Call for Papers:

Special Issue of the *Journal of Sustainability Education:*

"Educating for Water Resilience in the Context of Climate Crisis"
To coincide with United Nations World Water Day: March 22, 2020

*"We are now on the verge of water bankruptcy in many places around the world
with no clear way of repaying the debt."*
(World Economic Forum Water Initiative, 2011, pp. 1-2)

Humanity's relationship with water is inextricably linked to the sustainability of life of Earth. Our ability to *sustainably* interact with the water cycle at all scales—from global to local—is a clear prerequisite for mapping a long-term sustainable future, one that includes food security, human health, peace between water-sharing regions, sustainable economies, healthy ecosystems, sustained biodiversity, and social justice.

Today, water security has never before been so threatened by anthropogenic actions, and the resulting water insecurity is often framed as a "wicked problem." Driven by a burgeoning global population, global water demand is anticipated to increase by 55% by 2050 (United Nations World Water Assessment Programme [UN WWAP], 2015), and the global water *deficit* is projected to reach 40% by as soon as 2030 (UN WWAP, 2016). Water-based ecosystems—on which we rely for source water protection, safeguarding from extreme weather events, and the preservation of biodiversity—are suffering. Today, an estimated two-thirds of water-cycle-regulating forests worldwide are degraded, approximately 70% of natural wetlands have been lost since 1900, and water pollution has increased in most African, Asian, and Latin American rivers since the 1990s (UN WWAP, 2018).

Water insecurity presents significant human rights and social justice concerns. While the Human Right to Water was adopted by the United Nations as binding international law nearly a decade ago, today more than 2 billion people—about 30% of the global population—still do not have their right to water fully realized (World Health Organization, 2017). This water injustice reality disproportionately impacts marginalized individuals and communities, including the world's 370-500 million Indigenous Peoples (United Nations Educational, Scientific, and Cultural Organization, 2019). This lack of access to clean water is felt near and far, in both urban and rural settings, and in both developing and developed nations. It is estimated, for instance, that approximately 2.5 million people in the United States still lack access to safe drinking water (as

cited by Venkataraman, 2017, p. 14), a reality jarringly thrust into the spotlight during the 2015 Flint, Michigan, water crisis when lead-contaminated drinking water distributed by the city caused urgent health problems (City of Flint, 2016).

Threats to water security are further—and severely in many local contexts—exacerbated by the impacts of the unfolding anthropogenic climate crisis. The consequences of climate change are experienced by humans *predominantly* through their interactions with the water cycle (UN-Water, 2013). Climate intensification is projected to bring increasing volatility and variability to the water cycle in a highly regionalized context, leading to concerns for food security, climate refugee migration, transboundary conflict, and myriad other societal realities. Climate change-related impacts to the hydrologic cycle, including fluctuations to rainfall patterns, river flow, and groundwater recharge rates, are impacting the availability of freshwater for communities around the globe (Cooley, 2012). And, as underscored by the Intergovernmental Panel on Climate Change (IPCC), climate change feedbacks at the global scale are experienced in highly regionalized contexts, leading to more severe flooding in some regions and more severe droughts in others (IPCC, 2008).

Given these realities, the need for water action has emerged as a leading priority on the global policy and sustainable development stage, as signified by the 2015 inclusion of a stand-alone United Nations Sustainable Development Goal—SDG 6—specifically related to water. It is recognized that water security sits at the nexus of many different societal needs and will require interdisciplinary approaches to address, particularly in the context of climate change.

On March 22, 2020, the United Nations will mark World Water Day by focusing on the relationship between water and climate change. The *Journal of Sustainability Education* is pleased to be planning a March 2020 special issue, "Educating for Water Resilience in the Context of Climate Crisis," to mark the occasion.

The editors of this special issue seek submissions, including a wide range of academic literature, personal essays, media/book reviews, editorial pieces, photo essays, poetry, and other publishable works, that address the questions below among other related topics. The editors ask these questions in an effort to stimulate research, reflection, theory development, and discussion of praxis, the intersection of theory and action.

1. How do we teach sustainable water resilience strategies in the context of climate crisis? This question applies not only to the classroom setting, but also to the process of educating the public at large, policymakers, corporate leaders, elected officials, consumers, and other stakeholders.

2. What new frameworks are emerging for successful education, advocacy, and/or communication for sustainable water resilience?

3. Through the presentation of case studies or other article formats, what specific education activities have been proven effective—or not? These ideas may include, but are in no way are limited to, engagement in calculating virtual water footprints, place-based (watershed) education, gaming/simulation exercises related to water conservation or water conflict management, etc.

4. What is the current status of water literacy in the context of climate instability among various audiences, including classroom students, educators, the public, policymakers, elected officials, etc.? What strategies are being implemented to increase this level of water literacy and any potential action and/or activism that follows on the path toward water resilience?

