

Dear Editor,

First, we would like to sincerely thank you for the insightful and constructive comments, and for providing us with the opportunity to revise and improve our manuscript.

We are also very grateful for the invitation to re-submit the work as an *Invited Perspective to Natural Hazards and Earth System Sciences*. This format allowed us to substantially expand our line of argument compared to the original short communication, incorporate additional literature to better support our statements, and comprehensively revise and strengthen the overall storyline of the manuscript.

The revised manuscript is now entitled: “Invited Perspective: Four reasons DRR does not work as intended – lessons from the 2025 California wildfires and beyond.”

In addition, as the revised version now includes expanded discussion on knowledge co-creation and stakeholder involvement, we have added an additional co-author who contributed significantly to these new components.

In the following, we respond step-by-step to the comments from the Editor and both referees, and indicate how we have addressed their concerns in the revised manuscript. Because the manuscript has been substantially rewritten (please see the track-changed version), some original comments are no longer directly applicable. Consequently, some of our responses differ from those previously provided in the online discussion for the initial manuscript version.

Editor comment 1:

As you are aware, two reviewers have now provided detailed and thoughtful evaluations of your manuscript, and I appreciate the careful and comprehensive responses you have provided to their comments. One reviewer recommended minor revisions, while the second reviewer recommended rejection. After careful consideration, I find the concerns raised by the second reviewer particularly compelling, especially regarding the largely generic nature of the reflection and the limited demonstration of how the proposed approach would lead to improved outcomes in the specific context of California wildfires.

Author answers 1:

We fully understand and appreciate this assessment, and we thank you for the careful consideration of both reviews and for clearly communicating the key concerns that needed to be addressed.

In response, we have fundamentally revised the manuscript to directly address the issues raised, in particular the perception that the previous version was too generic and did not sufficiently demonstrate how the proposed perspective could lead to improved outcomes in the specific context of California wildfires. Moreover, and in line with the comments of Referee #1 (David Alexander), we have expanded our argumentation at a more general level by including additional examples from comparable large-scale events, namely the 2023 Turkey–Syria earthquakes, the 2024 Valencia floods, and the 2025 Texas floods.

We now frame the manuscript around four interrelated constraints on community resilience that repeatedly hinder DRR from functioning as intended and that are consistently observed across diverse hazards: (1) limited stakeholder awareness and risk perception; (2) inadequate capacity at both household and institutional levels; (3) weak incentives for proactive adaptation; and (4) governance barriers, including regulatory fragmentation, unclear accountabilities, and insufficient integration of risk into policy frameworks.

Nevertheless, the 2025 California wildfires remain a primary entry point and anchoring case for the manuscript.

Editor comment 2:

Beyond the individual review comments, I have also reflected on the manuscript's purpose and positioning within the journal. As currently framed, the paper does not appear to aim to report new developments or methodological advances, but rather to offer a perspective on institutional capacity and disaster risk reduction. Such contributions can be valuable; however, they require a clear and transparent grounding. Currently, the manuscript does not sufficiently demonstrate that its perspective is firmly anchored in the scientific literature specific to California wildfires or clearly framed as an explicitly marked opinion or perspective piece. The limited use of peer-reviewed references, alongside references to non-scientific commentary and contemporary political debate, further blurs this distinction.

Author answer 2:

We thank the Editor for this important reflection on the manuscript's purpose and positioning within the journal. We fully agree that perspective-type contributions must be clearly framed and transparently grounded in the scientific literature.

In response, we have substantially strengthened the literature base of the manuscript, in particular with respect to peer-reviewed work on California wildfires, DRR governance, and community resilience. We have also carefully revised the framing to ensure that the manuscript is clearly positioned as an Invited Perspective, while maintaining a robust scientific foundation.

In addition, we have critically reviewed and reduced references to non-scientific commentary and contemporary political debate, retaining only those that are strictly necessary for contextualization and clearly distinguishing them from the scientific evidence base. Overall, these revisions were intended to ensure a clear separation between evidence-based analysis and perspective-based interpretation, in line with the expectations for this article type.

Editor comment 3:

Relatedly, it is not yet clear whether California wildfires serve as a central empirical focus or primarily as a linchpin for a broader and more general discussion on disaster risk reduction and institutional capacity. If the latter is the intention, this would need to be reflected more clearly in both the scope and the title of the manuscript. Conversely, if California wildfires are to remain the focus, the manuscript would need to demonstrate more convincingly why this case is particularly salient and how the arguments are grounded in relevant scientific evidence.

Author answer 3:

As noted in our general response (#1 and 2) above, we have addressed this point in detail.

