Global Environments: A 360º Visual Journey

ENHANCE ITN

Communicating global environmental issues in new and exciting ways can lead to a better public understanding of academic research. The international doctoral researchers of the ENHANCE Innovative Training Network (ITN) present their interdisciplinary projects through short, immersive videos, accompanied by analytical contextualization. These six 360º videos and one multiple-screen video triptych, shot in different countries and ecosystems, aim to bring people closer to an in situ experience of global environments, their complexities, and our relationship to them.

About the Exhibition

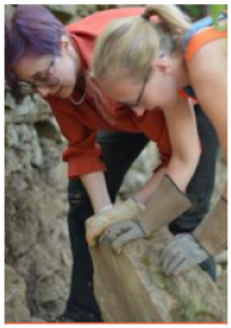
Agroecology as a Way of Life (Brazil)

Salt Symbiosis on the Black Sea (Bulgaria)

A Walk Through the Ruins (India)

Nourish: A 360° Video Poem (Baltic Sea)

Dreaming the Designer Climate (Iceland)



Building Cinque Terre: A Grapevine Viewpoint (Italy)

Protecting Wild Spaces and Species (Sweden)

How to cite:

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593 .

ISSN 2198-7696
Environment & Society Portal, *Virtual Exhibitions*

About the Exhibition

Illustration by Ernst Haeckel, 1904. Ernst Haeckel, *Kunstformen der Natur* (1904), plate/planche 49: Actiniae. Public Domain.

Ernst Haeckel, *Kunstformen der Natur* (1904), plate/planche 49: Actiniae.

The Environmental Humanities for a Concerned Europe Innovative Training Network (ENHANCE ITN) is a four-year multinational project realized through a generous grant by the European Commission's Marie Skłodowska Curie Actions . It aims to promote Environmental Humanities scholarship through trans- and interdisciplinarity, and to provide analytical, vocational, and complementary skills to early career researchers. The project captures the work of twelve international doctoral students based across four leading academic institutions, namely the Deutsches Museum , the Rachel Carson Center , KTH Stockholm and the University of Leeds . The principal directors of the project are Graham Huggan, Helmuth Trischler, and Christof Mauch. Roger Norum is the project coordinator.

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: About the Exhibition
Source URL: http://www.environmentandsociety.org/node/8602
PDF created on: 26 April 2021 09:11:49

Project Logo. Used with permission.

The doctoral researchers participating in this video project were Anna Antonova , Anne Gough, Jonathan Carruthers Jones , Claire Lagier , Vikas Lakhani , Jeroen Oomen , Jesse Peterson , Adam Sébire , Eveline de Smalen, and Sarah Elizabeth Yoho . Andrea Geipel and Claus Henkensiefken supported us in the production of the videos.

The ENHANCE researchers hope that such innovations bring a richer, deeper experience to socio-environmental research, writing, and communication. The goal is to encourage environmental humanities scholars across disciplines to embrace both traditional and contemporary technologies as a means of deepening their research capabilities and facilitating communication of their findings to a wider audience. Though some of these technological developments are quite recent, we are excited about the possibilities such affordances can bring to the study of human societies, cultures, and the environment. This 360° video exhibit was featured at the project's final conference, "(Um)Weltschmerz: An Exercise in Humility and Melancholia ," from 17 to 20 October 2018. The event took place at the Deutsches Museum and the Rachel Carson Center for Environment and Society in Munich, Germany.

As part of this multidisciplinary doctoral training programme, doctoral researchers carried out research into various global environmental issues currently confronting society. One aim of the ENHANCE project was to seek out, pilot, and develop new forms of researching and communicating pressing global environmental issues, and as such, the project experimented with various technologies for engaging—and engaging with—scholarly research. One of the project partners, the leading Swedish daily newspaper Dagens Nyheter, introduced the ENHANCE researchers to new immersive (360º) audio-video recording technologies as a means of bringing people closer to an in situ experience of the environment—and provided an increased understanding of its complexities.

The result of this training was that each of the ENHANCE doctoral researchers produced short video installations that emerged out of their own empirical and ethnographic fieldwork. The videos work by tracking,rendering, and displaying full-field visual, sonic, and tactile data in a context in which the viewer has full control and is empowered to decide what to look at, listen to, and feel—or which story to experience. These immersive technologies can be particularly helpful for communicating multiple perspectives on (and of) the world. This, in turn, can facilitate compelling modes of communicating academic research and can enable stakeholders to understand research more effectively and consequently lead to a more tangible societal impact.

We would like to thank Ruhi Deol, Eugenio Luciano, and Daniel Dumas at the Rachel Carson Center for realizing this virtual exhibition.

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: About the Exhibition
Source URL: http://www.environmentandsociety.org/node/8602
PDF created on: 26 April 2021 09:11:49

About the author

Roger Norum. Used with permission.

Roger Norum is the Project Coordinator of the Marie-Curie Actions Environmental Humanities for a Concerned Europe Innovative Training Network (ENHANCE ITN). He holds a BA in Arabic and Turkish from Cornell University and M.Phil and D.Phil degrees in Social Anthropology from the University of Oxford. He is currently a Lecturer in Anthropology at the University of Oulu, Finland. He can be reached at Roger.Norum@oulu.fi .

How to Cite

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593 . ISSN 2198-7696 Environment & Society Portal, *Virtual Exhibitions*.

