The journal *Climate Services* publishes research with a focus on science-based and user-specific climate information underpinning climate services, ultimately to assist society to adapt to climate change. *Climate Services* brings science and practice closer together. The journal addresses both researchers in the field of climate service research, and stakeholders and practitioners interested in or already applying climate services. It serves as a means of communication, dialogue and exchange between researchers and stakeholders. *Climate services* pioneers novel research areas that directly refer to how climate information can be applied in methodologies and tools for adaptation to climate change.

It publishes best practice examples, case studies as well as theories, methods and data analysis with a clear connection to climate services. The focus of the published work is often multi-disciplinary, case-specific, tailored to specific sectors and strongly application-oriented. To offer a suitable outlet for such studies, Climate Services journal introduced a new section in the research article type. The research article contains a classical scientific part as well as a section with easily understandable practical implications for policy makers and practitioners.

The journal’s focus is on the use and usability of climate information for adaptation purposes underpinning climate services.

The following topics are within the direct scope of the journal:
- The use of climate modelling and climate impact modelling to strengthen climate services;
- Prototypes, climate service tools, concepts and infrastructures for climate services;
- Use of climate services in relation to vulnerability and risk assessment and adaptation;
- Sectoral and cross-sectoral case studies for climate services;
- Development of adaptation and mitigation strategies for climate services;
- Climate adaptation, governance, economic aspects and institutions in support of climate services;
- Climate services studies to identify and overcome barriers to climate change adaptation; 
- Evaluation of climate services;
- The role of climate communication strategies and use of climate information in decision making for climate services;
- Transdisciplinary stakeholder dialogues in connection with climate services; and
- Discussion of current practices (both regarding value creation and value protection - or risks and opportunities) and corresponding recommendations for climate services.
Climate Services, together with its excellent board members, aims to publish high-quality, novel and groundbreaking research pioneering the relatively new field of climate services. The journal ensures its high quality by a thorough peer review process, following international peer review standards. We invite all people working in the field of climate services to consider publishing their work, research results and experiences in the Climate Services journal.

In case you have questions, please do not hesitate to contact us; jclimateservices@hzg.de

What do we mean with climate services?
The journal adopted the definition of climate services from the European Commission’s Roadmap for Climate Services (2015). According to this definition climate services cover “the transformation of climate-related data - together with other relevant information - into customized products such as projections, forecasts, information, trends, economic analysis, assessments (including technology assessment), counselling on best practices development and evaluation of solutions and any other services in relation to climate that may be use for the society at large.”

Hence climate services providers develop science-based and user-specific information relating to past, present and potential future climate and therefore assists society to adapt to climate variability and change. Information about climate, climate change, and impacts on natural and human systems as well as mitigation and adaptation strategies is tailored to the specific user requirements. Climate service users include economic, administrative, political and scientific stakeholders, across sectors and disciplines in society.

Complementary journal
Intending authors should also note that there is a complementary journal: Climate Risk Management. Climate Risk Management focuses on the observation of relationships between climate conditions and consequences in human and/or natural systems across multiple space and time scales; risk assessment and risk management approaches for climate-sensitive sectors such as agriculture, forestry and fire management, health, mining, natural resources management, water management, the built environment, and tourism; analysis of relevant institutional developments and arrangements relevant to adaptation; and the exploration of connections between climate risk management, disaster risk management, and sustainable development.

