



HERC Newsletter February 2019

ARCHAEOLOGY and CLIMATE CHANGE THREATS

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The HERC center was established at the CUNY Graduate Center in 2011 and is now undergoing a revisioning process that we hope will add value and create more opportunities for CUNY scholars to engage with initiatives and networks active in *archaeology of global change research* (McGovern 2018). We hope to periodically produce newsletters like this one (please feel free to send materials and suggestions) which will soon be posted on a revised HERC website (<https://herc.gc.cuny.edu/>).

This newsletter focuses on the problems of climate change threats to heritage and science and provides some links to active organizations and initiatives. It also flags up some upcoming conferences and workshops that offer opportunities to get engaged. Please suggest additions and revisions, and please join in the effort.

The Burning Libraries Threat

Just as archaeology is becoming widely recognized as a key discipline in the Global Change Research community (<http://ihopenet.org/>), and as our capacities to use our basic data to contribute to major issues of future sustainability are increased through new techniques (aDNA, stable isotopes, etc.) and by the accumulation of *big data* resources our basic record is threatened by environmental change as never before (Hambrecht et al 2019). Around the world archaeological sites are being damaged or destroyed by erosion, wildfire, rising soil temperatures, melting ice patches, sea level rise and increased storminess. We have multiple *Libraries of Alexandria* to offer to modern sustainability efforts, but they are **on fire now** (Maher 2018, Dawson et al. 2017).

In some areas, this decade will see the destruction of 90% of surviving archaeology- both cultural heritage and science lost forever. In Greenland, both coastal erosion and rising soil temperatures are combining to destroy a once exceptionally well- preserved archaeological record. Some 97 sites in Greenland that had excellently preserved bone, cloth, and feathers in the 1980's when sampled in 2010-16 by CUNY teams led by Konrad Smiarowski only four retained organic preservation. This rapid loss has become a widely recognized problem that has attracted media attention and spurred the creation of climate impact committees and response groups in most archaeological professional societies. This newsletter provides a partial overview of some of these initiatives and links to gain more information and updates. Also google search for "*Threats to Heritage and Science from Rapid Environmental Change*" for a range of additional links.

Key Archaeological Professional Society Links

- **Society for American Archaeology Climate Change Strategies and the Archaeological Record** (SAA CCSAR) committee and Interest Group. Formed in 2015 the CCSAR is now one of the most active SAA committees, and has been featured in two SAA presidential fora (Orlando and Vancouver). Currently chaired by Anne Jensen at Utqiagvik (formerly Barrow) Alaska, the SAA CCSAR committee has hosted well- attended sessions at SAA Orlando, Vancouver, and Washington DC and will have a session at the 2019 SAA in Albuquerque NM in April. SAA CCSAR has strong links to the *European Archaeological Association Climate Change and Heritage community* (see below) and to similar groups in other major archaeological professional organizations. Thanks to work by Dr. Ruth Maher (William Patterson U), papers from the Vancouver SAA have appeared in an issue of *Conservation and Management of Archaeological Sites* (vol 20, 2018, <https://www.tandfonline.com/toc/ycma20/20/4?nav=tocList>). The SAA CCSAR is now also becoming an SAA *Interest Group*, which will allow for development of its own SAA webpages.

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- **European Archaeological Association Climate Change and Heritage Community:** The EAA has collaborated closely with the SAA CCSAR, and in 2017-19 this team rapidly expanded from working group to community status (highest level EAA grouping) with key sessions in Maastricht and Barcelona bringing together representatives of SAA, EAA, WAC, AIA, SHA and a range of heritage groups. An expanded program is planned for the 2019 Bern EAA meetings. For more information see the EAA website: [https://www.e-a-a.org/EAA/Navigation Communities/EAA new CommunityDefault.aspx?iUniformKey=9544fb1b-2483-4517-8b92-b47ef667eb76&WebsiteKey=59c4f6fb-bee0-4278-9c2f-9529288deb09](https://www.e-a-a.org/EAA/Navigation%20Communities/EAA%20new%20CommunityDefault.aspx?iUniformKey=9544fb1b-2483-4517-8b92-b47ef667eb76&WebsiteKey=59c4f6fb-bee0-4278-9c2f-9529288deb09)

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- **Society for Historical Archaeology Heritage at Risk Committee (HARC)**

The committee was formed in 2017 to promote heritage at risk research and outreach within SHA, including the development of resources for use by the membership, and to disseminate information to the public about climate change's impacts to archaeological sites (<https://sha.org/blog/2018/04/introducing-the-heritage-at-risk-committee/>). A few of HARC's key goals include increasing advocacy efforts at the national and international levels, promoting expansion of heritage at risk themes at the annual conference, and increasing collaboration both with other committees within SHA and with professionals outside of the membership who study the impacts of climate change on our shared cultural resources. CUNY Archaeologist Kelly Britt is actively engaged with this committee and working with FEMA on NYC climate and heritage. See also: <https://sha.org/blog/2018/07/resiliency-projects-in-nyc/>

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Union of Concerned Scientists / ICOMOS/ World Heritage

