

TABLE OF CONTENTS

•	Description	p.1
•	Audience	p.2
•	Impact Factor	p.2
•	Abstracting and Indexing	p.2
•	Editorial Board	p.3
•	Guide for Authors	p.6



ISSN: 0269-7491

DESCRIPTION

Environmental Pollution is an international journal that seeks to publish papers that report results from original, novel research that addresses significant environmental pollution issues and problems and contribute new knowledge to science.

The editors welcome high quality papers where the pollutants are clearly defined and measured and can be directly related to biological, ecological, and human health effects. This includes air, water, and soil pollution and climate change. New techniques for the study and measurement of pollutants and their effects are also encouraged as well as papers on new types of environmental challenges such as pollution/antibiotic resistances of organisms. Emerging pollutions are of eminent interest, such as microplastics, electronic wastes, light or noise pollution as long as they can clearly be related to the biological effects mentioned above. Papers must be process-orientated and/or hypotheses-based to be considered for publication. Papers based on field studies are given priority for publication over micro/meso cosmos studies.

Papers, such as meta analyses, that report findings from re-examination and interpretation of existing data are welcome. Modeling papers are welcome only to a certain extent, i.e., they must be related to a specific pollution issue or process that is potentially of ecological and/or human health implications. Critical review papers and commentaries are also of high interest as are letters to the editor.

The editors do not wish to publish papers that describe results from routine surveys and monitoring programs that are primarily of local or regional interest. Descriptions of well-known pollutants, such as legacy pollutants, in yet another location are not of interest. Papers about sewage, waste and wastewater treatment and management as well as standard techniques in agronomy, remediation, biomonitoring, bioremediation and phytoremediation are not acceptable. However, papers on innovative techniques to combat regional or global problems are welcome; however, technical studies must show their field applicability.

Furthermore, the editors discourage submission of papers which describe analytical methods, laboratory experiments, food science studies, screening of new plant/animal/microorganism species for effect assessments and testing known pollution and chemicals in another setting. Eutrophication studies and secondary pollution by eutrophication are not covered by *Environmental Pollution*. In the same line, papers on ocean enrichment by CO₂ will not be accepted.

The abstract (up to 300 words), highlights and conclusions of papers in this journal must contain clear and concise statements. A graphical abstract is mandatory. A cover letter must be accompanied

with each submission, containing clear and concise statements as to why the study was done and how readers will benefit from the results.

Articles submitted for publication in *Environmental Pollution* should establish connections among research findings with implications for environmental quality, ecological health, and/or human health. The cover letter must explicitly express how the submission fits the Aims and Scope of Environmental Pollution. Failure to include the paragraph will result in returning the paper to the author.

The editors welcome the following contributions:

- *Full research papers*: Results from completed investigations reporting original and previously unpublished work.
- *Short communications*: A brief communication of urgent matter or the reporting of preliminary findings to be given expedited publication.
- *Review papers*: In-depth critical reviews of special subjects. Authors planning reviews should contact one of the editors prior to submission.
- *Commentaries*: Opinions and concerns about current scientific issues, invited or unsolicited
- *Letters to the Editor*: Short focused letters to raise issues or concerns about papers published in the journal and solicit a reply from the authors of those papers
- *Special Issues*. Special Issues will be published on emerging thematic issues and innovative conferences. An Editor or Associate Editor should be contacted early in the conference planning process to get approval and for guidelines on special issues of the journal. Furthermore, the Editors or Associate Editors will invite leading experts as Guest Editors for Special Issues.

Editors-in-Chief: D.O. Carpenter & Eddy Y. Zeng

AUDIENCE

Pollution research workers including chemists, toxicologists, environmentalists, conservationists, botanists, marine scientists, ecologists, biologists.

IMPACT FACTOR

2015: 4.839 © Thomson Reuters Journal Citation Reports 2016

ABSTRACTING AND INDEXING

AGRICOLA
Air Pollution Control Association Journal
Biological and Agricultural Index
Current Contents/Agriculture, Biology & Environmental Sciences
MEDLINE®
EMBASE
Energy Information Abstracts
Environmental Periodicals Bibliography
GeoSciTech
SCISEARCH
Science Citation Index
Scopus

EDITORIAL BOARD

Co-Editors-in-Chief:

David Carpenter, State University of New York (SUNY) at Albany, Rensselaer, New York, USA

Eddy Zeng, Jinan University, Guangzhou, China

Associate Editors:

Da Chen, Southern Illinois University at Carbondale, Carbondale, Illinois, USA

Environmental chemistry; Analytical chemistry; Ecotoxicology; Persistent organic pollutants; Flame retardants; Pesticides; Mass spectrometry; Gas/liquid chromatography.

Maria Cristina Fossi, Università di Siena, Siena, Italy

Kimberly Hageman, University of Otago, Dunedin, New Zealand

Organic Synthesis and Biological Chemistry, Materials and Polymers; Inorganic; Supramolecular and Coordination Chemistry, Environmental Chemistry and Geochemistry, Theory and modelling, Physical Chemistry and Spectroscopy

Sarah Harmon, University of South Carolina Aiken, Aiken, South Carolina, USA

Aquatic toxicology; Water pollution; Heavy metals toxicity; Fecal coliform pollution; Mercury toxicity.

