

Global Resources and Sustainability History

Final report of the NWO GREASE program

Erik van der Vleuten
2023

NOTE TO READER: Please find below an abbreviated version of the project final report submitted to the Dutch Research Council NWO in 2023. Sensitive and irrelevant information has been deleted.

1. General information

1a. Project leader (=main applicant)

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1b. Project title

Global Resources and Sustainability of European modernization, 1820-2020 (GREASE)

1c. Case number

IG.18.036

1d. International partners

Co-funding partners from the application:

Center for Contemporary and Digital History, University of Luxembourg
Institut des sciences de la communication, Paris Sorbonne Université
Center for Science Studies, Aarhus University
Division of History, Technology and Environment, KTH Stockholm
Department of History and Philosophy of Science, National and Kapodistrian University of Athens
Center for Interdisciplinary Studies of Poland, Europa-Universität Viadrina

1st. Start date and end date

Starts: October 1, 2018

End date: January 31, 2023

2. Evaluation of the project

Collaboration

1. Collaboration with European scientific partners: this cooperation proceeded satisfactorily, resulting in workshops, publications, and research agendas. Of the non-co-funding partners, Lisbon played an important role as a location for the 2019 workshop (co-organizing workshops at the partners' location is a good way to shape collaboration). New

European collaborations emerged through conference/workshop contacts, or through the mobility of individual partners. TU Darmstadt became an important new substantive partner, especially the group around the ERC project on [Global History of Technology](#) by Mikael Hård. The network built up in the context of this ERC project (including in Tanzania) also made an important contribution.

2. There has been a strong focus on cooperation with non-European partners. We had underestimated the importance of this in our original application. Early in the project we encountered the epistemic decolonization debate. It became clear that a new field such as 'global sustainability history' needs a much broader basis. After all, developing the field in Europe and then rolling it out worldwide would imply a continuation of epistemic colonization practices (in which 'sustainability' replaces the 'civilization offensive'). NB this is a major problem of much sustainability science; We believe that critically reflecting on this is an important contribution from the humanities.
As a follow-up to this observation, we have built a new collaboration with research groups in Maputo (Mozambique), Taipei (Taiwan), Dar es Salaam (Tanzania), and Chapecó (Brazil). These collaborations are particularly inspiring.
3. Due to COVID and the reasons described above in point 2, the workshop schedule has been slightly adjusted and the overall project was delayed (for which permission was granted by NWO).

Impact on international humanities

- Agenda development: GREASE has enabled us to pioneer and explore historical thinking about global sustainability issues (see list of publications below). In much (non-humanities) sustainability sciences we see many universalistic and ahistorical 'global sustainability' discourses. Within GREASE, several ways have been found to explicitly enter into a conversation with these 'global sustainability discourses', while at the same time placing humanities sensitivities at the center of approaching them. This concerns 'connected histories' and 'entangled histories' of situated, diversely imagined, and contested sustainability histories of regions (connected by knowledge or value chains) in the 'global North' and 'South'.
- Influence: For the time being, this idea has received a lot of enthusiasm from international peers. The notion that our themes should be studied in a global and connected history perspective is now widely shared. The broader impact will have to be seen in the coming years.

Future collaboration

Here we list a number of initiatives that we believe add up to a broader initiative to develop a global history of sustainability & technology together with the partners:

- Funded follow-up program 'SOY STORIES: Connected sustainability histories and futures of the global Soyacene' (NWO, 2023-28). Here we are working together with the Brazilian partner (UFFS history program) on a connected history of South American and European sustainability issues.
- Funded follow-up program "Sustainability Trade-offs in the Netherlands' Entangled Modernisation, 1900-2020" (NWO, 2023-28). Here we continue working on global sustainability history together with European partners.
- We collaborate with the Mozambique-based [Alternatives to Extractivism](#) network.
- We collaborate with the USDM history department in Tanzania.
- Within Tensions of Europe—Technology, resources and environment network, collaboration with European partners will be continued.
- We are working on a Dutch network with which we hope to further develop and globalize the

ideas developed.