Editor comment 4:

In light of these considerations, I believe that a major revision is necessary. In particular, I would ask you to:

- change the manuscript type (e.g. invited perspective), ensuring that this is consistently reflected in the framing, title, and content;
- clearly articulate the scope of the paper, including whether California wildfires constitute the primary focus or an illustrative example within a broader argument;
- strengthen the scientific grounding of the arguments through appropriate peer-reviewed literature, and clarify the relationship between scientific analysis and political commentary;
- address the first reviewer's suggestion by providing a concrete illustration of how the proposed approach could function in practice, should California wildfires remain central to the paper.

Author answer 4:

We thank you for the clear and constructive guidance regarding the necessary revisions. We have fully addressed each of these points in the revised manuscript:

- The manuscript has been reclassified as an *Invited Perspective*, and this is consistently reflected in the title, framing, and content throughout.
- The scope of the paper is now explicitly articulated: the 2025 California wildfires serve as the primary entry point and anchor case, while additional examples from the 2023 Turkey-Syria earthquakes, the 2024 Valencia floods, and the 2025 Texas floods illustrate that the identified constraints on community resilience are broadly observed across diverse hazards.
- The scientific grounding of the arguments has been substantially strengthened through the inclusion of additional peer-reviewed literature on California wildfires and beyond, while references to non-scientific commentary have been clearly distinguished and contextualized.
- In line with the first reviewer's suggestion, the manuscript now provides a concrete illustration of how the proposed approach could function in practice, grounded in the 2025 California wildfire context, while also highlighting generalizable lessons for other hazard-prone regions.

These revisions aim to ensure that the manuscript is clearly positioned as a perspective piece, firmly anchored in both the empirical California wildfire case and the broader scientific literature, while providing actionable insights for DRR practice and policy. Below, we will now answer step-by-step the reviewer comments.

RC1: 'Comment on egosphere-2025-2509', David E. Alexander, 15 Jul 2025

This short communication offers a very welcome, timely discussion of an extremely pertinent issue. It is interesting to note that many of the planning and preparedness deficiencies described in the paper are common to diverse environments and disaster. For example, the misuse of land subject to

natural hazard impacts connects the October 2024 floods in Valencia (Fekete 2025) and the January 2025 wildfires in Los Angeles. The flash floods in Texas also qualify.

The solutions to many natural hazard problems are clear, as the paper explains. The question is why they are not implemented. Poor organisation and lack of information and training are emphasised in the paper. I would suggest that ideology and political polarisation are at the root. Perhaps they need more than a passing mention.

The paper would benefit from short examples. I understand that it is a short contribution, and also that examples can be controversial, but they can be very illuminating of the mix of factors that predispose areas to disaster.

I hope that this paper stimulates more discussion of why solutions to the problem of natural hazards are not sufficiently implemented.

Author answers to RC1:

We thank Reviewer #1 for the positive and constructive comments, and for recognizing the timeliness and relevance of our manuscript. We greatly appreciate your reflections on the broader applicability of the challenges discussed, and your observation that similar deficiencies are present across diverse hazard contexts, including the 2024 Valencia floods and 2025 Texas flash floods.

In response to your suggestions, we have strengthened the manuscript in several ways:

- Expanded illustrative examples: We now include short, concrete examples from the 2023 Turkey-Syria earthquakes, 2024 Valencia floods (including the Fekete 2025 reference), and 2025 Texas floods, in addition to the 2025 California wildfires. These examples help highlight the recurring nature of the four constraints on community resilience across diverse hazards.
- Ideology and political polarization: We have incorporated discussion on the influence of political dynamics, including ideology and polarization, as underlying factors that interact with organizational and informational limitations to hinder effective DRR implementation. We have added a summarising Figure 2 in the Conclusion section.
- Concrete illustrations of solutions in practice: Where possible, we provide examples of how the proposed perspective could inform actionable approaches to improving preparedness and resilience, grounded in the California wildfire context but with broader relevance.

We hope that these revisions address your suggestions and further enhance the capacity of the manuscript to stimulate discussion on why well-known solutions to natural hazards are often not implemented. Please note that the manuscript type was changed from "*Brief Communication*" to "*Invited Perspective*" upon invitation by the NHESS Executive Editors.

RC2: 'Comment on egosphere-2025-2509', Anonymous Referee #2, 16 Dec 2025

The manuscript remains overly generic and does not demonstrate a clear or substantive contribution to the existing literature on wildfire governance. While the topic is important, the analysis lacks depth and originality, and the insights presented largely reiterate well-established arguments without advancing conceptual, empirical, or methodological understanding.

Author answer #1:

We sincerely thank Referee #2 for the time and effort devoted to reviewing our manuscript and for providing detailed and constructive feedback. Your comments have been extremely valuable in guiding the substantial revisions presented in this version.