Klaus Kümmerer, Leuphana Universität Lüneburg, Lüneburg, Germany

Bernd Nowack, Swiss Federal Laboratories for Materials Science and Technology, St. Gall, Switzerland

Yong Sik Ok, Kangwon National University, Chuncheon, The Republic of Korea

Soil pollution; Soil remediation; Heavy metals in the environment; Waste management; Bioavailability of Emerging Contaminant; Bioenergy and value-added products; Biochar and soil organic matter; Phytoremediation

Jörg Rinklebe, University of Wuppertal, Wuppertal, Germany

Soils, sediments, waters, plants, and their pollutions (in particular trace elements and nutrients) and linked biogeochemical issues with a special focus in redox chemistry; Remediation of soils and soil microbiology

Frank von Hippel, Northern Arizona University, Flagstaff, Arizona, USA

Perchlorate, OC pesticides, PCBs, PBDEs, PFCs, toxic metals (mercury, manganese, copper, arsenic) Ecotoxicology research incorporates molecular (gene expression), organismal (endocrine disruption, developmental disruption, behavior), and ecological approaches (stable isotopes) to solve problems in conservation biology and environmental health. A critical component of several of my larger research projects is community-based participatory research (CBPR) with indigenous people.

Wen-Xiong Wang, Hong Kong University of Science and Technology, Kowloon, Hong Kong

Metal Pollution, Metal Ecotoxicology, Metal Biogeochemistry, Metal Bioavailability Metal bioaccumulation, Metal toxicity, Environmental processes of metals, Bio monitoring, Biomarkers, Bioassays.

Charles Wong, University of Winnipeg, Winnipeg, Manitoba, Canada

Baoshan Xing, University of Massachusetts, Amherst, Massachusetts, USA

Editorial Board:

Dula Amarasingiwardena, Hampshire College, Amherst, Massachusetts, USA

Metal Pollution Environmental trace metal determination (ICP-MS, LA-ICP-MS) Metal chemical speciation Toxic metals in soils Tissue level elemental bioimaging Nanoparticles in Environment Environmental remediation -metals Humic substances in the environment

Allen Barker, University of Massachusetts, Amherst, Massachusetts, USA

Nigel Bell, Imperial College London, Kensington, London, UK

Effects of air pollution on managed and natural ecosystems; radioecology; waste management

Thomas Borch, Colorado State University, Fort Collins, Colorado, USA

Hydraulic fracturing, emerging contaminants, uranium mining, and carbon sequestration

Birgit Braune, Carleton University, Ottawa, Ontario, Canada

Arctic, marine ecosystems, birds, metals, organo-compounds, biomonitoring, biological effects

Juergen Burkhardt, University of Bonn, Germany

Andrzej Bytnerowicz, U.S. Department of Agriculture (USDA), Forest Service, Riverside, California, USA

Air pollution; monitoring; ozone; atmospheric deposition of nitrogen and sulfur; critical loads; impacts of wildland fires on air quality; evaluation of forest health; interactive effects of air pollution and climate change on terrestrial ecosystem; ambient air quality standards; passive samplers.

Art Chappelka, Auburn University, Auburn, Alabama, USA

Air pollution and global climate effects to terrestrial ecosystems; native plant community responses (shifts in diversity) to air pollutants and global climate change; plant-stress-air pollution/global climate change interactions; urban ecology and ecosystem services

Thomas Custer, U.S. Geological Survey (USGS), Lacrosse, Wisconsin, USA

Alessandra De Marco, ENEA Centro Ricerche Casaccia, S. Maria di Galeria, Rome, Italy

Impacts of air pollution on vegetation, with particular interest on ozone and nitrogen deposition; climate change and air pollution interactions and their synergistic impacts on ecosystems; integrated assessment modelling for evaluating impacts of policies and measures to reduce air pollution; nitrogen cycle and nitrogen budget and their importance in agricultural field

Marisa Domingos, MutaGen Brasil, Monte Alegre, Ribeirão Preto, Brazil

Environmental pollution and climatic change effects on natural vegetation, particularly in the tropics and subtropics Air-plant-soil interactions in polluted terrestrial ecosystems Physiologic, metabolic, structural/ultrastructural markers of increased plant tolerance against air pollutants and other environmental stressors Disturbances on nutrient dynamics in polluted terrestrial ecosystems Physiognomic/landscape disturbances in polluted terrestrial ecosystems The search of innovative biomonitoring technics for evaluating risks posed by air pollutants Ozone, nitrogen and sulfur oxides, particulate matter, fluorine, trace metals, polycyclic aromatic hydrocarbons

Juerg Fuhrer, AGROSCOPE, Zurich, Switzerland

Air pollution and climate change effects on crops, plant communities and agroecosystems, greenhouse gas fluxes in agricultural systems

Jiming Hao, Tsinghua University, Beijing, China

Marcus Hauck, Georg-August Universität Göttingen, Göttingen, Germany

lichen biology epiphyte biology global change biology metals in forest ecosystems

Magali Houde, Environment Canada, Montreal, Quebec, Canada

Aquatic ecotoxicology, organic pollutants, toxicogenomics, biological effects, zooplankton and fish, bioaccumulation, impacts of waste water treatment plant effluent, emerging flame retardants, polyfluoroalkyl substances, marine mammals

Harri Kankaanpää, Finnish Institute of Marine Research, Helsinki, Finland

Takayoshi Koike, Hokkaido University, Sapporo, Japan

physiological ecology of woody plants (partly including crops) under changing environment (such as elevated ozone, high nitrogen loading, soil acidification, elevated CO₂). My interest is to study on photosynthesis, respiration, growth, allocation of woody plants and plant-insect interaction.