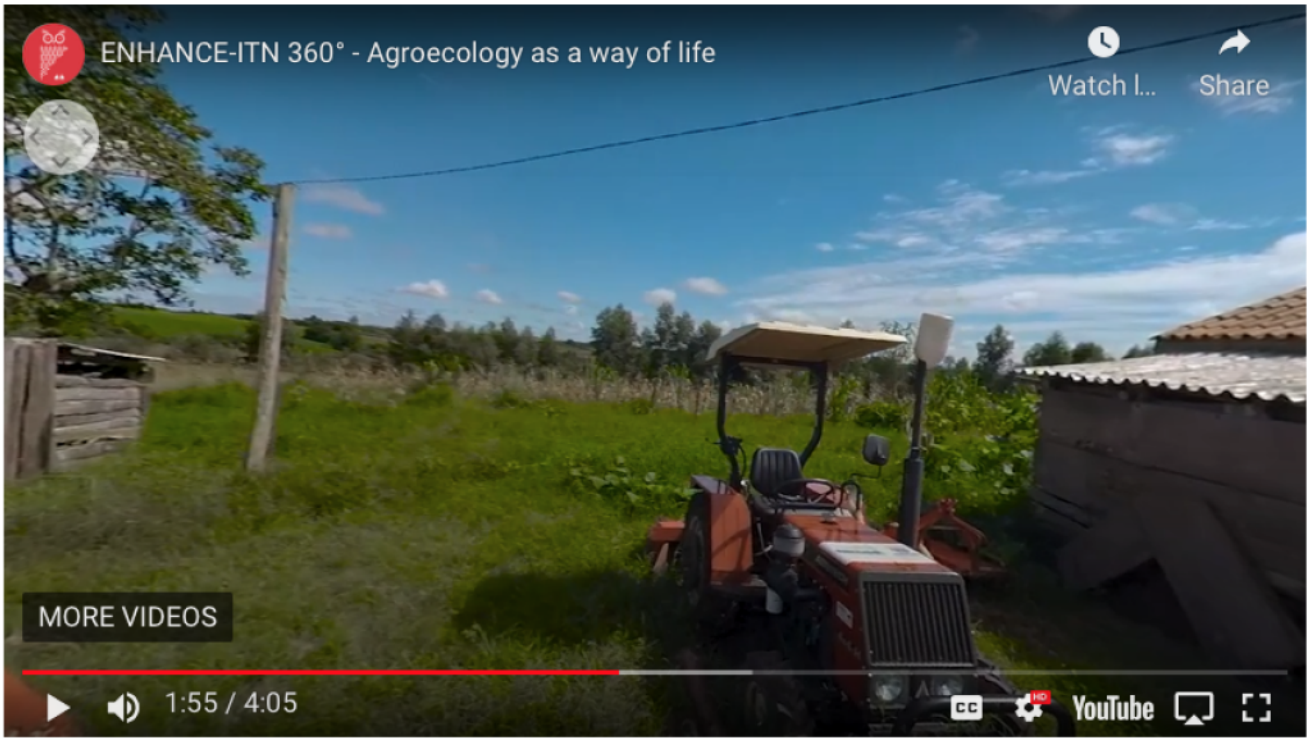
Websites linked in this text:

- http://www.itn-enhance.com
- https://ec.europa.eu/research/mariecurieactions/
- https://www.deutsches-museum.de/
- https://www.carsoncenter.uni-muenchen.de/
- https://www.kth.se/en/abe/inst/philhist/historia/ehl
- https://ahc.leeds.ac.uk/english
- http://www.environmentandsociety.org/exhibitions/360o-visual-journey/salt-symbiosis-black-sea-bulgaria
- http://www.environmentandsociety.org/exhibitions/360o-visual-journey/protecting-wild-spaces-and-species-sweden
- http://www.environmentandsociety.org/exhibitions/360o-visual-journey/agroecology-way-life-brazil
- http://www.environmentandsociety.org/exhibitions/360o-visual-journey/walk-through-ruins-india
- http://www.environmentandsociety.org/exhibitions/360o-visual-journey/dreaming-designer-climate-iceland
- http://www.environmentandsociety.org/exhibitions/360o-visual-journey/nourish-360deg-video-poem-baltic-sea
- http://www.environmentandsociety.org/exhibitions/360o-visual-journey/dreaming-designer-climate-iceland
- http://www.environmentandsociety.org/exhibitions/360o-visual-journey/building-cinque-terre-grapevine-viewpoint-italy
- https://seeingthewoods.org/2019/04/22/umweltschmerz-an-exercise-in-humility-and-melancholia/?fbclid=IwAR0Q-ZuClIXnskRXYMXjfa147-n1pLvvHpOQxCOOw7JkGh-hT0e4FdO3MQU
- http://doi.org/10.5282/rcc/8593.
- https://www.carsoncenter.uni-muenchen.de/index.html

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: About the Exhibition
Source URL: http://www.environmentandsociety.org/node/8602
PDF created on: 26 April 2021 09:11:49

Agroecology as a Way of Life (Brazil)

by Claire Lagier



The original virtual exhibition features a 360° video on the topic "Agroecology as a Way of Life" by CLaire Lagier. 2018. HD, 4 min. https://youtu.be/Mcm0VvSwsT4 . Video editing by Miriam Remter and Felix Remter (Primate Visions, Munich). Dubbing by Daniel Dutra.

This video shows six-year-old agroforestry projects in a land reform settlement in the state of Paraná, Brazil. This settlement was created in 2000 after a collective land occupation carried out by the Landless Workers' Movement (MST). Two farmer-activists practice agroecology, productive agriculture that relies on diversity, small-scale cooperative labor, and working with ecosystem processes. It is a type of farming that mixes trees with diverse crops and animal production and avoids the use of agrochemicals and synthetic fertilizers.

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Agroecology as a Way of Life (Brazil)
Source URL: http://www.environmentandsociety.org/node/8605
PDF created on: 26 April 2021 09:11:50

An agroecological grower tending his agroforest area, May 2016. Photograph by Claire Lagier. CC BY 4.0.

Photograph by Claire Lagier.

These farmers are members of a cooperative and sell their produce to public programs such as the Food Acquisition Program and the School Lunch (which allows schools to provide schoolchildren with free, nutritious lunches), and directly to private consumers in their region. Their production areas are certified organic through Rede Ecovida, a participatory network present in all of Brazil's South. Owing to the current Brazilian political situation, the names and exact locations of the farmers are undisclosed.

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Agroecology as a Way of Life (Brazil)
Source URL: http://www.environmentandsociety.org/node/8605
PDF created on: 26 April 2021 09:11:50

An agroecological grower plants lettuce seedlings in straw-covered soil in Paraná, Brazil, June 2017. Photograph by Claire Lagier. CC BY 4.0.

Photograph by Claire Lagier.

Agroecology is increasingly recognized worldwide as a practice to produce high-quality food in ways that help reproduce biodiversity and conserve natural resources, in contrast to conventional agriculture. According to rural social movements, it is a way of life that offers good living and working conditions to growers, provided that public powers support farm-level and food system-level transitions. Examples include facilitating market access, improving budgets for research and adapted technical assistance, improving access to secure land rights, and availability of adequate credit and subsidies.

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Agroecology as a Way of Life (Brazil)
Source URL: http://www.environmentandsociety.org/node/8605
PDF created on: 26 April 2021 09:11:50

About the author

Claire Lagier. Used with permission.