Please note that the manuscript type has been changed from “*Brief Communication*” to “*Invited Perspective*” upon invitation by the NHESS Executive Editors. As a result, the responses provided below differ from those originally posted online for the initial manuscript version, reflecting the extensive restructuring, expanded argumentation, and updated examples included in the revised manuscript.

We fully appreciate the concerns you have risen and have undertaken substantial revisions to address them. In particular:

- Manuscript focus and scope: The manuscript has been reframed as an *Invited Perspective*, clearly positioning it as a reflective, opinion-based contribution grounded in both empirical observation and scientific literature. The 2025 California wildfires now serve as the primary anchor case, while additional examples from the 2023 Turkey-Syria earthquakes, the 2024 Valencia floods, and the 2025 Texas floods illustrate that the constraints we identify on community resilience are consistently observed across diverse hazards.
- Strengthened scientific grounding: We have substantially expanded the use of peer-reviewed literature on wildfire governance, DRR, and community resilience. References to non-scientific commentary and contemporary political debate have been carefully contextualized and clearly distinguished from evidence-based sources.
- Concrete and actionable insights: To move beyond general reflection, we now provide specific illustrations of how the four identified constraints, (1) lack of stakeholder awareness, (2) inadequate capacity, (3) weak incentives for proactive adaptation, and (4) governance barriers, manifest in California and other hazard contexts, and how addressing them could improve outcomes in practice. This strengthens the conceptual contribution of the manuscript.
- Expanded discussion of underlying drivers: We also incorporated consideration of political dynamics, including ideology and polarization, as factors interacting with organizational and informational limitations to hinder effective DRR implementation, thus providing deeper analytical insight.

We hope that these revisions demonstrate a clear and substantive contribution to the literature on wildfire governance and DRR, while remaining aligned with the perspective format requested by the NHESS editors.

A further concern relates to the authors' limited engagement with the institutional and governance context of California wildfires. The analysis appears to be developed without sufficient context-specific knowledge of California's complex governance arrangements, legal frameworks, and institutional histories, which are central to the subject matter. This raises questions about the empirical grounding and interpretive validity of the study.

Author answer #2:

We sincerely thank the reviewer for highlighting the importance of situating the analysis within the institutional and governance context of California wildfires. We fully agree that understanding the specific legal frameworks, governance arrangements, and institutional histories is critical for interpreting the challenges of DRR implementation.

In response, we have strengthened the manuscript by explicitly integrating context-specific knowledge of California's governance landscape. We have added references to relevant peer-reviewed literature on the 2025 California wildfires and others to underpin our arguments, while also including appropriate literature for the other hazard cases to support the broader comparative points. This ensures that the perspective is clearly grounded in empirical and institutional realities without presenting the manuscript as an empirical study focused solely on California.

The revised text now provides a more detailed discussion of the institutional and regulatory environment, including the roles and responsibilities of key agencies, historical patterns of coordination and fragmentation, and how these factors interact with the four constraints on community resilience identified in the manuscript. These changes strengthen the conceptual and interpretive validity of the perspective, while maintaining relevance across multiple hazard contexts.

In its current form, the manuscript risks resembling what is often referred to in the literature as parachute or helicopter research, where external perspectives are applied to a case without meaningful engagement with local institutions, expertise, or contextual realities. The authors are encouraged to critically reflect on this issue and to strengthen the manuscript through deeper contextualisation, engagement with local scholarship and practitioners, or collaboration with regionally grounded expertise.

Author answer #3:

We thank the reviewer for raising this important point regarding contextual engagement. We fully recognize that perspective contributions must avoid the perception of "parachute" research and be meaningfully grounded in local realities.

In response, we have strengthened the manuscript by incorporating relevant peer-reviewed literature on California wildfires, including governance, institutional history, and policy contexts, to better contextualize our discussion. While this manuscript does not present new empirical data from California, it draws on documented experiences, case studies, and policy analyses to ensure the perspective is well informed by regional scholarship and evidence.

Moreover, we have clarified the scope of the manuscript: the 2025 California wildfires serve as a primary anchor case, while examples from other recent disasters illustrate that the four identified constraints on community resilience recur across multiple hazards. This comparative approach allows us to provide insights that are both contextually informed and broadly relevant for DRR practice.

The study provided some novel points to ponder but it gives no clear explanation of how the authors derived their four "key constraints". Did they analyse government reports? Media coverage? Conduct stakeholder interviews? Without a transparent method, the validity of these findings remains

questionable. Even for a brief communication, the methodological pathway leading to these conclusions should be outlined or at least referenced clearly.

Author answer #4:

We thank the reviewer for this comment. As noted in our general response above, the manuscript has been substantially restructured and reframed as an Invited Perspective. Because the entire manuscript was rewritten, we do not refer to individual text passages, but instead provide a general overview in both the track-changed and clean versions.