Rai Kookana, CSIRO (The Commonwealth Scientific and Industrial Research Organization), Glen Osmond, South Australia, Australia

Pesticides, Environment Fate, Pharmaceuticals, Soil science, Fullerene nanomaterials

Jamie Lead, University of Birmingham, Birmingham, England, UK

Chunyang Liao, Chinese Academy of Sciences, Yantai, China

Emerging organic contaminants, Endocrine disrupting chemicals, Pesticides, Environmental analytical chemistry, Environmental behavior and fate, Bioavailability, Toxicological effects, and Risk assessment

Daohui Lin, Zhejiang University, Hangzhou, China

aquatic toxicology, heavy metals pollution, constructed wetlands, fecal coliform pollution

Rainer Lohmann, University of Rhode Island, Narragansett, Rhode Island, USA

Passive samplers; POPs, sorption; bioaccumulation; atmospheric chemistry; marine pollution; long-range transport; oceans; black carbon; organic geochemistry

Stefano Loppi, Università degli Studi di Siena, Siena, Italy

Michael Lydy, Southern Illinois University, Carbondale, Illinois, USA

pesticides, toxic effects on aquatic systems, pyrethroid insecticides, bioavailability, desorption-based samplers, sediment-associated organic contaminants, honey bees declines

Shaily Mahendra, University of California at Los Angeles (UCLA), Los Angeles, California, USA

water treatment, environmental microbiology, environmental biotechnology, microbial ecology, enzymes, biodegradation, bioremediation, molecular biology, biomarkers, nano toxicology.

Andy A. Meharg, Queen's University Belfast, Northern Ireland, Belfast, Northern Ireland, UK

Thomas Meinelt, Institute of Freshwater Ecology and Inland Fisheries, Berlin, Germany

Alternative treatments in aquaculture, Impact (and interaction) of humic substances on environment and animals.

Willie Peijnenburg, Universiteit Leiden, Leiden, Netherlands

Risk assessment; Ecological risk assessment; Environmental fate and effect assessment; Nanoparticles; Bioavailability; Metals; Organics; Quantitative Structure-Activity Relationships (QSARs); Transformation of chemical substances; Biodegradation; Abiotic transformations

Elijah J. Petersen, National Institute of Standards and Technology (NIST), Gaithersburg, Maryland, USA

nanomaterials, carbon nanomaterials, standardization, nanoecotoxicity, carbon nanotubes

Stergios Pirintsos, University of Crete, Iraklion, Crete, Greece

"Biomonitoring of air pollution, trace elements and nitrogen using lichens Climate change issues and lichens Lichens and hydrogen production Lichen physiology and pollution Sensitivity issues of lichens Lichen diversity and vegetation in Mediterranean Ecosystems"

Pleijel, Göteborgs Universitet, Göteborg, Sweden

Ozone (effects on vegetation) Carbon dioxide (effects on vegetation) Urban ecology (especially air pollution in relation to vegetation) Temporal and spatial variation in air pollution exposure Crops (especially effects of air pollutants on growth and nutrient content) Deposition of air pollutants Weather and climate dependence of air pollution Climate change effects on crops

Markus Puschenreiter, Universität für Bodenkultur Wien (BOKU), Vienna, Austria

Heavy metals/trace elements in soils and plants, rhizosphere processes involved in metal/trace element acquisition, soil remediation technologies / phytoremediation

Brian Reid, University of East Anglia, Norwich, England, UK

Soil contamination; biochar; pesticides; HOCs; PAHs; PTEs

Dibyendu Sarkar, Stevens Institute of Technology, Hoboken, New Jersey, USA

Environmental Geochemistry, Soil Chemistry, Environmental Quality and Remediation, Human Health Risk Assessment, Green Technology

Jörg Schaller, Universität Bayreuth, Bayreuth, Germany

Nutrient, silicon and metal(loid) cycling; element fixation during litter decomposition; crop plant nutrition and trace element accumulation; invertebrates; silicon effect on metal binding; metal toxicity; carbon turnover; silicon turnover; rare earth element; ecosystem processes; silicon nano particles

Wada Shin-Ichiro, Kyushu University, Fukuoka, Japan

Richard Shore, Centre for Ecology and Hydrology (CEH), Bailrigg, Lancaster, UK

Philip Smith, Texas Tech University, Lubbock, Texas, USA

Ecotoxicology, ecological risk assessment, wildlife toxicology

Stefania Squizzato, Clarkson University, Potsdam, New York, USA

Jordi Sunyer, CREAL, Barcelona, Spain

Filip Tack, Universiteit Gent, Gent, Belgium

Heavy metals, trace element biogeochemistry, dredged materials, soil and sediment remediation, phytoremediation