- In conclusion: Thanks to GREASE, numerous collaborations and new initiatives have been initiated or deepened.

3. Research output

workshops

(Co)hosted workshop/conferences:

- Workshop "Perceptions and constructions of resources, resource crises and resource futures: looking at the Arctic and other spaces" (Aarhus University, 8-9 November 2018).
Joint kick-off workshop of the GREASE and EURES projects.
- Workshop Resources, Infrastructures and the Anthropocene: Dialogues between the Global-North and the Global-South (Caparica Campus, Lisboa, 18 - 20 September 2019).
In this workshop with approx. 40-45 people, we limited the participation of European partners to 50. It was hosted by our Lisbon partner. The workshop was the start of special issue 2.
- Online workshop "Resources & infrastructure in the postcolonial Anthropocene I" (November 10-13 2020)
Workshop (online due to Covid) with selected authors working on special issue for Global Environment.
- Online workshop "Resources & infrastructure in the postcolonial Anthropocene II" (6 May 2021)
Workshop (online due to Covid) with selected authors working on special issue for Global Environment.
- Online workshop "Entangling Technological Infrastructures, Material Flows and Modernities" (2 July 2021). Combined with other workshops in the Tensions of Europe Digital Workshop Festival
In lieu of an on-site GREASE workshop in Greece, on global resource history. Start of special issue 3.
- Online workshop "Data as a new resource? Similarities and differences of data vs. material resources Tensions of Europe" (online, 30 June 2021).
In lieu of an on-site GREASE workshop in Luxembourg, on data history as resource history (which was the role of the Luxembourg partner in GREASE).
- 10th Tensions of Europe Conference. Conference theme: Technology, Environment and Resources (Aarhus University, Denmark 29 June - 1 July 2022).
We used this conference as the GREASE final conference. Our Aarhus partner also used it for his EURES project. Combining our efforts we could make a larger conference on our research theme.

Co-sponsored, but hosted by non-European partners:

- Workshop "Alternatives to Extractivism: An examination of ways of knowing, being and doing in relation to the (sub)surface in Mozambique" (Maputo, 14-16 September 2022). Hosted by the Department for Archeology and Anthropology at UEM.
The conversation spotlighted Mozambican perspectives on global supply chains. For example: the European 'sustainable' energy transition means a new extractivism wave for Mozambique. Collaboration continues in the Alternatives to extractivism (A2E) network.
- Workshop "Taiwanese-Dutch connections & STS perspective" (Taipei, 14-16 December 2022) (including preparatory meetings). Hosted by Center for Public and Business Administration, Taipei.
The workshop (plus additional meetings) explored a connected history of the Netherlands & Taiwan, connected by semiconductor, resource and knowledge flows.

- Conference “Technology and Material Culture in African History” (Dar es Salaam 4-8 January 2023). Hosted by the History Department, UDSM.
Exploring history of technology and material culture from an African perspective, and establish an (East-) African scholarly hub. For GREASE: investigate African perspectives on 'global' 'sustainability' history (NB 'sustainability' is not a familiar term outside specific policy and academic circles, so the question was: which terms are used for what topics?).

Agenda development (recorded in core publications):

