

# NUCLEARWATERS: Putting Water at the Centre of Nuclear Energy History

## Newsletter September 2022

The ERC project [NUCLEARWATERS](#), based at KTH Royal Institute of Technology in Stockholm, explores the connections between nuclear energy and water in historical perspective. The goal is to rewrite the global history of nuclear energy by putting water at the centre of the analysis. Led by [Per Högselius](#), the project comprises seven senior and junior researchers, who collectively examine the “wet” history of nuclear energy from a range of thematic and geographical angles.

Since the publication of our last newsletter in April 2022, we have had a very busy time in the project. The NUCLEARWATERS seminar series continued with two invited guests. On 8 April [Sonali Huria](#) from the University of Erlangen-Nürnberg presented her work on the Indian Bishnoi community and its struggle for water in the face of Indian nuclear construction. And on 7 June [Stefan Guth](#) from the University of Heidelberg elaborated on the nuclear waters of Soviet Kazakhstan’s atomic oasis Aqtau.



On 21–22 June the NUCLEARWATERS project organized a major international workshop, targeting the “[Nuclear-Water Nexus](#)”. 32 scholars from Sweden, Norway, Germany, France, Britain, Italy, Spain, Qatar, Canada, the United States, India and Indonesia participated in this event, which was based on pre-circulated

papers. In the next phase, we aim to turn the workshop papers into an edited volume. We were intrigued by the breadth and depth of research that, as the workshop showed, is currently underway in different parts of the world on the “wet” aspects of nuclear energy.

NUCLEARWATERS researchers have recently also been very active at international conferences. In mid-June **Per Högselius** delivered a [keynote](#) on the “Nuclear Baltic” at the Baltic Connections conference in Jyväskylä, Finland. Towards the end of the month, then, several project members travelled to Århus in Denmark to participate in the [10<sup>th</sup> Tensions of Europe Conference](#). The conference was preceded by a summer school, with NUCLEARWATERS PhD student **Siegfried Evens** as one of the organizers. During the [conference](#) itself, **Melina Antonia Buns** organised the panel “Material and Ungraspable Nuclearities: Consumption of Resources and Spaces in the Transnational Nuclear Fuel Cycle”, with paper presentations by **Christopher Hill** (University of South Wales), **Per Högselius** and **Melina Buns** herself. **Michiel Bron** (Maastricht University) served as chair and **Anna Åberg** (Chalmers University of Technology) delivered a comment on all papers. **Siegfried Evens** organised another panel, “Opening the Nuclear Technological Black Box”, which featured

presentations by **Stefan Esselborn** (TU Munich) and **Tatiana Kasperski** (Sciences Po Paris), plus NUCLEARWATERS researchers **Achim Klüppelberg** and **Siegfried Evens**. Siegfried presented an additional paper in a session titled “Energy Challenges and Infrastructures”. **Per Högselius** offered a commentary on a recently published edited volume targeting European nuclear history, “[Engaging the Atom](#)”, with the four editors – **Arne Kaijser**, **Markku Lehtonen**, **Jan-Henrik Meyer** and **Mar Rubio-Varas** – present. Per further presented a paper titled “The European Energy System: Between Resource Colonialism and Energy Transnationalism.”

A week later several NUCLEARWATERS project members participated in the [European Society for Environmental History Conference](#), which took place in Bristol. **Melina Buns** moderated the roundtable “Writing Nuclear History: Environmental Perspectives”, which was organized by **Astrid Mignon Kirchhof** and **Jan-Henrik Meyer**. **Per Högselius** participated as one of the speakers. Meanwhile **Anna Storm**, **Siegfried Evens** and **Achim Klüppelberg** presented their NUCLEARWATERS research results in the panel “[Seeing Nuclear Energy Systems through the Lens of Water](#)”, organized by Achim. In two separate sessions, **Alicia Gutting** presented her draft article, soon to be published, titled “[What is Good Drinking Water? 41 Years of Water Conflicts around the Nuclear Research Centre Karlsruhe, 1956-1997](#)”, and **Kati Lindström** her Estonian case study, co-authored with **Achim Klüppelberg**, titled “[A fishy tale of the nuclear power plant never built in Estonia.](#)”. **Anna Storm** further participated in the panel “[‘Undo impossible’: How historians can contribute to issues of wicked wastes](#)”, together with (among others) **Jacob Darwin Hamblin** and **Verena Winiwarter**. The ESEH conference was followed by a summer school, this time with **Melina Buns** as one of the organizers. **Alicia Gutting** participated in the summer school, presenting her ongoing research on “Cooling Water Wars in the Rhine River Basin”.



*On excursion in Sweden. Photo by Melina Antonia Buns*

We have also been busy visiting nuclear sites and historical archives, taking advantage of loosening covid restrictions. On 10–11 May most of our team jointly visited several Swedish nuclear sites on the Baltic Sea, including [Studsvik](#) (Sweden’s prime nuclear research site, which once upon a time hosted several small reactors) and the nearby Atomic Beach, [Marviken](#) (where the “Swedish line” in nuclear engineering, based on heavy-water technology, ended in the late 1960s) and Oskarshamn (where we visited the Äspö Hard Rock Laboratory and the

Encapsulation pilot plant of the Swedish Nuclear Fuel and Waste Management Company, SKB).

NUCLEARWATERS project leader **Per Högselius** devoted considerable effort, in the past couple of months, to exploring nuclear power plants and nuclearized landscapes in Germany, Poland, France and Britain, with [visits to nuclear sites](#) such as Mülheim-Kärlich, Stendal, Zarnowiec, Cattenom and Oldbury – with each site featuring its own, often surprising water flows.