Claire Lagier is a doctoral student at the Rachel Carson Center at the LMU Munich . Her doctoral research, funded by the Marie Sklodowska-Curie ITN fellowship ENHANCE (2015–2018), investigates how agroecology has gained legitimacy within a Brazilian social movement advocating for land reform, the Landless Movement (MST) , whose leadership has been advocating for ecological production methods since the early 2000s. She has six years of experience teaching about and investigating Brazilian agro-environmental politics and social movements. She has worked for GRAIN , the research network which coined and investigates the phenomenon known as land grabbing, and is an editor for the online magazine Uneven Earth , which strives to bring insights from political ecology, environmental justice, and degrowth to the public in an accessible manner. Claire has a bachelor's degree in International Studies and Political Science from Université de Montréal (2011) and a Master's degree in Environmental Sciences from Université du Québec à Montréal (2014). In 2018, she was a visiting scholar at KTH Stockholm's Environmental Humanities Laboratory .

Websites linked in this text:

- https://youtu.be/Mcm0VvSwsT4
- https://www.carsoncenter.uni-muenchen.de/index.html
- https://www.en.uni-muenchen.de/index.html
- https://www.mstbrazil.org/content/what-mst
- https://www.grain.org/
- http://unevenearth.org/
- https://www.kth.se/en/abe/inst/philhist/historia/ehl

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Agroecology as a Way of Life (Brazil)
Source URL: http://www.environmentandsociety.org/node/8605
PDF created on: 26 April 2021 09:11:50

Dreaming the Designer Climate (Iceland)

by Jeroen Oomen and Adam Sébire

The original virtual exhibition features a 360° video on "AnthropoScene III: Hellisheiði; or, the post-modern Prometheus" by Adam Sébire. 2018. Video triptych, 3 HD screens (or 2 plus core sample in lit vitrine), 3 min. https://vimeo.com/276489442. © 2018 Adam Sébire. Used with permission.

In December 2015, at COP21 in Paris, the world's leaders stated their "aspiration" to limit global warming to an upper limit of 1.5ºC this century. On the planet's present greenhouse gas emissions trajectory there is no way to achieve this without what is sometimes termed climate engineering, which consists of using technology—most of it unproven and with unknown potential side-effects—to modify our climate. Carbon capture and storage (CCS) is arguably the most benign of these technologies. However, despite being both difficult and expensive it has proven politically attractive as a "technofix," delaying decarbonization. Yet the range of imagined technological fixes for global warming is broader and more controversial. Some scientists even research direct interventions in the Earth's temperature. Although such measures might be needed sometime in the coming century, these technologies raise questions about what the (global) climate entails, how one might govern such endeavors, and what it means to intervene directly in the largest systems of the biosphere.

Hellisheiði in Iceland is the otherworldly site of the CarbFix2 and Climeworks projects, one such CCS project. Since October 2017, this test site has been capturing carbon dioxide directly from the surrounding air. It mixes the captured CO_2 with water, injecting it via domed wells into the basalt rock formations surrounding Hengill, an active volcano, where it mineralizes—anthropogenic carbon dioxide sequestered as rock.

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Dreaming the Designer Climate (Iceland)
Source URL: http://www.environmentandsociety.org/node/8634
PDF created on: 26 April 2021 09:11:50

CarbFix2 injection wells, Hellisheiði, Iceland. © 2017 Adam Sébire . Used with permission.

Australian video artist Adam Sébire is drawn to this site for its modern-day alchemy and for its Promethean overtones: an unshakeable faith in the technological mastery of Homo sapiens. In his video triptych, one of the screens investigates the experiments at Hellisheiði (the injection wells of CarbFix and Climeworks' white cube "carbon scrubber" module). In another, a core sample of the sequestered CO_2—now mineralized as calcite within the basalt host rock—appears as a quasi-mystical object. The third screen is more ambiguous: also set in Iceland, but in a future geological era where complex lifeforms have disappeared and where the planet appears to be correcting an atmospheric imbalance. Now, geological processes reverse. After only a few hundred thousand years, equilibrium—homeostasis—will have returned.

Interior, CarbFix2/Climeworks CO_2 injection well, Hellisheiði, Iceland. © 2017 Adam Sébire . Used with permission.

CarbFix2/Climeworks injection wells, injecting CO_2 into the basalt below the Hengill volcano, Hellisheiði, Iceland. © 2017 Adam Sébire . Used with permission.

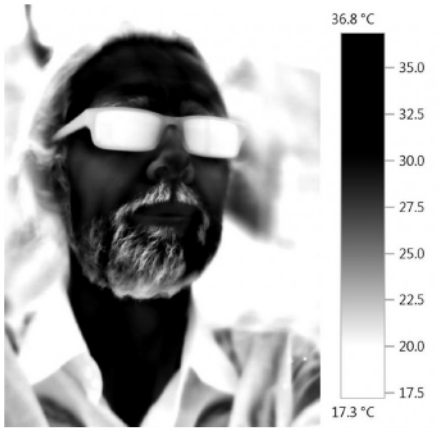
ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Dreaming the Designer Climate (Iceland)
Source URL: http://www.environmentandsociety.org/node/8634
PDF created on: 26 April 2021 09:11:50

About the authors

Jeroen Oomen. Used with permission.

Photograph by Jeroen Oomen, 2019.

Jeroen Oomen is a postdoctoral researcher at the Urban Futures Studio, at the University of Utrecht in the Netherlands. His research interests include the socio-technological creation of futures, climate, and collective imaginations. He completed his PhD at the Rachel Carson Center for Environment & Society, LMU Munich, as part of the Marie Curie ITN ENHANCE. His PhD thesis, "Dreaming the Designer Climate," analyzed the sociotechnical development of climate engineering research in Germany and the United States.



Adam Sebire. © 2019 Adam Sébire . Used with permission.

Adam Sébire studied filmmaking in Sydney and Havana, going on to direct documentaries for Australian television. In 2003 a film shoot about sea level rise on the tiny Pacific atoll of Tuvalu began to focus his work on the early effects of climate change. But, how to show a process largely imperceptible to our senses, in which effects are displaced from their causes both in time and space? To this end, Adam is undertaking a practice-based PhD at the University of New South Wales. He uses video polyptychs—multi-screen video art—to rethink our aesthetic visual representation of (and engagement with) climate change. www.adamsebire.info/anthropoScenes .