ABSTRACTING AND INDEXING

Directory of Open Access Journals (DOAJ)
Current Contents - Agriculture, Biology & Environmental Sciences
Current Contents - Social & Behavioral Sciences
Science Citation Index Expanded
Essential Science Indicators
Journal Citation Reports - Science Edition
Journal Citation Reports - Social Science Edition
Current Contents - Physical, Chemical & Earth Sciences
Social Sciences Citation Index
INSPEC

EDITORIAL BOARD

Editor-in-Chief
Daniela Jacob, Helmholtz Centre Geesthacht Centre for Materials and Coastal Research Climate Service Center Germany, Hamburg, Germany
Regional climate change, regional climate modelling; hydrological cycle; adaptation to climate change; climate services, impact and adaptation assessment, extremes

Managing Editor
Gaby Langendijk, Helmholtz Centre Geesthacht Centre for Materials and Coastal Research Climate Service Center Germany, Hamburg, Germany
Juliane Petersen, Helmholtz Centre Geesthacht Centre for Materials and Coastal Research Climate Service Center Germany, Hamburg, Germany
**Associate Editors**

**Tong Jiang**, Beijing Climate Center, Haidian, Beijing, China  
Hydrological Modelling, Impact on Water Resources at Regions and Watershed Basins, Water Resources Management

**Silvina Solman**, University of Buenos Aires, Buenos Aires, Argentina  
Atmospheric Sciences, (regional) Climate Modeling, Regional Climate Change and Variability

**Ioannis Tsanis**, Technical University of Crete School of Environmental Engineering, Chania, Greece  
Management of Water Resources, Environmental Hydraulics, Climate Change - Extreme Events, Coastal Engineering

**Stephen Zebiak**, Columbia University International Research Institute for Climate and Society, Palisades, New York, United States  
Climate dynamics, prediction, climate risk management, climate services

**Editorial Board**

**Glen Anderson**, ABT Associates Inc, Cambridge, Massachusetts, United States  
Climate-Smart Development practice, assessment of climate change risk, benefits and costs of adaptation measures

**Dan Bălteanu**, Institute of Geography, București, Romania  
Geomorphology, environmental change and natural & technological hazards

**Sukaina Bharwani**, Stockholm Environment Institute, Oxford, United Kingdom  
Urban adaptation in southern Africa, connecting communities working on climate change adaptation and disaster risk reduction in Europe, and contributing to the field of climate services

**Laurens Bouwer**, Helmholtz Centre Geesthacht Centre for Materials and Coastal Research Climate Service Center Germany, Hamburg, Germany  
Assessment of climate change influence on extreme weather hazards, specifically flooding; modelling of impacts and damages; and finance options for adaptation, including insurance

**Carlo Buontempo**, European Centre for Medium Range Weather Forecasts, Reading, United Kingdom  
Climate projections, Post processing climate data, monthly to decadal forecasting, climate impacts, regional climate modelling, global climate change; Tropical cyclones, Tropical cyclones, science communication

**Meaghan E. Daly**, University of New England Department of Environmental Studies, Biddeford, Maine, United States  
Interactions between science and society, including the production and use of knowledge to inform climate change adaptation decision-making, planning, and policy. In particular, her research examines processes of co-production and user engagement within the development of climate services

**Bruce Hewitson**, University of Cape Town, Captown, South Africa  
Climate modelling, climate change, regional climate change projections, climate downscaling, interesting analysis methodologies, appropriate technology for Africa and scientific capacity building

**Richard Klein**, Stockholm Environment Institute Bonn, Bonn, Germany  
Role of adaptation in the design and implementation of a global climate policy agreement, societal and institutional challenges to adaptation and to the provision and use of climate services

**Pankaj Kumar**, Indian Institute of Science Education and Research Bhopal Department of Earth and Environmental Sciences, Bhopal, Madhya Pradesh, India  
Meteorology, regional climate modelling, water resources, hydrology, climate variability, monsoon dynamics and variability

**Wolfram Mauser**, Ludwig Maximilians University Munich, Munich, Germany  
Hydrology - model development and process research, remote sensing - quantitative parameter determination and sensor development, global change research - climate impact and regional adaptation, regional and global potentials for sustainable production of biomass for food, energy and industry

**Eddy Moors**, IHE Delft Institute for Water Education, Delft, Netherlands  
Climate change mitigation and adaptation, special focus on water use