5. How are Indigenous Peoples and Local Communities experiencing and addressing water insecurity at local and regional scales, and what education strategies are being implemented to increase water resilience in the context of climate crisis? How is Indigenous and Traditional Ecological Knowledge (ITEK) being implemented to address and/or teach sustainable water resilience strategies?

6. What role do youth and climate crisis activists play in also advocating for sustainable water resilience?

7. What education strategies are being employed to increase marginalized communities' advocacy and/or demand for the realization of the Human Right to Water?

8. How does sustainability education work to increase understanding of the links between water resilience and the future of biodiversity, specifically as both are threatened by climate change?

9. How are communities with the potential of conflict over water—such as upstream and downstream communities within transboundary waterways or communities that share a scarce water resource—employing sustainability education strategies to work toward cooperation and peace related to water rather than engaging in prolonged conflict? Some examples may include Participatory 3D Mapping and/or the creation of shared water governance groups. Case studies may be a particularly useful way to submit a response to this question.

10. What is the potential for grassroots water governance structures, such as watershed councils, to serve as sources of sustainable water resilience education to the community at large and other audiences?

11. What are effective strategies to educate voters, policymakers, infrastructure planners/investors, and elected leaders on the value of nature-based solutions, such as green and natural infrastructure, for water-cycle sustainability in both urban and rural settings? These strategies may include, but are not limited to, the protection of source water-protecting upstream forests, the implementation of urban green infrastructure (bioswales, green roofs, constructed wetlands, and other green stormwater infrastructure), the uptake of conservation agriculture that reduces chemical and sediment runoff, and other nature-based strategies. How might sustainability education strategies play a role in facilitating discussions between proponents of traditional grey infrastructure and those who are working to increase implementation of green infrastructure?

12. How do various communities, jurisdictions, and peoples value water differently, and how does sustainability education play a role in decision-making based upon differing valuation models? Some nations, for instance, have granted rivers human legal rights, allowing rivers to achieve legal standing in court to protect themselves. Some models value water instrumentally, while others value it intrinsically. Many cultures value water for its sacred, spiritual, or cultural significance. Some environmental economics models assign dollar values to calculate waters' value using an ecosystem services framework. How do these different ways of valuing water influence our collective ability to move toward water resilience in the context of climate crisis, and what role does sustainability education play in facilitating those conversations?

13. What is sustainability education's role in water-related climate adaptation? For instance, what are some of the most effective strategies in place to engage the public and other audiences in contemplation and action related to rising sea levels, intensifying floods and droughts, and intensifying fires?

Submission deadline: November 1, 2019

Anticipated journal acceptance responses back to submitting authors: January 15. 2020

Submission details: If you are interested in submitting work for this issue, please visit the *Journal of Sustainability Education* website (www.susted.com) and register as an author. To do so, look for the "RATS" (Review and Article Tracking and Submission) system link at the top of the home page.

Style requirements: Please ensure submissions comply with APA style as well as the *Journal of Sustainability Education*'s specific style and submission guidelines.

Seeking Peer Reviewers: The *Journal of Sustainability Education* also seeks potential peer reviewers who have a background in water resilience and/or climate change/crisis education, advocacy, policy, or related fields of expertise. If you believe you are qualified and are interested in becoming a peer reviewer, a role that typically requires a terminal degree in a related field, please contact us at editor@susted.com using "Water Issue Peer Reviewer Interest" in the email subject line.

We look forward to exploring this impactful topic with the special issue "Educating for Water Resilience in the Context of Climate Instability" in March 2020. For further information, please contact the issue editors, using "*JSE* Special Water Issue" in the subject line of your message.

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About the *Journal of Sustainability Education*: The *Journal of Sustainability Education (JSE)* serves as a forum for academics and practitioners to share, critique, and promote research, practices, and initiatives that foster the integration of economic, ecological, and social-cultural dimensions of sustainability within formal and non-formal educational contexts. *JSE* is a peer-reviewed, open access trans- and interdisciplinary e-journal that publishes three editions a year: two themed issues and one general issue. Issues include research and practice feature articles, professional and news reports of projects and initiatives, opinion pieces, announcements of educational and research opportunities, and book and other media reviews. *JSE* is housed by Prescott College's Ph.D. Program in Sustainability Education.

About the Special Issue Guest Editor: Amanda Bielawski is a conservation and sustainable development policy/communications consultant and researcher with a specific focus on global water security, environmental justice, climate, and biodiversity. Bielawski's recent research emanating from the United Nations Development Programme's Global Programme on Nature for Development analyzed how 50 communities across 26 developing nations implemented nature-based solutions for water security, often based upon Indigenous and Traditional Ecological Knowledge. Bielawski holds an MS in Environmental Studies with a concentration in Environmental Policy, Law, and Communications; an MBA; and international credentials related to global water policy and environmental conflict and peace building. Bielawski's mid-career doctoral research focuses on pathways to increase uptake of long-term nature-based strategies for water security, with a specific focus on water security in indigenous communities. Bielawski serves as Senior Editor of the *JSE*, and Guest Editor of this Special Issue.

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