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Dreaming the Designer Climate (Iceland)
Source URL: http://www.environmentandsociety.org/node/8634
PDF created on: 26 April 2021 09:11:50

Websites linked in this text:

- https://vimeo.com/276489442
- https://www.adamsebire.info/
- http://www.adamsebire.info/anthropoScenes

Websites linked in image captions:

- https://www.adamsebire.info/the-works/anthroposcenes
- https://www.adamsebire.info/the-works/anthroposcenes
- https://www.adamsebire.info/anthropoScenes
- https://www.adamsebire.info/anthropoScenes
- https://www.adamsebire.info/anthropoScenes
- https://www.adamsebire.info/anthropoScenes
- https://www.adamsebire.info/anthropoScenes
- https://www.adamsebire.info/anthropoScenes

Building Cinque Terre: A Grapevine Viewpoint (Italy)

by Sarah Elizabeth Yoho

The original virtual exhibition features a 360° video on "Building Cinque Terre: A Grapevine Viewpoint" by Sarah Elizabeth Yoho. 2018. HD, 3 min. https://youtu.be/IoY2AjzEix0 .

This 360° video captures the process of constructing a dry stone wall in Italy's Cinque Terre. In cooperation with community organization Tu Quoque Vernazza, it was filmed over nine days and is shown in time-lapse. We placed the camera in grapevines in order to give the grapevine's point of view of Cinque Terre life. The front camera captured the wall, while the back camera captured the village of Vernazza and the sea. If you look up, down or to the sides, you will see grapevines. With this view, we wanted to show both the incredible beauty of Cinque Terre and the amount of work it takes to maintain the region's dry stone walls.

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Building Cinque Terre: A Grapevine Viewpoint (Italy)
Source URL: http://www.environmentandsociety.org/node/8601
PDF created on: 26 April 2021 09:11:50

Preparing to lift a large rock to the top of a wall. Pictured (left to right): Margherita Ermirio; Sarah Elizabeth Yoho. Photograph by Sarah Rose Liebau. CC BY 4.0.

Photograph by Sarah Rose Liebau

Cinque Terre is one of the top tourist destinations in Italy. It is known for its moving terraced landscape, picturesque villages, vineyards overlooking the sea, and walking trails that crisscross the region. Its fragile environment, however, is inundated with issues of overuse: overcrowding, environmental degradation, struggles to maintain adequate public services, etc. The dry stone walls are the foundation of Cinque Terre's terraced landscape. When walls work, it is easy not to notice them. When walls fail, it can be disastrous, leading to erosion, landslides, and loss of plants, animals, and human livelihoods.

To put it another way, without dry stone walls we would no longer have Cinque Terre. In a terraced landscape, wall failure is often attributed to neglect, erosion, or abandonment. Mass wall abandonment started during industrialization and accelerated following World War II. Erosion has worsened as tourism has increased, and weather, particularly extreme weather events like heavy storms or extreme heat, contribute to erosion. To combat wall failure, there are many diligent people and organizations dedicated to working to reverse wall destruction. Furthermore, UNESCO recently added dry stone walls in Italy and much of the Mediterranean to its List of Intangible Cultural Heritage of Humanity, which will hopefully raise international awareness about these walls.

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Building Cinque Terre: A Grapevine Viewpoint (Italy)
Source URL: http://www.environmentandsociety.org/node/8601
PDF created on: 26 April 2021 09:11:50

Cinque Terre is one of the top tourist destinations in Italy. It is known for its moving terraced landscape, picturesque villages, vineyards overlooking the sea, and walking trails that crisscross the region. Its fragile environment, however, is inundated with issues of overuse: overcrowding, environmental degradation, struggles to maintain adequate public services, etc. The dry stone walls are the foundation of Cinque Terre's terraced landscape. When walls work, it is easy not to notice them. When walls fail, it can be disastrous, leading to erosion, landslides, and loss of plants, animals, and human livelihoods.

To put it another way, without dry stone walls we would no longer have Cinque Terre. In a terraced landscape, wall failure is often attributed to neglect, erosion, or abandonment. Mass wall abandonment started during industrialization and accelerated following World War II. Erosion has worsened as tourism has increased, and weather, particularly extreme weather events like heavy storms or extreme heat, contribute to erosion. To combat wall failure, there are many diligent people and organizations dedicated to working to reverse wall destruction. Furthermore, UNESCO recently added dry stone walls in Italy and much of the Mediterranean to its List of Intangible Cultural Heritage of Humanity, which will hopefully raise international awareness about these walls.

For more information on Cinque Terre wall building, visit Tu Quoque's facebook page .

Building rock walls with Vernazza Cinque Terre in the background. Pictured (left to right): Margherita Ermirio, Sarah Elizabeth Yoho. Photograph by Sarah Rose Liebau. CC BY 4.0.

Photograph by Sarah Rose Liebau.

Group photo after building a dry stone rock wall in Cinque Terre. Pictured (left to right): Sarah Rose Liebau, Margherita Ermirio, Sarah Elizabeth Yoho. Photograph by Sarah Rose Liebau. CC BY 4.0.

Photograph by Sarah Rose Liebau.

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Building Cinque Terre: A Grapevine Viewpoint (Italy)
Source URL: http://www.environmentandsociety.org/node/8601
PDF created on: 26 April 2021 09:11:50

About the author

Sarah Elizabeth Yoho. Photograph by Sarah Rose Liebau. Used with permission.

Sarah Elizabeth Yoho is an environmental anthropology PhD candidate at the University of Leeds who works within the environmental humanities research space. Her particular research focus is on modes of human and environmental resilience in Italian coastal communities. As part of her work, she has logged countless hours learning about the art of dry stone walling through involvement in community rock wall building projects.