**Jaroslav Mysiak**, Fondazione Eni Enrico Mattei, Milan, Italy  

**Carin Nilsson**, Lund University, Lund, Sweden  
Storms and wind damage in forests, climate science communication, climate services, adaptation to a changing climate as well as stakeholder interaction and dialogue initiation

**Jean Palutikof**, Griffith University - Gold Coast Campus, Southport, Queensland, Australia  
Climate change impacts, and the application of climatic data to economic and planning issues

**Massimiliano Pasqui**, Institute of BioEconomy National Research Council Rome Branch, Rome, Italy
Regional modelling for both meteorological and climate applications in assessing impacts and adaptation strategies in agriculture, in disasters risks management support, in drought monitoring and forecasting; seasonal forecasts, future climate scenarios and their impact on agriculture

**Adriaan H. Perrels**, Finnish Meteorological Institute, HELSINKI, Finland
Climate change impact and adaptation analysis, evaluation of weather and climate services, socioeconomic assessments of direct and induced effects of climate change and adaptation policies and measures; - socioeconomic evaluation (cost benefit analysis) of weather and climate services

**Franz Pretenthaler**, Joanneum Research Society, Graz, Austria
Business Economics, Climate Change Adaptation, Climate Change Economics, Climate Change Impacts, Corporate Finance, Financial Accounting and Analysis, Financial Analysis Risk Management, Insurance, Regional Economics, Weather and Climate Services

**Paolo Michele Ruti**, World Meteorological Organization, Geneve, Switzerland
Atmosphere General Circulation, Regional Climate processes, African climate, underpinning science for Climate Services

**Jochen Schanze**, TU Dresden, Dresden, Germany
Man-environment systems from the perspective of environmental impacts and risks of rural and urban land use as well as their societal management and governance, covers the interrelations between process and system simulation, foresight, evaluation, decision support and management strategies of regional and local actors

**Roger B. Street**, University of Oxford Environmental Change Institute, Oxford, United Kingdom
Adaptation, vulnerability and risk assessment, including in the context of supporting assessments at the national level and within sectors, in the development and use of climate data and information to support those assessments

**Buda Su**, Xinjiang Institute of Ecology and Geography, Wulumuqi, China
Climate change impact, hydrological cycle, rivers, water resources, climate change
GUIDE FOR AUTHORS

Types of Articles
The journal Climate Services invites the submission of full length climate service research papers, review articles, perspectives and short communications.

Research papers
Climate Service research papers report the results of original research and its (potential) application. The article consists of a scientific research paper and an additional Practical Implications chapter.

In the research paper (max. 8,000 words excluding references) the scientific background to climate services is provided, consisting, e.g., of the description of methods, models, newly developed theories or the analysis of data.

The practical Implications chapter (max. 1,200 words excluding references) is an easily understandable, stand-alone text where practical aspects of the article are presented. It provides policy makers and practitioners with all relevant information to understand and apply presented climate services. Practical implications could contain e.g. a case study or the practical application of a method. The Practical Implications chapter should be integrated in the research paper directly after the Abstract.

All practical implication for policy makers and practitioners are included in the article, but they will also be distributed separately in a Climate Services Policy and Practitioner Brief, in order to reach a broader audience.

Review articles
Reviews should address topics or issues of current interest. They may be submitted or invited. Review articles are usually up to 12,000 words(excluding references) and must include a Methods section explaining how the literature for review was selected.

Perspectives (please choose article type "discussion" when submitting a "Perspective" paper in EVISE)
These articles provide an opportunity for authors to present a novel, distinctive viewpoint on any subject within the journal’s scope. The article should be well grounded in evidence and adequately supported by citations but may focus on a stimulating and thought-provoking line of argument that represents a significant advance in thinking about climate service problems and solutions. Perspectives articles should not exceed 8,000 words(excluding references).

Short communications
Short communications are meant to highlight important research that is novel or represents highly significant preliminary findings, and should be less than 4,000 words(excluding references).