Shu Tao, Peking University, Beijing, China

Doris Vetterlein, Umweltforschungszentrum (UFZ) Leipzig-Halle GmbH, Halle/Saale, Germany

Zhenyu Wang, Ocean University of China, Qingdao, China

Environmental geochemistry Toxicology

Jason White, Connecticut Agricultural Experimental Station, New Haven, Connecticut, USA

nanotoxicology, food safety, bioremediation and phytoremediation

Paul Williams, Chinese Academy of Sciences (CAS), Beijing, China

1] Toxic trace elements 2] 2D high-resolution chemical imaging 3] Rhizosphere Chemistry/ Soil-plant interactions 4] Diffusive Gradients in thin films (DGT) 5] Arsenic/Selenium Biogeochemistry 6] Bioavailability of metals 7] Human health impacts of arsenic, cadmium and lead 8] Urban & Sustainable agriculture 9] Advanced analytical approaches for contaminant quantification 10] Soil & Water pollution

Bert Wolterbeek, Delft University of Technology, Delft, Netherlands

plant physiology, air pollution (methods, effects), (bio)monitoring, radionuclides, kinetics, dynamics, metals, radioecology

Feng Xiao, University of North Dakota, Grand Forks, North Dakota, USA

Perfluorochemicals (PFCs) and perfluoroalkyl substances (PFASs); Perfluorooctanoate (PFOA) and perfluorooctane sulfonate (PFOS); Biochar, char, soot, black carbon, and activated carbon; Adsorption; Water chemistry; Drinking-water treatment; Emerging contaminants and environmental monitoring; Geographic Information System; Exploratory data analysis; Exposure assessment.

Scott Young, Nottingham, Nottingham, UK

Bioavailability, speciation and mobility of trace metals and radioisotopes in the environment and specifically with the geochemical controls over trace element deficiency and toxicity

Shuzhen Zhang, Chinese Academy of Sciences (CAS), Beijing, China

persistent organic pollutants, bioavailability, plant uptake of organic contaminants, plant uptake of nanoparticles, plant uptake of heavy metals, soil accumulation of contaminants, adsorption mechanisms of organic contaminants, adsorption mechanisms of heavy metals, synchrotron X-ray absorption spectroscopy analysis, metabolism and biotransformation of organic contaminants

Fangjie Zhao, Nanjing Agricultural University, Nanjing, China

Biogeochemistry of trace elements, uptake and detoxification of heavy metals in plants, bioremediation

GUIDE FOR AUTHORS

Your Paper Your Way

We now differentiate between the requirements for new and revised submissions. You may choose to submit your manuscript as a single Word or PDF file to be used in the refereeing process. Only when your paper is at the revision stage, will you be requested to put your paper in to a 'correct format' for acceptance and provide the items required for the publication of your article. There are no strict formatting requirements but all manuscripts must contain the essential elements needed to convey your manuscript, for example Abstract, Keywords, Introduction, Materials and Methods, Results, Conclusions, Artwork and Tables with Captions.

Introduction

Environmental Pollution is an international journal that seeks to publish papers that report results from original, novel research that addresses significant environmental pollution issues and problems and contribute new knowledge to science.

The editors welcome high quality papers where the pollutants are clearly defined and measured and can be directly related to biological, ecological, and human health effects. This includes air, water, and soil pollution and climate change. New techniques for the study and measurement of pollutants are also encouraged. Papers, such as meta analyses, that report findings from re-examination and interpretation of existing data are welcome. Modeling papers are also welcome. Critical review papers are also of interest as are letters to the editor.

The editors do not wish to publish papers that describe results from routine surveys and monitoring programs that are primarily of local interest. Descriptions of well-known pollutants, such as legacy pollutants, in yet another location are not of interest. Papers about sewage, waste and wastewater treatment and management, agronomy, remediation, biomonitoring, bioremediation and phytoremediation are not acceptable.

It is unnecessary to ask for permission to the Editor in Chief before submitting manuscript. Kindly check the guidelines and see if your paper is within the scope of the journal, if yes, please go ahead and submit it..

Types of paper

- *Full Research Papers:* Full Research Papers should not exceed 8000 words (including abstract, Figures and tables but excluding references).

- *Short Communications:* These follow the same format as full papers, except that Results and Discussion sections should be combined. Manuscripts should not exceed 5000 words.

- *Review Papers:* Authors may submit manuscripts that provide in-depth critical review of a special subject. These reviews must provide a Synthesis and Critical Evaluation of the state of the knowledge of the subject and indicate research directions. The Editors also periodically invite review articles. Manuscripts should not exceed 10,000 words.

- *Discussion:* Discussion (commentary) papers may be submitted that express opinions and concerns, suggest research priorities and question conventional methodologies and conclusions. Manuscripts should include an Abstract, Introduction, Presentation of the Concerns or Analysis and Conclusions. References, Tables and Illustrations should be used sparingly. The manuscript should not exceed 12 double-spaced pages. The Editors will evaluate all manuscripts, for suitability of publication.

