarian Academy of Sciences
Yurii Gagarin Street 2
1700 Sofia, Bulgaria
E-mail: info@pensoft.net

Editorial Board: <http://biorisk.pensoft.net/board>

Focus and Scope

BioRisk is a peer-reviewed, open-access, rapid online journal launched to publish research of biodiversity and ecosystem risks and opportunities caused by global change and local factors.

BioRisk publishes papers in environmental science describing and analyzing risks and opportunities for biodiversity and ecosystems in any part of the world.

BioRisk shall accept manuscripts related to the following topics:

- Risks and consequences for biodiversity and ecosystems caused by:
 - Socio-economic developments (drivers & pressures);
 - Land use and habitat fragmentation (agriculture, forestry etc.);
 - Landscape planning and infrastructures;
 - Climate change;
 - Environmental pollution (ecotoxicology, eutrophication, nitrogen deposition etc.);
 - Loss in ecosystem services (pollination, biological control, soil conservation and restoration etc.);
 - Biological invasions;
- Methods and tools for biodiversity risk assessment;
- Uncertainty in risk assessments;
- Environmental Impact Assessment (EIA);
- Ecological expertise, expert systems and evidence based assessments;
- Goods and services at risk;
- Free topics in relation to risk assessment.

ISBN numbers will be assigned to monographs, collections of papers, Festschrift volumes, atlases.

All content is Open Access distributed under the terms of the *Creative Commons Attribution License*, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. Authors are thus encouraged to post the pdf files of published papers on their homepages or elsewhere to expedite distribution.

Editorial Office

Pensoft Publishers
Prof. Georgi Zlatarski 12, 1700 Sofia, Bulgaria. Tel. +359-2-8704281, Fax +359-2-8704282
E-mail: biorisk@pensoft.net

AUTHOR GUIDELINES

Authors are kindly requested to submit their manuscript *only* through the online submission module at <http://biorisk.pensoft.net/>. In case of difficulties with the submission procedure, please contact [biorisk@pensoft.net](mailto: biorisk@pensoft.net). Full text of author guidelines is available at: <http:// biorisk.pensoft.net/>

EXCERPTS FROM THE GUIDELINES

BODY TEXT. All papers must be in English, checked by a native English-speaking colleague (if author(s) is/are not native English speaker(s)). Write with precision, clarity, and economy: use the active voice and first person whenever appropriate.

WEB (HTML) LINKS. Authors may include links to other Internet resources in their article. This is especially encouraged in the reference section. When inserting a reference to a web-page, please include the **http://** portion of the address.

CITATIONS WITHIN THE TEXT. Before submitting the manuscript, check each citation in the text against the **References** to ensure that they match exactly. Delete citations from the list if they are not actually cited in the text of the article. Citations in the text should be formatted as follows: (Smith 1990) or (Smith et al. 1998; Brock and Gunderson 2001; Felt 2006).

REFERENCES. It is crucial to properly format the references, because all references will be linked electronically as much as possible to the papers they cite. For all references, list all authors. You can include a **DOI** number for the full-text article as an alternative to or in addition to traditional volume and page numbers. Please use the following style for the reference list:

Published Papers: Polaszek A, Alonso-Zarazaga M, Bouchet P, Brothers DJ, Evenhuis NL, Krell FT, Lyal CHC, Minelli A, Pyle RL, Robinson N, Thompson FC,

van Tol J (2005) ZooBank: the open-access register for zoological taxonomy: Technical Discussion Paper. *Bulletin of Zoological Nomenclature* 62: 210-220.
Accepted Papers: Same as above, but "in press" appears instead the page numbers.

Electronic Journal Articles: Thuiller W, Araújo MB, Pearson RG, Whittaker R J, Brotons L, Lavorel S (2004) Biodiversity conservation – Uncertainty in predictions of extinction risk. *Nature* 430: doi:10.1038/nature02716.

Paper within conference proceedings: Orr AG (2006) Odonata in Bornean tropical rain forest formations: Diversity, endemism and applications for conservation management. In: Cordero Rivera A (Ed) *Forest and Dragonflies. Fourth WDA International Symposium of Odonatology*, Pontevedra (Spain), July 2005. Pensoft Publishers, Sofia-Moscow, 51–78.

Book Chapters: May RM, Lawton JH, Stork NE (1995) Assessing extinction rates. In: Lawton JH, May RM (Eds) *Extinction rates*. Oxford University Press, New York, 1–24.

Books: Hanski I (2005) *The shrinking world: Ecological consequences of habitat loss*. International Ecological Institute, Oldendorf/Luhe, 307 pp.

Book with institutional author: European Environment Agency (2005) *Vulnerability and Adaptation to Climate Change in Europe*. EEA Technical Report 7/2005, 84 pp.

PhD thesis: Kawanishi K (2002) *Population status of tigers (Panthera tigris) in a primary rainforest of Peninsular Malaysia*. PhD thesis, Gainesville: University of Florida.

Link/URL: BBC News: Island leopard deemed new species. [<http://news.bbc.co.uk/>]. [accessed 3.VI.2008]

CITATIONS OF PUBLIC RESOURCE DATABASES: It is highly recommend-

ed all appropriate datasets, images, and information to be deposited in public resources. Please provide the relevant accession numbers (and version numbers, if appropriate). Accession numbers should be provided in parentheses after the entity on first use. Examples of such databases include, but are not limited to:

- Morphbank (www.morphbank.net),
- Genbank (www.ncbi.nlm.nih.gov/Genbank),
- BarCode (www.barcodinglife.org)

Providing accession numbers allows linking to and from established databases and integrates your article with a broader collection of scientific information. Please list all accession numbers directly **after the References**.

OPEN ACCESS FEES. Publication fees in open access journals ensure a barrier-free distribution of your paper at no charge for the readers and include costs involved in processing, formatting, publishing, indexing and archiving your paper.

The journal charges Open Access Publication Fee of EURO 20 per page for papers of less than 40 printed pages; minimum EUR 200 for papers smaller than 10 pages. Publication fees for papers larger than 40 pages can be negotiated with the Managing Editor.

Open Access Publication Fees are usually covered by institutional funds and grants. Discounts/waivers can be requested by private and retired scientists, scientists from low- and middle-level income countries, post-graduate students, especially in case of exceptionally good manuscripts.

Discounts will be offered also to scientists who actively participate in the reviewing and editing process.

PRINTED VERSION. Offprints and printed issues of the journal can be purchased additionally (see journal's website). For standing orders/subscriptions please contact the Managing Editor.