Websites linked in this text:

- https://youtu.be/IoY2AjzEix0
- http://www.facebook.com/tuquoquevernazza

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Building Cinque Terre: A Grapevine Viewpoint (Italy)
Source URL: http://www.environmentandsociety.org/node/8601
PDF created on: 26 April 2021 09:11:50

Salt Symbiosis on the Black Sea (Bulgaria)

by Anna Antonova

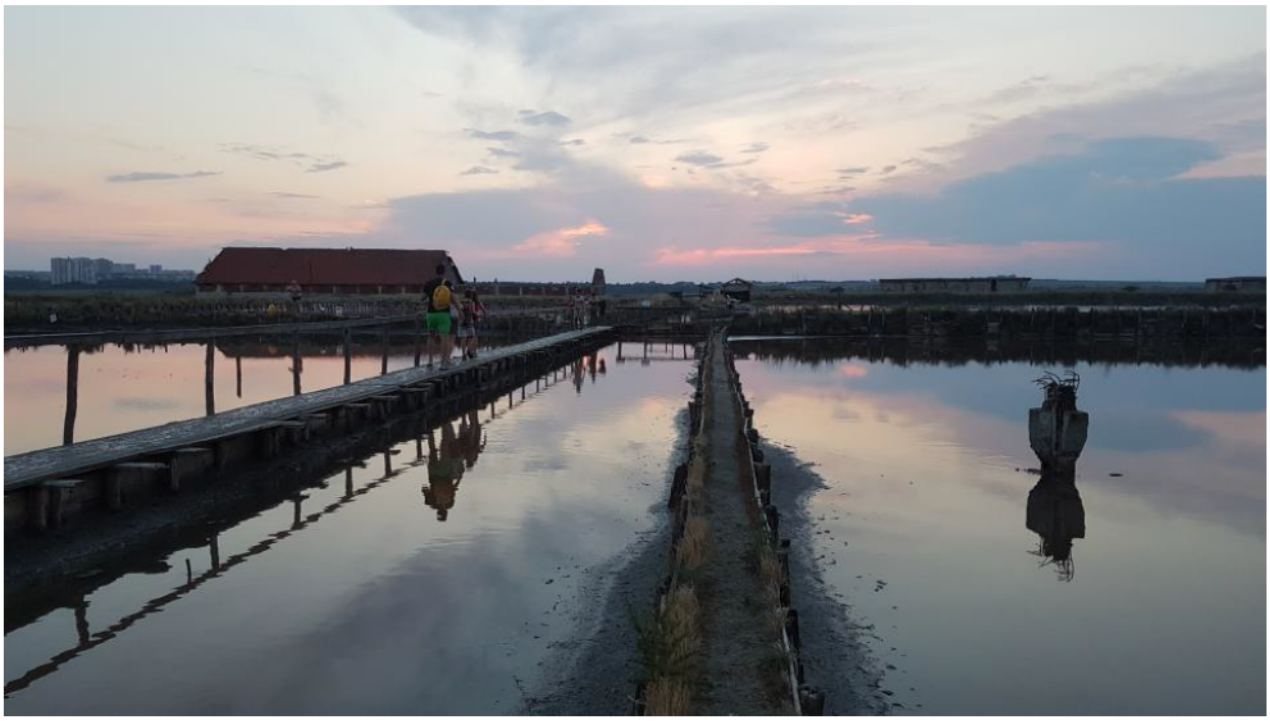
The original virtual exhibition features a 360° video on "Salt Symbiosis on the Black Sea," by Anna Antonova. 2018. HD, 4 min. https://youtu.be/W6-1aBAhJ_U. Video editing by Miriam Remter and Felix Remter (Primate Visions, Munich). CC BY 4.0.

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Salt Symbiosis on the Black Sea (Bulgaria)
Source URL: http://www.environmentandsociety.org/node/8603
PDF created on: 26 April 2021 09:11:51

Anna Antonova from the ENHANCE ITN project at the Black Sea holding a 360° video camera. Photograph by Anna Antonova. CC BY 4.0.

Photograph by Anna Antonova.

This video immerses the viewer in a unique habitat on the Bulgarian coast of the Black Sea: the salt flats in the Atanasovsko Lake near the city of Burgas. Salt flats, like these, are a natural symbiosis between humans and their coastal environment. They support traditional human labor and industry, their mud can be used as a natural spa with proven health benefits, and at the same time, the dikes provide nesting habitats for migratory bird species, while the shallow waters perform important nursery functions for the aquatic ecosystem. For these reasons, many local non-governmental organizations, such as Green Balkans and the Bulgarian Biodiversity Foundation, aim to promote and popularize the salt flats amongst community members and tourists alike.



Sunset at the Atanasovsko Lake salt flats. To the far left, the outskirts of Burgas city neighbor the lake. Photograph by Anna Antanova. CC BY 4.0.

Photograph by Anna Antanova.

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Salt Symbiosis on the Black Sea (Bulgaria)
Source URL: http://www.environmentandsociety.org/node/8603
PDF created on: 26 April 2021 09:11:51

Sadly, these kinds of environments are increasingly rarer along the Bulgarian coastline. In the Burgas region, salt production was once the most prominent industry; today, although salt is still being produced here, tourism plays a much more important role in the local economy. As one of the main strategic pillars for the Bulgarian economy as a whole, the tourist industry comes with environmental pressures that have often entered in direct conflict with the salt flats ecosystem. In past decades, many salt flats on this part of the coastline have been filled in to support tourism-related construction. For local human and nonhuman communities, this not only represents a material change in the environment, but also a profound change in how lives subsist on the coastline.

The Atanasovsko Lake salt flats. The recognizable bright red color comes from the water's extremely high levels of salinity and the specific microorganisms living in it. Photograph by Anna Antanova. CC BY 4.0.

Photograph by Anna Antanova.

Ultimately, when coasts change, societies change with them; not only in terms of their economies, political systems, or legislation but also in terms of the stories they tell about themselves and their relationships to their landscape. The salt flats, and how we might feel as we stroll through them, are a reflection of that.

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Salt Symbiosis on the Black Sea (Bulgaria)
Source URL: http://www.environmentandsociety.org/node/8603
PDF created on: 26 April 2021 09:11:51

About the author

Anna Antonova. Used with permission.

Anna S. Antonova is a Marie Skłodowska-Curie Research Fellow with the ENHANCE innovative training network at the University of Leeds, Leeds, UK. Her research brings together humanities and social science approaches to examine how societal relations with and within coastal landscapes evolve over time, especially under pressure from global environmental, political, and economic changes. Her doctoral research at the University of Leeds examined transformations, crises, and contestations in narratives about environment and society on two European coasts, the Bulgarian Black Sea and the Yorkshire North Sea. She has previously worked on the external dimension of the EU's Common Fisheries Policy.