- *Correspondence:* Readers are encouraged to write to any of the Editors (Letter to Editor) and raise issues and concerns about papers published in the journal. Editors or authors will reply to letters.

- *Special Issues:* Proposals for Special Issues of Full Research Papers that focus on a specific topic or theme will also be considered. Special Issues will be published on emerging thematic issues and innovative conferences. An Editor or Associate Editor should be contacted early in the conference planning process to get approval and for guidelines on special issues of the journal. Furthermore, the Editors or Associate Editors will invite leading experts as Guest Editors for Special Issues.

Please note that the word count includes main text, figures, tables and not the reference list. **Each small table or figure counts for 300 words, and large tables or multiple panel figures may count for 600 or even more words.**

BEFORE YOU BEGIN

Ethics in publishing

Please see our information pages on [Ethics in publishing](#) and [Ethical guidelines for journal publication](#).

Declaration of interest

All authors are requested to disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations within three years of beginning the submitted work that could inappropriately influence, or be perceived to influence, their work. [More information](#).

Submission declaration and verification

Submission of an article implies that the work described has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis or as an electronic preprint, see '[Multiple, redundant or concurrent publication](#)' section of our ethics policy for more information), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify originality, your article may be checked by the originality detection service [CrossCheck](#).

Changes to authorship

Authors are expected to consider carefully the list and order of authors **before** submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only **before** the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the **corresponding author**: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed.

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors **after** the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

Article transfer service

This journal is part of our Article Transfer Service. This means that if the Editor feels your article is more suitable in one of our other participating journals, then you may be asked to consider transferring the article to one of those. If you agree, your article will be transferred automatically on your behalf with no need to reformat. Please note that your article will be reviewed again by the new journal. [More information](#).

Copyright

Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (see [more information](#) on this). An e-mail will be sent to the corresponding author confirming receipt of the manuscript together with a 'Journal Publishing Agreement' form or a link to the online version of this agreement.

Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. [Permission](#) of the Publisher is required for resale or distribution outside the institution and for all other derivative works, including compilations and translations. If excerpts from other copyrighted works are included, the author(s) must obtain written permission from the copyright owners and credit the source(s) in the article. Elsevier has [preprinted forms](#) for use by authors in these cases.

For open access articles: Upon acceptance of an article, authors will be asked to complete an 'Exclusive License Agreement' ([more information](#)). Permitted third party reuse of open access articles is determined by the author's choice of [user license](#).

Author rights

As an author you (or your employer or institution) have certain rights to reuse your work. [More information](#).

Elsevier supports responsible sharing

Find out how you can [share your research](#) published in Elsevier journals.

Role of the funding source

You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement then this should be stated.

Funding body agreements and policies

Elsevier has established a number of agreements with funding bodies which allow authors to comply with their funder's open access policies. Some funding bodies will reimburse the author for the Open Access Publication Fee. Details of [existing agreements](#) are available online.

Open access

This journal offers authors a choice in publishing their research:

Open access

- Articles are freely available to both subscribers and the wider public with permitted reuse.
- An open access publication fee is payable by authors or on their behalf, e.g. by their research funder or institution.

Subscription

- Articles are made available to subscribers as well as developing countries and patient groups through our [universal access programs](#).
- No open access publication fee payable by authors.

Regardless of how you choose to publish your article, the journal will apply the same peer review criteria and acceptance standards.

For open access articles, permitted third party (re)use is defined by the following [Creative Commons user licenses](#):

Creative Commons Attribution (CC BY)

Lets others distribute and copy the article, create extracts, abstracts, and other revised versions, adaptations or derivative works of or from an article (such as a translation), include in a collective work (such as an anthology), text or data mine the article, even for commercial purposes, as long as they credit the author(s), do not represent the author as endorsing their adaptation of the article, and do not modify the article in such a way as to damage the author's honor or reputation.

Creative Commons Attribution-NonCommercial-NoDerivs (CC BY-NC-ND)

For non-commercial purposes, lets others distribute and copy the article, and to include in a collective work (such as an anthology), as long as they credit the author(s) and provided they do not alter or modify the article.

The open access publication fee for this journal is **USD 3000**, excluding taxes. Learn more about Elsevier's pricing policy: <https://www.elsevier.com/openaccesspricing>.

Green open access

Authors can share their research in a variety of different ways and Elsevier has a number of green open access options available. We recommend authors see our [green open access page](#) for further information. Authors can also self-archive their manuscripts immediately and enable public access from their institution's repository after an embargo period. This is the version that has been accepted for publication and which typically includes author-incorporated changes suggested during submission, peer review and in editor-author communications. Embargo period: For subscription articles, an appropriate amount of time is needed for journals to deliver value to subscribing customers before an article becomes freely available to the public. This is the embargo period and it begins from the date the article is formally published online in its final and fully citable form. [Find out more](#).

This journal has an embargo period of 24 months.