1. ESSAY (FIRST PRESENTATION OF IDEAS): Erik van der Vleuten, “Technology, Societal Challenges, and Global Sustainability History,” *ICON: Journal of the International Committee for the History of Technology* 24 (2019): 34-52.
2. SPECIAL JOURNAL SECTION: Anna Åberg & Frank Veraart (eds.), 'Creating, Capturing and Circulating Commodities: The technology and politics of material resource flows, from the 19th century to the present'. Special section of *The Extractive Industries and Society* Vol.7. no.1 (2020): 1-67.
3. SPECIAL JOURNAL ISSUE: Evelien de Hoop, Aarthi Sridhar, Claiton Marcio da Silva, Erik van der Vleuten (eds.), 'Historicizing entanglements: Science, Technology, and socio-ecological change in the postcolonial Anthropocene.' *Global Environment. Journal of transdisciplinary history* 15.2 (2022). Open access.
4. SPECIAL JOURNAL ISSUE: Stathis Arapostathis and Frank Veraart (eds.) 'Entangling Technological Infrastructures, Material Flows and Environmental Modernities'. Special issue of *ICON: Journal of the International Committee for the History of Technology*, coming September 2023.
5. CONCLUDING ROUNDTABLE 2022: Animesh Chatterjee, Jethron Akallah, MatthiasHeymann, Prakash Kumar, Evelien de Hoop, Jonas van der Straeten, Erik van de Vleuten (lead), *Global Histories of Technology and the Environment?* *Technology & Culture*, submitted.

Follow-up projects (funded)

- 2022 NWO Open Competition Social Sciences & Humanities: Erik van der Vleuten (Main applicant), Jaqueline Broerse, Claiton M da Silva. 'SOY STORIES: Connected sustainability histories and futures of the global Soyacene'.
NB this application stems directly from the GREASE program; was developed with the new Brazilian GREASE partner (UFFS History department, da Silva and Morretto), and builds on core publication 3. It is a connected history of situated sustainability-relevant narratives in Brazilian regions (deforestation, pesticide crisis) and Dutch regions (e.g. the nitrogen crisis), and also explores the possibilities of a 'transformative' future-oriented historiography.
- 2022 NWO Open Competition Social Sciences & Humanities: JP Smits (PL), Frank Veraart (project coordinator), Johan Schot, Bram Bouwens, Barbara van Mierlo, “Sustainability Trade-offs in the Netherlands’ Entangled Modernization, 1900-2020.”
This application also comes directly from GREASE, and in particular the work of project GREASE secretary Veraart with GREASE partner CBS/Smits. (See also core publication 2). This program also allows us to continue working on global sustainability history together with European and non-European partners.