As described in the manuscript, the four constraints were identified through synthesis of peer-reviewed literature, publicly available reports, and documented case studies across multiple hazards, rather than through new empirical data collection. The perspective is therefore intended to provide a conceptual and comparative reflection grounded in existing knowledge, rather than to present a novel empirical study.

Specific comments of reviewer #2:

Line 20: The discussion around the fire-resistant structure that withstood the flames would benefit from greater elaboration. Adding details on the specific architectural elements or materials used would enhance reader understanding and provide a concrete example of wildfire-adapted design in practice.

Answer: We thank the reviewer for this suggestion. In response, we have added additional information in the Introduction and included a figure illustrating the fire-resistant structure in question (the house in Palisades). Key architectural elements and materials for wildfire-adapted design are also described in the figure caption to further enhance reader understanding.

Line 25: The article leans heavily on previously established frameworks (e.g., White et al. 2001) without critically updating or challenging them based on the 2025 wildfire context. The authors could have presented a new model of institutional failure, or a typology of governance barriers observed specifically during the 2025 events, that can give their contribution to the academic discourse.

Answer: We thank the reviewer for this comment. We acknowledge that the frameworks of White et al. (2001) are foundational and now 25 years old, yet they remain highly relevant for understanding the constraints on DRR. To explicitly highlight the key contributions of our perspective in the context of the 2025 California wildfires any beyond, we have added Figure 2 in the Conclusion section, which summarises the four reasons why DRR does not work as intended. This figure provides a clear and concise synthesis of the constraints and their interactions, while situating our discussion within the broader, well-established literature.

Line 50: Statements such as “capacity building extends beyond individual societal capabilities” is asserted without concrete case studies, statistics, or stakeholder quotes. For a communication rooted in the context of 2025 California wildfires, readers expect specific, data-driven examples or policy evaluations (e.g., What agencies failed? What codes were not enforced? How were inter-agency gaps revealed?).

Answer: We thank the reviewer for this important comment. In response, we have added additional information from available scientific literature to substantiate statements regarding capacity building and institutional constraints. While this manuscript remains an *Invited Perspective* rather than an empirical study, we have included examples from policy analyses, documented case studies, and peer-reviewed reports that illustrate agency challenges, gaps in code enforcement, and inter-agency coordination issues observed during the 2025 California wildfires. These additions provide concrete, context-specific evidence to support our arguments while remaining consistent with the perspective format.

Line 95: The article avoids any discussion of political or economic trade-offs, despite referencing political constraints. It fails to address who benefits from the status quo and why inertia persists. Why would local governments or developers resist fire-adapted building codes? Are there economic disincentives to resilient land-use planning?

Answer: We thank the reviewer for raising this important point. We acknowledge that political and economic trade-offs are highly relevant to understanding DRR implementation and inertia. However, in the context of this *Invited Perspective*, our primary aim was to provide a conceptual discussion of systemic constraints on community resilience, rather than to conduct a detailed political-economic analysis.

Where relevant, we have briefly acknowledged the role of political dynamics, including incentives and potential resistance, in shaping DRR outcomes. A deeper exploration of economic or political trade-offs, including benefit distribution and policy inertia, would require a dedicated empirical study beyond the intended scope of this perspective.

The early sections stress the role of property owner awareness, which risks reinforcing a “blame the individual” narrative. This is not adequately balanced with a deeper examination of how institutions fail to support or enable community-level change. The emphasis on public education could be critically reassessed to avoid downplaying the structural asymmetries of power and resource allocation.

The paper discusses the 2025 wildfires as if they are an isolated event. Yet, the same regions in California have experienced repeated catastrophic fires. The authors miss the opportunity to present a temporal critique: why do the same institutional barriers persist despite multiple wake-up calls? What (if any) institutional learning has occurred? A brief comparison across years would strengthen the urgency and credibility of the argument.

Answer: We thank the reviewer for these insightful observations. We fully agree that addressing structural and institutional factors is essential to avoid overemphasizing individual responsibility. In the revised manuscript, we have carefully balanced discussion of stakeholder awareness with a stronger focus on institutional constraints, governance barriers, and capacity limitations, highlighting how systemic factors shape and often limit community-level action.

Regarding the temporal dimension of wildfire events, we acknowledge the recurrence of catastrophic fires in California. While this *Invited Perspective* is not an empirical longitudinal study, we have incorporated references to prior wildfire events and their documented outcomes to illustrate persistent institutional challenges. This helps situate the 2025 fires within a broader historical

context and underscores the recurring barriers to DRR implementation without overextending the scope of the perspective.

We sincerely thank the reviewer for the thorough and constructive comments. Your insights have been invaluable in guiding the revisions, helping us to clarify the focus of our manuscript, strengthen its contextual grounding, and better balance discussion of individual and institutional factors. The manuscript has been substantially improved as a result of your feedback.