Elsevier Publishing Campus

The Elsevier Publishing Campus (www.publishingcampus.com) is an online platform offering free lectures, interactive training and professional advice to support you in publishing your research. The College of Skills training offers modules on how to prepare, write and structure your article and explains how editors will look at your paper when it is submitted for publication. Use these resources, and more, to ensure that your submission will be the best that you can make it.

Language (usage and editing services)

Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the [English Language Editing service](#) available from Elsevier's WebShop.

Submission

*** Manuscript Submission**

The complete manuscript can be submitted via Editorial system (EVISE) at <http://www.ees.elsevier.com/envpol>, following all instructions exactly.

Complete manuscripts received via EVISE will be further evaluated by an Editor. **Authors are requested to choose an editor most appropriate to their research field during the submission process in the "Provide additional information tab" during the submission process.** This final evaluation will determine whether or not a manuscript will be sent out for review.

Submission to this journal proceeds totally online and you will be guided stepwise through the creation and uploading of your files. The system automatically converts source files to a single PDF file of the article, which is used in the peer-review process. Please note that even though manuscript source files are converted to PDF files at submission for the review process, these source files are needed for further processing after acceptance. All correspondence, including notification of the Editor's decision and requests for revision, takes place by e-mail removing the need for a paper trail.

Revised Submission: While submitting, the revised submission, please ensure to remove all the old files pertaining to the original submission and make sure to have the "Revised Manuscript" under the manuscript category along with the respective figures\Tables\GA\Highlights. Please note that authors have a maximum of 6 weeks to resubmit a revised manuscript, unless an extension is requested from the editor.

The resubmission of previously rejected manuscripts is by invitation only.

Referees

Please submit, with the manuscript, the names, addresses and e-mail addresses of five potential referees who are well-qualified to review the manuscript, if they are asked to review it. Reviewers are asked to evaluate the originality, significance and technical quality of the work, as well as the clarity of the manuscript, and the relevance of the subject matter to the journal. The final decision for publication of all manuscripts is made by the Editor-in-Chief.

PREPARATION

NEW SUBMISSIONS

Submission to this journal proceeds totally online and you will be guided stepwise through the creation and uploading of your files. The system automatically converts your files to a single PDF file, which is used in the peer-review process.

As part of the Your Paper Your Way service, you may choose to submit your manuscript as a single file to be used in the refereeing process. This can be a PDF file or a Word document, in any format or layout that can be used by referees to evaluate your manuscript. It should contain high enough quality figures for refereeing. If you prefer to do so, you may still provide all or some of the source files at the initial submission. Please note that individual figure files larger than 10 MB must be uploaded separately.

Line numbering: Authors are requested to enter continuous line numbering in their manuscript text files before uploading their source files here which will prevent errors of line numbers getting embedded with the text while the PDF is built.

only YPYW (Your Paper Your Way)

Reference Formatting: There are no strict requirements on reference formatting at submission. References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book

chapter and the pagination must be present. Use of DOI is highly encouraged. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct.

[dataset] Oguro, M., Imahiro, S., Saito, S., Nakashizuka, T., 2015. Mortality data for Japanese oak wilt disease and surrounding forest compositions. Mendeley Data, v1. <http://dx.doi.org/10.17632/xwj98nb39r.1>.

only YPYW (Your Paper Your Way)

Formatting requirements: There are no strict formatting requirements but all manuscripts must contain the essential elements needed to convey your manuscript, for example **Abstract, Keywords, Introduction, Materials and Methods, Results, Conclusions, Artwork and Tables with Captions**.

If your article includes any Videos and/or other Supplementary material, this should be included in your initial submission for peer review purposes.

Divide the article into clearly defined sections. Please ensure your paper has consecutive line numbering - this is an essential peer review requirement.

Figures and tables embedded in text

Please ensure that any figures and tables included in the single file are placed at the end of the main text in the manuscript. If your article includes any Videos and/or other Supplementary material, this should be included in your initial submission for peer review purposes.

REVISED SUBMISSIONS

Use of word processing software

Regardless of the file format of the original submission, at revision you must provide us with an editable file of the entire article. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the [Guide to Publishing with Elsevier](#)). See also the section on Electronic artwork.

To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

Cover Letter

A cover letter must be sent with the manuscript and must include:

- The novelty, scientific significance and importance of the manuscript.
- The names and valid, current e-mail addresses[institutional email addresses ONLY] for five (5) potential reviewers who are well-qualified to review the manuscript if they are asked to review it. Potential reviewers should be from the international scientific community and not from one country or region.
- The name and e-mail address [institutional email addresses ONLY] of the corresponding author.

Article structure

Subdivision - unnumbered heads

Divide your article into clearly defined sections. Each subsection is given a brief heading. Each heading should appear on its own separate line. Subsections should be used as much as possible when cross-referencing text: refer to the subsection by heading as opposed to simply "the text".

Introduction

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

Material and methods

Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described.

Results

Results should be clear and concise.

Discussion

This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

Conclusions

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

Essential title page information

- **Title.** Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.
- **Author names and affiliations.** Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author. **Authors are requested to provide only institutional email addresses.**
- **Corresponding author.** Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. **Environmental Pollution discourages multiple corresponding authors from the same institute. Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.**
- **Present/permanent address.** If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

Abstract

A concise and factual abstract is required. (*maximum length 300 words*).