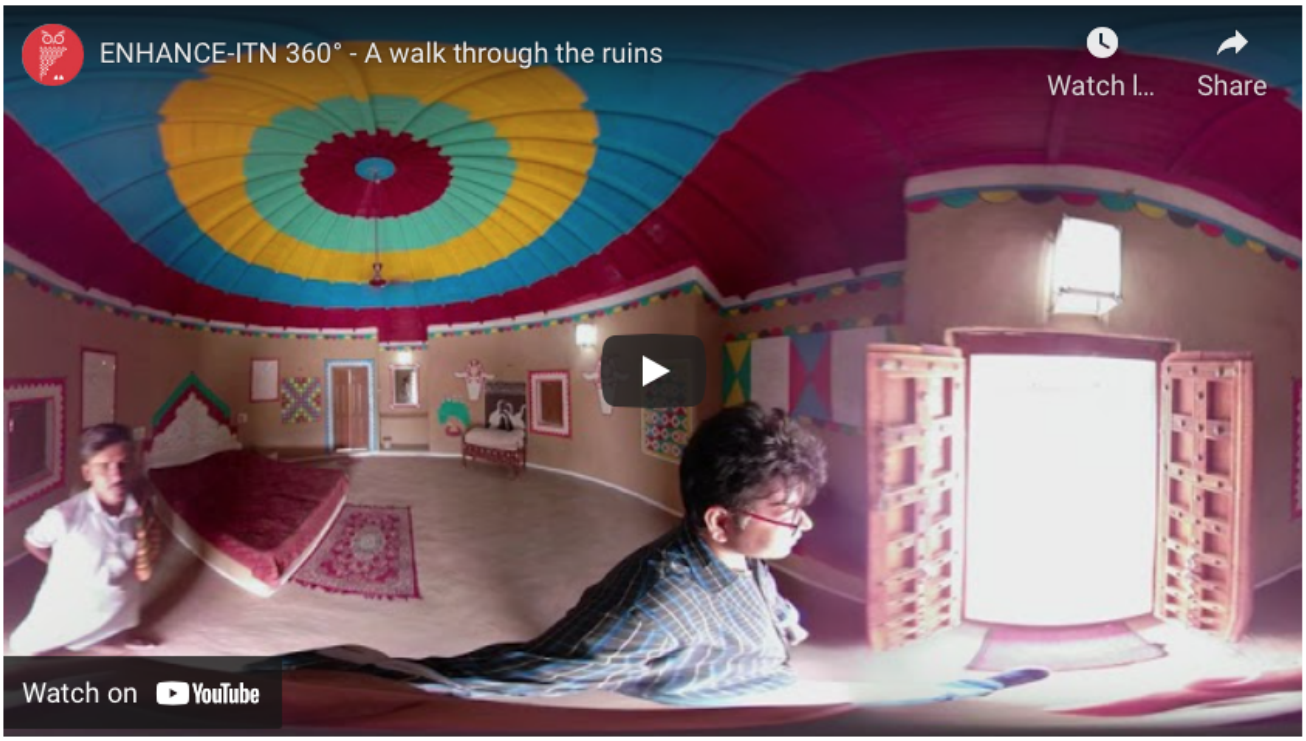
Websites linked in this text:

- https://youtu.be/W6-1aBAhJ_U

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Salt Symbiosis on the Black Sea (Bulgaria)
Source URL: http://www.environmentandsociety.org/node/8603
PDF created on: 26 April 2021 09:11:51

A Walk Through the Ruins (India)

Vikas Lakhani



The original virtual exhibition features a 360° video on "A Walk Through the Ruins," by Vikas Lakhani. 2018. HD, 4 min. https://youtu.be/1I5O9ZQ7e30. Video editing by Miriam Remter and Felix Remter (Primate Visions, Munich). CC BY 4.0.

This video shows the Kutch region of Gujarat that was devastated by a 7.7 Mw earthquake on 26 January 2001. Kutch is famous for its marshy salt flats, vibrant culture, and diverse food and textile traditions. However, it has made headlines in the past due to its high risk of cyclones and earthquakes. Exploring how the memory of disasters influence people's risk perception, collective action, institutional response, and decision-making processes, the video takes the viewer through the ruins and memories of the earthquake.

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: A Walk Through the Ruins (India)
Source URL: http://www.environmentandsociety.org/node/8609
Print date: 11 May 2021 13:52:03

Relics of reconstruction. Photograph by Vikas Lakhani. CC BY 4.0.

Photograph by Vikas Lakhani.

Taking a walk through the village of Vondh, the viewer observes the neo-liberal visions of governance in which Vondh was relocated and reconstructed under a government scheme. The village, designed with parallel streets, identical houses, and superficial community participation, was relocated to a high salinity area. As a result, the concrete houses crumbled within a few years, and the village stands abandoned as a memorial of failed relocation policies challenging the efficacy of governance and accountability. The story continues with the aim to explore the traditional housing of the region and the meaning of development. We move to a *Bhunga*, a typical mud house with a circular foundation and low height that has evolved against cyclones and earthquakes over centuries. The traditional wisdom of constructing *Bhungas* is celebrated, and they have become popular tourist attractions following the earthquake of 2001. Lastly, we take a walk through the ruins of Adhoi village to understand the impact of the earthquake on the everyday life of its residents. Adhoi was also relocated to a new

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: A Walk Through the Ruins (India)
Source URL: http://www.environmentandsociety.org/node/8609
Print date: 11 May 2021 13:52:03

site, and the old village was proposed to be converted into a museum. However, few villagers opted for monetary aid instead of relocating, and the plan to turn the old village into a museum never went beyond the planning stage. As a result, the old Adhoi appears to be a ghost village with a few residents who barely notice the ruins anymore.

Abandoned houses in the relocated village of Vondh. Photograph by Vikas Lakhani. CC BY 4.0.

Photograph by Vikas Lakhani

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: A Walk Through the Ruins (India)
Source URL: http://www.environmentandsociety.org/node/8609
Print date: 11 May 2021 13:52:03

About the author

Vikas Lakhani. Used with permission.

Vikas Lakhani is a doctoral candidate at the Rachel Carson Center at the LMU Munich. His doctoral project, funded by the Marie Sklodowska-Curie ITN fellowship ENHANCE (2015–2018), investigates how the memory of disasters shape risk perceptions, collective action, institutional response, and decision-making. His work focuses on Machhu Dam failure (1979) and Bhuj Earthquake (2001) in Gujarat, India. Before starting his doctoral research, Vikas worked with the Hiroshima University, Government of Gujarat, and the Tata Institute of Social Sciences on the issues of urbanization in developing economies, policies, and planning of disaster management, and post-disaster recovery projects. Vikas has a bachelor's degree in Environmental Science from the M.S. University of Baroda (2006) and a Master's degree in Disaster Management from Tata Institute of Social Sciences, Mumbai (2009). In 2018, Vikas was a visiting scholar at the University of Leeds (UK) and the University of Stavanger (Norway).