News
Articles in the news category offer authors the opportunity to introduce organizations working in the field of climate services, to highlight projects and programs which are important for climate services and finally provide a platform to present climate service products. News articles should be less than 2,000 words (incl. figures and excluding references).

Letters to the Editor
Letters to the editor are written in response to a recent article appearing in the journal. Letters should be less than 800 words, with references kept to a minimum (three or fewer references).

Special Issue papers
The journal Climate Services accepts special issue proposals. Please complete the special issue proposal form and send it to the Editor-in-Chief

**Submission checklist**

You can use this list to carry out a final check of your submission before you send it to the journal for review. Please check the relevant section in this Guide for Authors for more details.

**Ensure that the following items 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:

*Manuscript*:
- Include keywords
- All figures (include relevant captions)
- All tables (including titles, description, footnotes)
- Ensure all figure and table citations in the text match the files provided
- Indicate clearly if color should be used for any figures in print

*Graphical Abstracts / Highlights files* (where applicable)

*Supplemental files* (where applicable)

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)
- A competing interests statement is provided, even if the authors have no competing interests to declare
- Journal policies detailed in this guide have been reviewed
- Referee suggestions and contact details provided, based on journal requirements

For further information, visit our [Support Center](https://www.elsevier.com/locate/cliser).

**BEFORE YOU BEGIN**

*Ethics in publishing*

Please see our information pages on Ethics in publishing and Ethical guidelines for journal publication.

*Declaration of competing interest*

All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors should complete the declaration of competing interest statement using this template and upload to the submission system at the Attach/Upload Files step. **Note: Please do not convert the .docx template to another file type. Author signatures are not required.** If there are no interests to declare, please choose the first option in the template. This statement will be published within the article if accepted. [More information](https://www.elsevier.com/locate/cliser).

*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, a published lecture or academic thesis, see 'Multiple, redundant or concurrent publication' 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 Crossref Similarity Check.
Preprints
Please note that preprints can be shared anywhere at any time, in line with Elsevier’s sharing policy. Sharing your preprints e.g. on a preprint server will not count as prior publication (see 'Multiple, redundant or concurrent publication' for more information).

Use of inclusive language
Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Content should make no assumptions about the beliefs or commitments of any reader; contain nothing which might imply that one individual is superior to another on the grounds of age, gender, race, ethnicity, culture, sexual orientation, disability or health condition; and use inclusive language throughout. Authors should ensure that writing is free from bias, stereotypes, slang, reference to dominant culture and/or cultural assumptions. We advise to seek gender neutrality by using plural nouns ("clinicians, patients/clients") as default/wherever possible to avoid using "he, she," or "he/she." We recommend avoiding the use of descriptors that refer to personal attributes such as age, gender, race, ethnicity, culture, sexual orientation, disability or health condition unless they are relevant and valid. These guidelines are meant as a point of reference to help identify appropriate language but are by no means exhaustive or definitive.

Author contributions
For transparency, we encourage authors to submit an author statement file outlining their individual contributions to the paper using the relevant CRediT roles: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Roles/Writing - original draft; Writing - review & editing. Authorship statements should be formatted with the names of authors first and CRediT role(s) following. More details and an example

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.

Copyright
Upon acceptance of an article, authors will be asked to complete an 'Exclusive License Agreement' (see more information on this). 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.

Open access
Please visit our Open Access page for more information.
Elsevier Researcher Academy

Researcher Academy is a free e-learning platform designed to support early and mid-career researchers throughout their research journey. The "Learn" environment at Researcher Academy offers several interactive modules, webinars, downloadable guides and resources to guide you through the process of writing for research and going through peer review. Feel free to use these free resources to improve your submission and navigate the publication process with ease.

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 Author Services.

Submission
Our online submission system guides you stepwise through the process of entering your article details and uploading your files. The system converts your article files to a single PDF file used in the peer-review process. Editable files (e.g., Word, LaTeX) are required to typeset your article for final publication. All correspondence, including notification of the Editor's decision and requests for revision, is sent by e-mail.