The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

Capsule: In addition to the abstract for the manuscript, authors are required to submit a one- sentence statement that describes the significance of their work to the rest of the scientific community. When necessary, the capsule may be edited before publication.

Graphical abstract

A Graphical abstract is mandatory for this journal. It should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership online. Authors must provide images that clearly represent the work described in the article. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: please provide an image with a minimum of 531 × 1328 pixels (h × w) or proportionally more. The image should be readable at a size of 5 × 13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. See <https://www.elsevier.com/graphicalabstracts> for examples.

Authors can make use of Elsevier's Illustration and Enhancement service to ensure the best presentation of their images also in accordance with all technical requirements: [Illustration Service](#).

Highlights

Highlights are mandatory for this journal. They consist of a short collection of bullet points that convey the core findings of the article and should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point). You can view [example Highlights](#) on our information site.

Keywords

Keywords: Immediately after the abstract, provide a maximum of 5 keywords, avoiding general and plural terms and multiple concepts (avoid, for example, "and", "of"). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. Note that these keywords will be used for indexing purposes.

Acknowledgements

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

Formatting of funding sources

List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, please include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Units

Units and symbols: The SI system should be used for all scientific and laboratory data: if in certain instance, it is necessary to quote other units, these should be added in parentheses. Temperatures should be given in degrees Celsius.

Footnotes

Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors build footnotes into the text, and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article.

Electronic artwork

General points

- Make sure you use uniform lettering and sizing of your original artwork.
- Preferred fonts: Arial (or Helvetica), Times New Roman (or Times), Symbol, Courier.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Indicate per figure if it is a single, 1.5 or 2-column fitting image.
- For Word submissions only, you may still provide figures and their captions, and tables within a single file at the revision stage.
- Please note that individual figure files larger than 10 MB must be provided in separate source files. A detailed [guide on electronic artwork](#) is available.

You are urged to visit this site; some excerpts from the detailed information are given here.

Formats

Regardless of the application used, when your electronic artwork is finalized, please 'save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):

EPS (or PDF): Vector drawings. Embed the font or save the text as 'graphics'.

TIFF (or JPG): Color or grayscale photographs (halftones): always use a minimum of 300 dpi.

TIFF (or JPG): Bitmapped line drawings: use a minimum of 1000 dpi.

TIFF (or JPG): Combinations bitmapped line/half-tone (color or grayscale): a minimum of 500 dpi is required.

Please do not:

- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); the resolution is too low.
- Supply files that are too low in resolution.
- Submit graphics that are disproportionately large for the content.

Color artwork

Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF), or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear

in color online (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. **For color reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article.** Please indicate your preference for color: in print or online only. [Further information on the preparation of electronic artwork.](#)

Figure captions

Ensure that each illustration has a caption. A caption should comprise a brief title (**not** on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

Tables

Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

References

Responsibility for the accuracy of bibliographic citations lies entirely with the authors.

Citation in text

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

Reference links

Increased discoverability of research and high quality peer review are ensured by online links to the sources cited. In order to allow us to create links to abstracting and indexing services, such as Scopus, CrossRef and PubMed, please ensure that data provided in the references are correct. Please note that incorrect surnames, journal/book titles, publication year and pagination may prevent link creation. When copying references, please be careful as they may already contain errors. Use of the DOI is encouraged.

A DOI can be used to cite and link to electronic articles where an article is in-press and full citation details are not yet known, but the article is available online. A DOI is guaranteed never to change, so you can use it as a permanent link to any electronic article. An example of a citation using DOI for an article not yet in an issue is: VanDecar J.C., Russo R.M., James D.E., Ambeh W.B., Franke M. (2003). Aseismic continuation of the Lesser Antilles slab beneath northeastern Venezuela. *Journal of Geophysical Research*, <https://doi.org/10.1029/2001JB000884>. Please note the format of such citations should be in the same style as all other references in the paper.

Web references

As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

Data references

This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

Reference management software

Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support [Citation Style Language styles](#), such as [Mendeley](#) and [Zotero](#), as well as [EndNote](#). Using the word processor plug-ins from these products, authors only need to select the appropriate journal template when preparing their

article, after which citations and bibliographies will be automatically formatted in the journal's style. If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide.

Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link:

<http://open.mendeley.com/use-citation-style/environmental-pollution>

When preparing your manuscript, you will then be able to select this style using the Mendeley plugins for Microsoft Word or LibreOffice.

Reference formatting

There are no strict requirements on reference formatting at submission. References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book chapter and the pagination must be present. Use of DOI is highly encouraged. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct. If you do wish to format the references yourself they should be arranged according to the following examples:

Reference style

Name and year style in the text

Text: All citations in the text should refer to:

1. *Single author:* the author's name (without initials, unless there is ambiguity) and the year of publication;
2. *Two authors:* both authors' names and the year of publication;
3. *Three or more authors:* first author's name followed by 'et al.' and the year of publication. Citations may be made directly (or parenthetically). Groups of references should be listed first alphabetically, then chronologically.