Websites linked in this text:

- https://youtu.be/1I5O9ZQ7e30

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: A Walk Through the Ruins (India)
Source URL: http://www.environmentandsociety.org/node/8609
Print date: 11 May 2021 13:52:03

Nourish: A 360° Video Poem (Baltic Sea)

by Jesse D. Peterson

The original virtual exhibition features a 360° video on "Nourish: A 360° Video Poem," by Jesse D. Peterson. 2018. HD, 3 min.https://youtu.be/xiLQ5xbr7-0. Video editing by Miriam Remter and Felix Remter (Primate Visions, Munich). CC BY 4.0.

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Nourish: A 360° Video Poem (Baltic Sea)
Source URL: http://www.environmentandsociety.org/node/8607
PDF created on: 26 April 2021 09:11:55

This short video poem began as a project in alternative storytelling based upon an ecocritical analysis of the short story, "It," by Theodor Sturgeon. This poem forms a part of the creative research outputs attached to my dissertation work on nutrient pollution, algal blooms, and dead zones in the Baltic Sea. For a more detailed description of the background and scholarly contribution this video makes, please read my publication "Doing Environmental Humanities: Inter/transdisciplinary Research through an Underwater 360° Video Poem." Otherwise, as a general description, the poem presents both an environment and posthuman character from which the human cannot be disentangled.

Broadly speaking, my research looks at the global problem of cultural eutrophication. Eutrophication refers to when a water body is excessively rich in nutrients, causing dense growth of algae and plants. Cultural eutrophication is the process of exacerbation of natural eutrophication through anthropogenic sources of pollution and other processes affecting the marine environment, such as climate change.

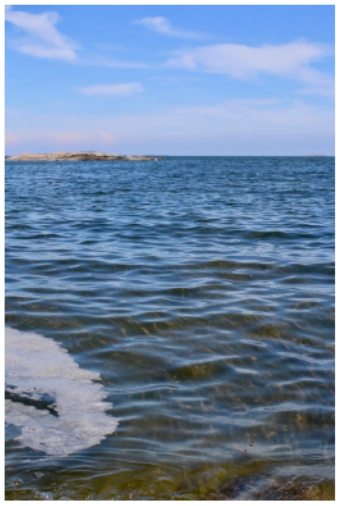
An annual summertime bloom of cyanobacteria flourishes in the Baltic Sea in 2015. Captured by the Operational Land Imager (OLI) on NASA's Landsat 8 satellite. NASA images by Norman Kuring, Public Domain.

NASA images by Norman Kuring, NASA's Ocean Color Web. Caption by Kathryn Hansen.
https://earthobservatory.nasa.gov/images/86449/blooming-baltic-sea .

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Nourish: A 360° Video Poem (Baltic Sea)
Source URL: http://www.environmentandsociety.org/node/8607
PDF created on: 26 April 2021 09:11:55

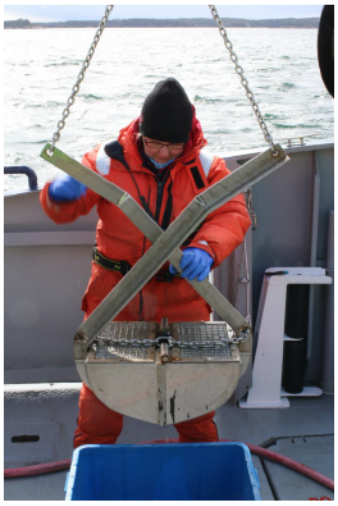
The consequences of eutrophication in the seas invite us to rethink human actions and responsibilities towards them, including their coastal and marine organisms. By analyzing how certain practices respond to and represent cultural eutrophication, this research identifies values and meanings attached to water, nutrients, algal blooms, and dead zones. It also explores how other species and ecological forces contribute to making waste.

Focusing on the Baltic Sea, this study attempts the first in-depth analysis of cultural eutrophication from a humanities perspective. By looking at films, images, and books, as well as making site visits and conducting interviews, this research makes a theoretical contribution by arguing that waste is also created by ecological systems, and not just by people. It also makes practical contributions by historicizing scientific and technological projects, by developing alternative narratives, and by revealing different communities' concerns and interests about cultural eutrophication.



Remnants of a cyanobacteria bloom off the east coast of Bullerö, summer of 2018. Cyanobacteria blooms can be toxic and affect the ecology, economics, politics, and livelihoods in the region. Photograph by Jesse Peterson. CC BY 4.0.

Photograph by Jesse Peterson.



A worker unloads sediment onboard the research vessel *Electra* in the spring of 2016 as part of the ongoing efforts to monitor dead zones in the Baltic Sea. Photograph by Jesse Peterson. CC BY 4.0.

Photograph by Jesse Peterson

Websites linked in this text:

- https://youtu.be/xiLQ5xbr7-0
- https://www.tandfonline.com/doi/full/10.1080/14688417.2019.1583592
- https://www.terrain.org/
- https://orcid.org
- https://orcid.org/0000-0002-0634-8839

Websites linked in image captions:

- https://earthobservatory.nasa.gov/images/86449/blooming-baltic-sea

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Nourish: A 360° Video Poem (Baltic Sea)
Source URL: http://www.environmentandsociety.org/node/8607
PDF created on: 26 April 2021 09:11:55

About the author

Jesse Peterson. Photograph by Claire Peterson. Used with permission.

Photograph by Claire Peterson.

Jesse D. Peterson is a PhD candidate at the Division of History of Science, Technology and Environment at KTH Royal Institute of Technology, Stockholm, 11428 Sweden. Email: jessep@kth.se. He has an MSc in Environmental Humanities (U of U 2013) and an MFA in Creative Writing (UNLV 2010). He is part of ENHANCE, the KTH Environmental Humanities Laboratory, the posthumanities hub and helped found the literary arts journal *saltfront*. His research interests include exploring socio-natures of waste, ecology, and culture as well as practicing methods of creative scholarship. His publications include both academic and creative outputs and can be found in *Green Letters*, *The Discourses of Environmental Collapse*, *Geohumanities*, Terrain.org , and elsewhere. https://orcid.org/0000-0002-0634-8839

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Nourish: A 360° Video Poem (Baltic Sea)
Source URL: http://www.environmentandsociety.org/node/8607
PDF created on: 26 April 2021 09:11:55

Protecting Wild Spaces and Species (Sweden)

by Jonathan Carruthers Jones

The original virtual exhibition features a 360° video on "Protecting Wild Spaces and Species," by Jonathan Carruthers Jones. 2018. HD, 5 min. https://youtu.be/ajAcI0dau00 . Video editing by Miriam Remter and Felix Remter (Primate Visions, Munich). CC BY 4.0

Wilderness. What is it really? It is often argued that there is not a simple answer, but rather that we all have a very individual and personal point of view on this question, based on our life experiences. These experiences vary greatly and as Roderick Frazier Nash famously wrote in *Wilderness and the American Mind*, "One man's wilderness is another's roadside picnic ground" (Nash 1993, 1).