Publications

- van der Vleuten, Erik. "Technology, Societal Challenges, and Global Sustainability History," *ICON: Journal of the International Committee for the History of Technology* 24 (2019): 34-52.
- Åberg, Anna and Frank Veraart (eds.). 'Creating, Capturing and Circulating Commodities: The technology and politics of material resource flows, from the 19th century to the present'. Special section of *The Extractive Industries and Society* Vol.7. no.1 (2020): 1-67.
- Veraart, Frank, Anna Åberg, Hanna Vikström. "Creating, capturing, and circulating commodities: The technology and politics of material resource flows, from the 19th century to the present", *The Extractive Industries and Society* Vol.7. no.1 (2020):1-7
- Bekasova, Alexandra. "From common rocks to valuable industrial resources: Limestone in nineteenth-century Russia", *The Extractive Industries and Society* Vol.7. no.1 (2020):8-19
- Vikström, Hanna. "Risk or opportunity? The extractive industries' response to critical metals in renewable energy technologies, 1980-2014", *The Extractive Industries and Society* Vol.7. no.1 (2020):20-28
- Åberg, Anna, Maja Fjæstad. "Chasing uranium: Securing nuclear fuel on a transnational arena in Sweden 1971–1984", *The Extractive Industries and Society* Vol.7. no.1 (2020): 29-38
- Bruno, Karl. "The technopolitics of Swedish iron mining in Cold War Liberia, 1950–1990", *The Extractive Industries and Society* Vol.7. no.1 (2020): 39-49
- Veraart, Frank, Jan-Pieter Smits, Erik van der Vleuten, "Connected by oil: A framework to analyze the connected sustainability histories of the Niger and Rhine Deltas, 1950-2015", *The Extractive Industries and Society* Vol.7. no.1 (2020): 50-67
- de Hoop, Evelien, Aarthi Sridhar, Claiton Marcio da Silva, Erik van der Vleuten (eds.). 'Historicizing entanglements: Science, Technology, and socio-ecological change in the postcolonial Anthropocene.' *Global Environment. Journal of transdisciplinary history* 15.2 (2022)
- De Hoop, Evelien, Aarthi Sridhar, Claiton Marcio Da Silva, Erik Van Der Vleuten. "[Historicising Entanglements: Science, Technology and Socio-Ecological Change in the Postcolonial Anthropocene](#)", *Global Environment* 15.2 (2022): 194-208
- De Hoop, Evelien and Erik Van Der Vleuten. "[Sustainability Knowledge Politics: Southeast Asia, Europe and the Transregional History of Palm Oil Sustainability Research](#)", *Global Environment* 15.2 (2022): 209-245
- Da Silva, Claiton Marcio, Claudio De Majo. "[Bio-anthropophagy, or the Anthropocene in the Making: the Caboclo Peoples in the Construction of Modern Brazil \(1889–1939\)](#)", *Global Environment* 15.2 (2022)
- De Oliveira, Ana Marcela França, Adrián Gustavo Zarrilli. "[The Expansion of the Railway and Environmental Changes: The Modern Configuration of the Argentine Pampas, c. 1870–1930](#)", *Global Environment* 15.2 (2022):
- Abazeed, Abeer R.Y. and Yasmine Hafez, "[Imagining the Nile: Knowledge–Power Nexus in the 19th Century Anthropocene](#)", *Global Environment* 15.2 (2022):
- Fotopoulos, Yannis and Stathis Arapostathis, "[From National to Cosmopolitan Hydrocarbons Resource Space: Hydrocarbons, Transnational Politics and the State in Greece](#)", *Global Environment* 15.2 (2022):
- Veraart, Frank. "[Catalysing Socio-Ecological Change: The Extraction and Processing of Edible Oils, 1910–1940](#)", *Global Environment* 15.2 (2022):
- Veraart, Frank. "1929: Unilever becomes a multinational power", in: Lex Heerma-van Vos et al. (eds), *World History of the Netherlands VOL. II* (Amsterdam: Ambo Anthos, 2022).
- van der Vleuten, Erik and Evelien de Hoop. "2019. Dutch nitrogen crisis and South American deforestation", in: Lex Heerma-van Vos et al. (eds), *World History of the Netherlands VOL. II* (Amsterdam: Ambo Anthos, 2022).
- Arapostathis, Stathis and Frank Veraart (eds.). 'Entangling Technological Infrastructures, Material Flows and Environmental Modernities'. Special issue of *ICON: Journal of the International*

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- Arapostathis, Stathis and Frank Veraart. "Introduction: Entangling Technological Infrastructures, Material Flows and Environmental Modernities", *ICON: Journal of the International Committee for the History of Technology*, 28.1 (2023) p. 9-23
- Martin, John. "British Agricultural Revolutions: The Dissemination and Assimilation of More Productive Methods," *ICON: Journal of the International Committee for the History of Technology* 28.1 (2023) p. 24-47
- Alexakis, Sotiris and Stathis Arapostathis. "From Exploitation to Adaptation: Entanglements, Nature, and Agricultural Practices in Greece, 1920–2000," *ICON: Journal of the International Committee for the History of Technology* 28.1 (2023) p. 48-76
- Strecker, Klara and Frank Veraart. "From Kenya with Love... Agents Shaping the Backbone of a Telecoupled Rose System, 1920–2020," *ICON: Journal of the International Committee for the History of Technology* 28.1 (2023) p. 77-104
- da Silva, Claiton Marcio and Claudio de Majo. "The "Fire Day" in Brazil: Soybean Monocultures and Politicisation of Arsons during the Great Acceleration," *ICON: Journal of the International Committee for the History of Technology* 28.1 (2023) p. 105-122
- Declercq, Robrecht. "Economic Geology and the Global Copper Frontier (1900–1980): Expanding the Futures and Reserves of Mining, p. 123-147", *ICON: Journal of the International Committee for the History of Technology* 28.1 (2023)
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