Examples: "as demonstrated (Allan, 1996a, 1996b, 1999; Allan and Jones, 1995). Kramer et al. (2000) have recently shown ..."

List: References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters "a", "b", "c", etc., placed after the year of publication. Note that any (consistent) reference style and format may be used: the Publisher will ensure that the correct style for this journal will be introduced for the proof stages, the final print version and the PDF files for electronic distribution.

Examples:

Reference to a journal publication:

Van der Geer, J., Hanraads, J.A.J., Lupton, R.A., 2000. The art of writing a scientific article. *Journal of Scientific Communications* 163, 51-59.

Reference to a book:

Strunk Jr., W., White, E.B., 1979. *The Elements of Style*, third ed. Macmillan, New York. Reference to a chapter in an edited book:

Mettam, G.R., Adams, L.B., 1999. How to prepare an electronic version of your article, in: Jones, B.S., Smith, R.Z. (Eds.), *Introduction to the Electronic Age*. E-Publishing Inc., New York, pp. 281-304.

Video

Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include links to these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the files in one of our recommended file formats with a preferred maximum size of 150 MB. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including [ScienceDirect](#). Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will be used instead of standard icons and will personalize the link to your video data. For more detailed instructions please visit our [video instruction pages](#). Note: since video and animation cannot be embedded in the print version of the journal, please provide text for both the electronic and the print version for the portions of the article that refer to this content.

Supplementary material

Supplementary material such as applications, images and sound clips, can be published with your article to enhance it. Submitted supplementary items are published exactly as they are received (Excel or PowerPoint files will appear as such online). Please submit your material together with the article and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to supplementary material during any stage of the process, please make sure to provide an updated file. Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

Data linking

If you have made your research data available in a data repository, you can link your article directly to the dataset. Elsevier collaborates with a number of repositories to link articles on ScienceDirect with relevant repositories, giving readers access to underlying data that give them a better understanding of the research described.

There are different ways to link your datasets to your article. When available, you can directly link your dataset to your article by providing the relevant information in the submission system. For more information, visit the [database linking page](#).

For [supported data repositories](#) a repository banner will automatically appear next to your published article on ScienceDirect.

In addition, you can link to relevant data or entities through identifiers within the text of your manuscript, using the following format: Database: xxxx (e.g., TAIR: AT1G01020; CCDC: 734053; PDB: 1XFN).

AudioSlides

The journal encourages authors to create an AudioSlides presentation with their published article. AudioSlides are brief, webinar-style presentations that are shown next to the online article on ScienceDirect. This gives authors the opportunity to summarize their research in their own words and to help readers understand what the paper is about. [More information and examples are available](#). Authors of this journal will automatically receive an invitation e-mail to create an AudioSlides presentation after acceptance of their paper.

Interactive plots

This journal enables you to show an Interactive Plot with your article by simply submitting a data file. [Full instructions](#).

Submission checklist

The following list will be useful during the final checking of an article prior to sending it to the journal for review. Please consult this Guide for Authors for further details of any item.

Ensure that the following items are present:

- Please check continuous line numbers are present

One author has been designated as the corresponding author with contact details:

- E-mail address
- Full postal address

All necessary files have been uploaded, and contain:

- Keywords
- All figure captions
- All tables (including title, description, footnotes)

Further considerations

- Manuscript has been 'spell-checked' and 'grammar-checked'
- All references mentioned in the Reference list are cited in the text, and vice versa
- Permission has been obtained for use of copyrighted material from other sources (including the Internet)

Printed version of figures (if applicable) in color or black-and-white

- Indicate clearly whether or not color or black-and-white in print is required.

For any further information please visit our customer support site at <http://support.elsevier.com>.

AFTER ACCEPTANCE

Online proof correction

Corresponding authors will receive an e-mail with a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less error-prone process by allowing you to directly type your corrections, eliminating the potential introduction of errors.

If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF.

We will do everything possible to get your article published quickly and accurately. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. It is important to ensure that all corrections are sent back to us in one communication. Please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

Offprints

The corresponding author will, at no cost, receive a customized [Share Link](#) providing 50 days free access to the final published version of the article on [ScienceDirect](#). The Share Link can be used for sharing the article via any communication channel, including email and social media. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Both corresponding and co-authors may order offprints at any time via Elsevier's [Webshop](#). Corresponding authors who have published their article open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

Additional information

Language editing

Information on author-paid and pre-accept language editing services available to authors can be found at <http://authors.elsevier.com/LanguageEditing.html>.

Online Publication

Your article will appear on Elsevier's online journal database ScienceDirect as an "Article in Press" within approximately 4-6 weeks of acceptance. Articles in Press for this journal can be viewed at <http://www.sciencedirect.com/science/journal/02697491>. An Article in Press may be cited prior to its publication by means of its unique digital object identifier (DOI) number, which does not change throughout the publication process.

AUTHOR INQUIRIES

Visit the [Elsevier Support Center](#) to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch.

You can also [check the status of your submitted article](#) or find out [when your accepted article will be published](#).

© Copyright 2014 Elsevier | <http://www.elsevier.com>