This video takes you on a journey to the Arctic Circle, the Abisko National Park in northern Sweden, where a research project was trying to understand this very question—what is wilderness?

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Protecting Wild Spaces and Species (Sweden)
Source URL: http://www.environmentandsociety.org/node/8608
PDF created on: 26 April 2021 09:11:57

Research walk in Abisko National Park, Swedish Arctic, June 2018. Photograph by Jonathan Carruthers Jones. CC BY 4.0.

Photograph by Jonathan Carruthers Jones.

In order to answer the question, the researchers took people on a walk from an area of sparse wilderness to an area of abundant wilderness, and back. We invited people from all different lifestyles to come on this excursion. We made regular stops along the walk and asked them to tell us how "wild" the landscape was for them, how "wild" did it look, and how "wild" did it sound?

By taking these people on the same walk, we could compare their different opinions and perceptions of wilderness. We could also then compare a "map" of their human point of view with maps of wilderness made by experts using data captured by satellites. We have done similar research projects in the Scottish Highlands and the French Pyrenees mountain regions. Through this work, we have found that even though wilderness is a much contested term—with supposedly lots of personal differences in opinions—people share a lot in common in their views of what wilderness is.

By making maps together in this participatory way, to support conservation decision-making, we argue that the conservation of wild spaces and wild species produces less conflict and, in the long-term, is more effective.

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Protecting Wild Spaces and Species (Sweden)
Source URL: http://www.environmentandsociety.org/node/8608
PDF created on: 26 April 2021 09:11:57

Research walk in Abisko National Park, Swedish Arctic, June 2018. Photograph by Jonathan Carruthers Jones. CC BY 4.0.

Photograph by Jonathan Carruthers Jones

Research walk in Abisko National Park, Swedish Arctic, June 2018. Photograph by Jonathan Carruthers Jones. CC BY 4.0.

Photograph by Jonathan Carruthers Jones

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Protecting Wild Spaces and Species (Sweden)
Source URL: http://www.environmentandsociety.org/node/8608
PDF created on: 26 April 2021 09:11:57

About the author

Jonathan Carruthers Jones. Photograph by Rob Neil. Used with permission.

Jonathan Carruthers Jones is a Marie Skłodowska Curie Doctoral Research Fellow and a research associate with the Wildland Research Institute (WRi) at the University of Leeds. Jonathan's research focuses on understanding the complex issues which surround how humans and nature interact in wild spaces and how this relates to the long-term success of nature conservation. He explores how we can improve decision-making on the protection of wild spaces and species within the remote and mountainous areas of Europe using a range of participatory tools, visual methods, and integrated in-situ mapping methods. His research sites are in the Scottish Highlands, the French Pyrenees, and the Swedish and Finnish Arctic.

Websites linked in this text:

- https://youtu.be/ajAcI0dau00

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Protecting Wild Spaces and Species (Sweden)
Source URL: http://www.environmentandsociety.org/node/8608
PDF created on: 26 April 2021 09:11:57

Copyright Information

Introduction

Illustration by Ernst Haeckel, 1904. Ernst Haeckel, *Kunstformen der Natur* (1904), plate/planche 49: Actiniae. Public Domain.

Ernst Haeckel, *Kunstformen der Natur* (1904), plate/planche 49: Actiniae.

Agroecology as a Way of Life

An agroecological grower plants lettuce seedlings in straw-covered soil in Paraná, Brazil, June 2017. Photograph by Claire Lagier. CC BY 4.0.

Photograph by Claire Lagier.

Dreaming the Designer Climate

CarbFix2 injection wells, Hellisheiði, Iceland. © 2017 Adam Sébire . Used with permission.

Building Cinque Terre

Preparing to lift a large rock to the top of a wall. Pictured (left to right): Margherita Ermirio; Sarah Elizabeth Yoho. Photograph by Sarah Rose Liebau. CC BY 4.0.

Photograph by Sarah Rose Liebau

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Copyright Information
Source URL: http://www.environmentandsociety.org/node/8732
PDF created on: 27 April 2021 08:30:49

Salt Symbiosis on the Black Sea

The Atanasovsko Lake salt flats. The recognizable bright red color comes from the water's extremely high levels of salinity and the specific microorganisms living in it. Photograph by Anna Antanova. CC BY 4.0.

Photograph by Anna Antanova.

A Walk through the Ruins

Relics of reconstruction. Photograph by Vikas Lakhani. CC BY 4.0.

Photograph by Vikas Lakhani.

Nourish: A 360° Video Poem

An annual summertime bloom of cyanobacteria flourishes in the Baltic Sea in 2015. Captured by the Operational Land Imager (OLI) on NASA's Landsat 8 satellite. NASA images by Norman Kuring, Public Domain.

NASA images by Norman Kuring, NASA's Ocean Color Web. Caption by Kathryn Hansen. https://earthobservatory.nasa.gov/images/86449/blooming-baltic-sea .

Protecting Wild Spaces and Species

Research walk in Abisko National Park, Swedish Arctic, June 2018. Photograph by Jonathan Carruthers Jones. CC BY 4.0.

Photograph by Jonathan Carruthers Jones

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Copyright Information
Source URL: http://www.environmentandsociety.org/node/8732
PDF created on: 27 April 2021 08:30:49

Websites linked in image captions:

- https://www.adamsebire.info/the-works/anthroposcenes
- https://www.adamsebire.info/the-works/anthroposcenes
- https://earthobservatory.nasa.gov/images/86449/blooming-baltic-sea

ENHANCE ITN. "Global Environments: A 360º Visual Journey." Environment & Society Portal, *Virtual Exhibitions* 2019, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/8593.
Chapter: Copyright Information
Source URL: http://www.environmentandsociety.org/node/8732
PDF created on: 27 April 2021 08:30:49