Strategic Plan for the Journal of Geophysical Research—Earth Surface

JGR Earth Surface

EDITORIAL

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Key Point:

- A strategic plan for *JGR Earth Surface* is presented, in alignment with AGU's goals and objectives

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Strategic Plan for the *Journal of Geophysical Research—Earth Surface*

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Abstract The Editors of the *Journal of Geophysical Research—Earth Surface* present a new strategic plan for the journal. The journal will contribute to the objectives of AGU to embrace advancing Earth and space science for the benefit of human societies and the environment, while continuing to value fundamental science deeply. Many scientific topics covered by *JGR Earth Surface* are closely connected to urgent, complex problems affecting humanity and the global environment today, including climate change and a variety of natural hazards; this strategic plan is intended to ensure that published science is robust, impactful, and ultimately used to help address those problems. The plan prioritizes (1) publishing high-impact science using the highest standards of scientific ethics and rigor; (2) advancing mechanistic understanding needed to address societal challenges; and (3) ensuring that a diverse talent pool contributes to the science through a fair, equitable review and publication process.

In 2020, the American Geophysical Union (AGU) released a new strategic plan centered around the intention to continue a deep commitment to fundamental, "discovery" science while more firmly embracing a mission to advance Earth and space sciences for the benefit of humanity and the environment (American Geophysical Union, 2020). Essential to AGU's mission is the need to help solve society's most complex problems, and thus the role of AGU journals is not only to further discovery but also to accelerate efforts to address societal challenges in the coming century. Among the societal issues specified in the AGU strategic plan is the increasing need to understand and mitigate the threat of climate change and its impacts on people, their livelihoods, and ecosystems. Recognizing the myriad challenges associated with climate change and other natural and anthropogenic hazards, AGU's strategic plan stated an intent to "move more decisively into the realm of solution-based science that addresses emerging global issues," moving the science published in its journals from "usable" to "used." Increasing the diversity of the talent pool contributing science to AGU and its publications is essential to these efforts. Individuals of all backgrounds must be equitably included and valued in order to publish the highest-quality science, and so to help solve pressing societal challenges.

JGR Earth Surface publishes original, innovative science concerning physical, chemical, and biological processes that affect the form and function of Earth's surface over all temporal and spatial scales, including fluvial, aeolian, and coastal sediment transport and morphodynamics; hillslope mass movements; glacial and periglacial activity; weathering and pedogenesis; and surface manifestations of volcanism and tectonism. The areas of Earth science covered by *JGR Earth Surface* are closely connected to some of the most urgent, complex problems affecting human societies and the global environment today. Most prominent among these are landscape and cryosphere response to anthropogenic climate change and the increasing exposure of human communities to natural hazards. These problems include the response of ice sheets, glaciers, proglacial and periglacial regions (including permafrost terrain) to a warming climate; coastal processes and morphodynamic responses to sea-level rise; mechanics of landslides and other slope-failure hazards; rivers subjected to changing hydrologic and sediment regimes; landscape response to fire; and dryland processes associated with drought and wind-blown sediment transport. Many of these Earth-surface processes involve interactions among climate, human land use, and inherent topographic and geographic factors (such as tectonic and meteorologic drivers) that must be understood to support safe and sustainable development of human societies as well as the preservation and restoration of ecosystems. Thus, the science published in *JGR Earth Surface* provides clear and abundant opportunities for AGU to communicate societally relevant, actionable information within the scientific community and to policy-makers and the public. Formulating this journal's strategic plan takes into account the over-arching objectives of AGU, evolving needs of the scientific community and public end-users of the data, and the need for the journal to function efficiently.

Going forward, the strategic plan for *JGR Earth Surface* will encompass:

1. Publishing rigorous, high-impact science using the highest standards of scientific integrity, ethics in the review process, and robust connections between data and interpretations. Actions supporting this strategic goal include: (a) providing thorough, rigorous, constructive evaluation of manuscripts by well qualified subject-matter experts as reviewers and editors with broad demographic and geographic representation; (b) completing manuscript review and decisions in a timely manner, recognizing that efficiency is key to maintaining novelty of the science and the trust of authors; (c) maintaining appropriate workload and scope of expertise among editorial-board members; (d) ensuring civil, constructive feedback to authors; (e) continuing to promote and lead in Open Research by requiring open access to data and model code, to promote trust in evidence-based science and to ensure credibility and reproducibility of the work published in *JGR Earth Surface.*
2. Continuing to value fundamental science, while particularly encouraging work that advances quantitative documentation and mechanistic understanding toward addressing societal challenges. Actions supporting this strategic goal include: (a) recruiting manuscripts—through conferences and other professional interactions—that provide robust, broadly relevant new science on emerging global issues relevant to societies and the environment; (b) using AGU's Enhanced Content features (i.e., Editor's Highlight and Research Spotlight features in *Eos*, and press releases) and social media to promote *JGR Earth Surface* papers that further the understanding of climate change and Earth-surface hazards to people, their livelihoods, and ecosystems, anticipating that additional visibility will facilitate transforming science from "usable" to "used;" (c) soliciting and encouraging Special Collections on topics of particular relevance for emerging global issues, including climate change and natural hazards.
3. Increasing the diversity of the talent pool contributing science to *JGR Earth Surface* so that individuals of all backgrounds are equitably included and valued. Enhancing demographic and geographic representation among authors, reviewers, and editorial-board members is a critical component of science quality, creates important career-growth opportunities, and is essential to keeping this journal at the forefront of its rapidly growing field. Diverse voices are essential to reducing bias in the peer-review process, as Xenopoulos et al. (2022) summarized with respect to publication through AGU. Actions supporting this strategic goal include: (a) promoting diversity among editorial-board members—including through targeted recruitment—with consideration to geographic location, gender, racial and ethnic background, career stage, and other characteristics, aiming for representation commensurate with that of the Earth-surface and cryosphere scientific communities; (b) soliciting manuscript reviews from a diverse talent pool, to broaden perspectives informing the science and promote cross-border integration of the scientific community; (c) formalizing training for editorial-board members intended to reduce bias in the peer-review process; (d) encouraging early career scientists through manuscript recruitment, author/reviewer workshops, and student-oriented panel discussions. Toward this goal, following a successful trial period in 2021, AGU has recently made permanent the option for students, postdoctoral scholars, and other early career scientists to co-review manuscripts for *JGR Earth Surface.* The journal will encourage expanded use of co-reviewing, to enhance early career scientists' reviewing skills, broaden the reviewer pool, and increase the diversity of perspectives brought into manuscript evaluation.

These strategic goals and related actions are intended to function together like a three-legged stool to support the publication of high-quality science through *JGR Earth Surface*. The Editors and AGU encourage participation from the Earth-surface and cryosphere scientific community to realize these goals and to revise and improve the means of achieving them as needed.

References

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