Submit your article
Please submit your article via https://www.evise.com/profile/api/navigate/CLISER.

Referees
Please submit the names and institutional e-mail addresses of several potential referees. For more details, visit our Support site. Note that the editor retains the sole right to decide whether or not the suggested reviewers are used.

PREPARATION

Peer review
This journal operates a single blind review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. More information on types of peer review.

Use of word processing software
It is important that the file be saved in the native format of the word processor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the word processor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier). Note that source files of figures, tables and text graphics will be required whether or not you embed your figures in the text. 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.

Article structure
Subdivision - numbered sections
Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to 'the text'. Any subsection may be given a brief heading. Each heading should appear on its own separate line.

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 details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also 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.

Practical implications
This chapter is an easily understandable, summary that should stands on its own. It provides policy makers and practitioners with all relevant information to understand and apply presented climate services. Practical implications could contain e.g. a case study or the practical application of a method. All practical implication summaries for policy makers and practitioners are included in the article, but they will also be distributed separately in Climate Services Policy and Practitioner Brief, in order to reach a broader audience.

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.

Appendices
If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

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. You can add your name between parentheses in your own script behind the English transliteration. 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.
• Corresponding author. Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. This responsibility includes answering any future queries about Methodology and Materials. 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.

Highlights
Highlights are optional yet highly encouraged for this journal, as they increase the discoverability of your article via search engines. They consist of a short collection of bullet points that capture the novel results of your research as well as new methods that were used during the study (if any). Please have a look at the examples here: example Highlights.

Highlights 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).
Abstract
A concise and factual abstract is required. 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.

Graphical abstract
Although a graphical abstract is optional, its use is encouraged as it draws more attention to the online article. The graphical abstract should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership. 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 x 1328 pixels (h x w) or proportionally more. The image should be readable at a size of 5 x 13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. You can view Example Graphical Abstracts on our information site. Authors can make use of Elsevier's Illustration Services to ensure the best presentation of their images and in accordance with all technical requirements.

Keywords
Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and 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. These keywords will be used for indexing purposes.

Abbreviations
Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

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.

Nomenclature and units
Follow internationally accepted rules and conventions: use the international system of units (SI). If other quantities are mentioned, give their equivalent in SI. You are urged to consult IUPAP: Symbols, Units, Nomenclature and Fundamental Constants in Physics for further information.

Math formulae
Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).
Footnotes
Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

Artwork
Electronic artwork
General points
• Make sure you use uniform lettering and sizing of your original artwork.
• Embed the used fonts if the application provides that option.
• Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
• Number the illustrations according to their sequence in the text.
• Use a logical naming convention for your artwork files.
• Provide captions to illustrations separately.
• Size the illustrations close to the desired dimensions of the published version.
• Submit each illustration as a separate file.
• Ensure that color images are accessible to all, including those with impaired color vision.

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
If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native document format.
Regardless of the application used other than Microsoft Office, 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 all used fonts.
TIFF (or JPEG): Color or grayscale photographs (halftones), keep to a minimum of 300 dpi.
TIFF (or JPEG): Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.
TIFF (or JPEG): Combinations bitmapped line/half-tone (color or grayscale), keep to a minimum of 500 dpi.

Please do not:
• Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); these typically have a low number of pixels and limited set of colors;
• 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 on the Web (e.g., ScienceDirect and other sites). For further information on the preparation of electronic artwork, please see https://www.elsevier.com/artworkinstructions.

Illustration services
Elsevier's Author Services offers Illustration Services to authors preparing to submit a manuscript but concerned about the quality of the images accompanying their article. Elsevier's expert illustrators can produce scientific, technical and medical-style images, as well as a full range of charts, tables and graphs. Image 'polishing' is also available, where our illustrators take your image(s) and improve them to a professional standard. Please visit the website to find out more.

Figure captions
Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. 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
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 highly encouraged.

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.