These science and world heritage groups have become key players in mobilizing awareness of climate change impacts globally. Adam Markham (UCS) has a very informative blog that provides a good gateway to these efforts: <https://blog.ucsusa.org/adam-markham/climate-change-is-the-fastest-growing-threat-to-world-heritage>. For more on ongoing ICOMOS Climate Change and Heritage Working Group you can subscribe to their email feed at <https://mail.google.com/mail/u/0/?q=314#inbox/WhctKJVJggtbzQHskdZfjDMzfKnjDRLCSLjvIXQGdwXkXMdBvwwVxLGGpnQZsXVBQFHJjcl>

Other Upcoming Conferences and Workshops

Canadian Archaeological Association Quebec

The Canadian Archaeological Association is making the theme for the 2019 CAA annual meeting (Quebec May 15-18 2019) *"Heritage at Risk", in recognition of the myriad challenges confronting the preservation and accessibility of the archaeological record, archaeological sites, monuments, landscapes, collections and intangible cultural heritage. Development, neglect, coastal erosion and other climate-related factors all pose significant threats that are not yet well understood in terms of their scale or their potential mitigation. Social, educational and technological factors pose risks to collections, archives and intangible cultural heritage. This theme highlights possible looming crises for archaeologists, heritage resource managers and the public, as well as potential policy, education and technological solutions."* <https://canadianarchaeology.com/caa/annual-meeting/upcoming/quebec-city-2019>

International Union for Quaternary Research INQUA Dublin 2019

Alice Kelley (U Maine Orono) has organized a “Losing Legacy” session for the international interdisciplinary INQUA session in Dublin July 25-31st 2019. This session will have CUNY representation and will be the second INQUA session (after Kyoto 2017) to feature a “burning libraries” themed session. We are making considerable progress in gaining allies in the natural sciences and raising their concerns about loss of data they also value.

References

Dawson, Tom; Courtney Nimura; Elías López-Romero; Marie-Yvane Daire (Editors), (2017) *Public Archaeology and Climate Change*, Oxbow Books, Cambridge, ISBN: 9781785707049

Hambrecht, George, Anderung, C., Brewington, S., Dugmore, A., Edvardsson, R., Feeley, F., Gibbons, K., Harrison, R., Hicks, M., Olafsdottir, G., Rockman, M., Smiarowski, K., Streeter, R., Szabo, V., McGovern, T.H. (In press 2019) Distributed Observation Networks of the Past. *Quaternary International*. (accepted in press).

Maher Ruth (2018) Our Libraries Are Burning! Climate Change Impacts on Archaeology and Heritage. Guest Editor: Ruth Maher, *Conservation and Management of Archaeological Sites* vol 20, 2018

McGovern, T.H. (2018) What is it all for? Archaeology and Global Change Research, Society for American Archaeology President’s Forum, *SAA Archaeological Record* November 2018, pp 33-36

More information on SAA CCSAR

Unpublished SAA Climate Change and the Archaeological Record Committee Reports

McGovern, Thomas H. 2016 Report of 2015 SAA Climate Change Strategies and the Archaeological Record Committee (available www.nabohome.org)

McGovern, Thomas H. 2017 Report of 2016 SAA Climate Change Strategies and the Archaeological Record Committee (available www.nabohome.org)

McGovern, Thomas H. 2018 Report of 2017 SAA Climate Change Strategies and the Archaeological Record Committee (available www.nabohome.org)

Response initiatives

We urgently need a major commitment of funds and resources to respond to these deadly threats to both science and heritage now and for decades to come. Danish and Norwegian funders in 2018-19 have stepped up to provide multiple millions of dollars for new response projects in Norway and Greenland, and the US NSF Arctic Social Sciences Program has recommended a CUNY RESPONSE project in Greenland for funding 2019-21. This support is very welcome, but we need to go beyond normal funding channels to engage the public and a wide range of stakeholders in long term response to climate change threats to both science and heritage. A growing pattern has been to target archaeological field schools (working closely with local communities) onto vulnerable sites to provide an immediate and sustained response

that helps build capacity for sustained effort joining international scientific teams with local activists and heritage groups. For excellent examples see <http://www.scapetrust.org/> .

Orkney: CUNY faculty and students have been collaborating since 2010 with the *University of Highlands and Islands, U Bradford, & William Patterson U* in a joint field school (BA and MA level) on the island of Rousay, Orkney. Rousay is both incredibly rich in archaeology and very endangered by increasingly common and violent Atlantic storms and rising sea levels. The collaborative Rousay *Swandro* project has had high media visibility (<https://www.nytimes.com/interactive/2018/09/25/climate/scotland-orkney-islands-sea-level.html>) and has strong community support and involvement (<https://www.swandro.co.uk/>).

Greenland: CUNY archaeologists are also collaborating closely with the Greenland National Museum and Archives in an international field school combining climate impact response and capacity building and public engagement (<https://ifrglobal.org/program/greenland-arctic-vikings/>). This field school will coordinate with the new NSF supported research and rescue efforts.

Hebrides: CUNY is working with partners at University of Highlands and Islands, U Maryland, U Bergen, and Liaocheng University to develop another collaborative community-based field school targeting rapidly eroding sites in the Outer Hebrides. A planning meeting with *Scotland's Islands Research Framework for Archaeology (SIRFA)* in January 2019 was very positive (excursion is illustrated below) and we will be working with our partners to set up a climate response field school in the Hebrides by 2020. See: <https://mailchi.mp/9f099b69f4e6/scarf-newsletter-february-2019>