In terms of archival work, **Alicia Gutting** was finally able to visit the Vorarlberg State Archive in Bregenz (Austria) and subsequently the St. Gallen State Archive (Switzerland) to research the exciting case of the Rüthi Nuclear Power Plant, which was planned during the 1960s and 1970s but was ultimately never realized. Meanwhile **Per Högselius** paid a visit to several German archives, while **Siegfried Evens** has started to explore the Swedish National Archives and their nuclear files.

Multiple heatwaves in Europe and elsewhere during the summer has served to highlight the relevance of our project, as high water temperatures and low water levels in several European rivers forced numerous nuclear power plants to temporarily shut down or substantially reduce production. In this context our project has been repeatedly highlighted in the public discourse, for example, through much-read newspaper articles in Wired News and Dagens Nyheter. In August **Per Högselius** published a [debate article](#) that sparked a major debate in Sweden on the impact of climate change on nuclear energy. **Anna Storm**, for her part, published an article in [Ny Teknik](#), suggesting that the decommissioning of the historical Ågesta nuclear heat and power plant in southern Stockholm must take into account the cultural heritage dimension, also sparking debate. Meanwhile in Norway, **Melina Buns**, in a [debate article](#) co-authored with **Pål Nygaard**, criticized the Norwegian government's intention to invest heavily in nuclear research. In Sweden, Melina further participated in a public discussion on nuclear energy organized by Students for Sustainable Development at Karolinska Institutet, while Per Högselius provided a brief account of nuclear energy history as part of a public debate at KTH, with more than one thousand people attending.

On 21 August **Siegfried Evens** left Stockholm temporarily to start a four-month fellowship at Virginia Tech's STS department, where he will be hosted by **Sonja Schmid**. In October he will present his dissertation at Virginia Tech's Blacksburg campus. From 1 October **Alicia Gutting**, too, will go abroad for a longer period of time, having being invited by **Christian Rohr** to spend three months at the University of Bern in Switzerland. There, she will continue writing her article on the Rüthi NPP, present at the higher seminar and give a guest lecture. Additionally, she will partake at the doctoral workshop "[Writing Environmental History](#)", organized by the Rachel Carson Center in Munich. We also congratulate **Melina Antonia Buns**, who will soon leave us for a good reason: she has been appointed associate professor at the University of Stavanger, a position that she will take up early next year.

We have now embarked on a busy autumn term and are looking forward to the rest of the academic year.

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Read more about our project in media, and about the activities of our project members:

[Alicia Gutting, "First steps towards defending my work on the history of the nuclear Rhine River", WaterBlog@KTH](#)

[Melina Antonia Buns, "Making a Model: The 1974 Nordic Environmental Protection Convention and Nordic Attempts to Form International Environmental Law", Scandinavian Journal of History \(2022\), doi: 10.1080/03468755.2022.2069151.](#)

[Per Högselius, "Energy in a Historical Perspective." In Towards the Energy of the Future: The Invisible Revolution behind the Electrical Socket, ed. F. Brounéus & C. Duwig, pp. 33–40. Stockholm: Vetenskap & Allmänhet.](#)

[Melina Antonia Buns and Pål Nygaard, "25 millioner til atomforskning er et dyrt villspor \[25 million NOK for nuclear research leads astray\]," Morgenbladet, 5 June 2022.](#)

[Per Högselius, "Kärnkraften: en kort historisk exposé", presentation at KTH Debatt, 8 June 2022.](#)

["Nuclear Power Plants Are Struggling to Stay Cool", Wired News, 21 July 2022 \(interview with Per Högselius\).](#)

[Anna Storm, "Ågestaverket – en unik kärnkraftsanläggning slängd i containrar", Ny Teknik, 28 July 2022](#)

[Melker Drottz, "Vi är skyldiga att montera ned Ågestaverket" \(response to Anna's article\), Ny Teknik, 2 August 2022](#)

[Anna Storm, "Det hade varit möjligt att behålla kontrollrummet från Ågestaverket" \(final response\), Ny Teknik, 3 August 2022](#)

["Hettan tvingar franska kärnkraftverk att minska elproduktionen", Dagens Nyheter, 5 August 2022 \(interview with Per Högselius\).](#)

[Per Högselius, "Ny kärnkraft måste ta hänsyn till ett allt varmare klimat" Dagens Nyheter Debatt, 11 August 2022.](#)

["Kärnkraften tar redan hänsyn till ett varmare klimat", DN Debatt, 17 August 2022 \(response to Per Högselius' debate article\).](#)

[Per Högselius, "Förvånar mig att ingenjörer inte ser historiska mönster". DN Debatt, 19 August 2022 \(final response\).](#)

["Svenska experter: uppvärmt kylvatten ett hanterbart problem", Sveriges Radio, 11 August 2022 \(commentary to Per Högselius debate article\).](#)

["Sverige exporterar mest el – fransk kärnkraft klarar inte värmen", Tidningen Syre, 11 August 2022 \(about Per Högselius' debate article in DN\).](#)

["Professor: 'Kärnkraften blir allt mindre planerbar'" Ny Teknik, 12 August 2022 \(interview with Per Högselius\).](#)

[Per Högselius, "'Löftet' om sänkt standard vinner inga val." Svenska Dagbladet, 30 August 2022.](#)

["Forskare sticker hål på myten om att kärnkraften är oberoende av väder", Dagens ETC, 3 September 2022 \(interview with Per Högselius\).](#)

[Per Högselius, "Politiska missförstånd om svenska kärnkraften", Svenska Dagbladet, 8 September 2022.](#)