References in a special issue
Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

Reference style
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 can be listed either first alphabetically, then chronologically, or vice versa.
Examples: ‘as demonstrated (Allan, 2000a, 2000b, 1999; Allan and Jones, 1999).... Or, as demonstrated (Jones, 1999; Allan, 2000)... Kramer et al. (2010) 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.
Examples: Reference to a journal publication:
Reference to a journal publication with an article number:
Reference to a book:
Reference to a chapter in an edited book:
Reference to a website:
Reference to a dataset:

Journal abbreviations source
Journal names should be abbreviated according to the List of Title Word Abbreviations.

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 file in one of our recommended file formats with a preferred maximum size of 150 MB per file, 1 GB in total. 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.

Research data
This journal encourages and enables you to share data that supports your research publication where appropriate, and enables you to interlink the data with your published articles. Research data refers to the results of observations or experimentation that validate research findings. To facilitate reproducibility and data reuse, this journal also encourages you to share your software, code, models, algorithms, protocols, methods and other useful materials related to the project.

Below are a number of ways in which you can associate data with your article or make a statement about the availability of your data when submitting your manuscript. If you are sharing data in one of these ways, you are encouraged to cite the data in your manuscript and reference list. Please refer to the "References" section for more information about data citation. For more information on depositing, sharing and using research data and other relevant research materials, visit the research data page.
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 gives 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).

Mendeley Data
This journal supports Mendeley Data, enabling you to deposit any research data (including raw and processed data, video, code, software, algorithms, protocols, and methods) associated with your manuscript in a free-to-use, open access repository. During the submission process, after uploading your manuscript, you will have the opportunity to upload your relevant datasets directly to Mendeley Data. The datasets will be listed and directly accessible to readers next to your published article online.

For more information, visit the Mendeley Data for journals page.

Data in Brief
You have the option of converting any or all parts of your supplementary or additional raw data into one or multiple data articles, a new kind of article that houses and describes your data. Data articles ensure that your data is actively reviewed, curated, formatted, indexed, given a DOI and publicly available to all upon publication. You are encouraged to submit your article for Data in Brief as an additional item directly alongside the revised version of your manuscript. If your research article is accepted, your data article will automatically be transferred over to Data in Brief where it will be editorially reviewed and published in the open access data journal, Data in Brief. Please note an open access fee of 600 USD is payable for publication in Data in Brief. Full details can be found on the Data in Brief website. Please use this template to write your Data in Brief.

MethodsX
You have the option of converting relevant protocols and methods into one or multiple MethodsX articles, a new kind of article that describes the details of customized research methods. Many researchers spend a significant amount of time on developing methods to fit their specific needs or setting, but often without getting credit for this part of their work. MethodsX, an open access journal, now publishes this information in order to make it searchable, peer reviewed, citable and reproducible. Authors are encouraged to submit their MethodsX article as an additional item directly alongside the revised version of their manuscript. If your research article is accepted, your methods article will automatically be transferred over to MethodsX where it will be editorially reviewed. Please note an open access fee is payable for publication in MethodsX. Full details can be found on the MethodsX website. Please use this template to prepare your MethodsX article.

Data statement
To foster transparency, we encourage you to state the availability of your data in your submission. This may be a requirement of your funding body or institution. If your data is unavailable to access or unsuitable to post, you will have the opportunity to indicate why during the submission process, for example by stating that the research data is confidential. The statement will appear with your published article on ScienceDirect. For more information, visit the Data Statement page.

AFTER ACCEPTANCE

Online proof correction
To ensure a fast publication process of the article, we kindly ask authors to provide us with their proof corrections within two days. 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 be notified and receive a link to the published version of the open access article on ScienceDirect. This link is in the form of an article DOI link which can be shared via email and social networks. 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 Author Services.

**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 find out when your accepted article will be published.

If you have any specific questions related to Climate Services, please contact the Journal Manager at cliser@elsevier.com

© Copyright 2018 Elsevier | https://www.elsevier.com