



# STORYTELLING AND ENVIRONMENTAL HISTORY

Experiences from  
Germany and Italy

Roberta Biasillo  
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Transformations in  
Environment and Society

2020 / 2

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# **Storytelling and Environmental History**

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Edited by  
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Roberta Biasillo and Claudio de Majo

### Introduction

Environmental history can be approached from different angles, with scholars continuing to develop diverse definitions of the field and analyses of where to place it in wider disciplinary contexts. This special issue approaches this emerging discipline from two distinct angles. The first is that of the distinct national historiographical traditions of Germany and Italy and the main themes, challenges, and trends of environmental history in these two countries. The second is through autobiographical approaches to the writing of environmental history, which merge creative writing and personal reflection to shed light on how environmental histories emerge from the translation and interpretation of diverse historical sources. In particular, the volume brings together the voices of junior researchers working across disciplinary boundaries, including history, literary studies, and the visual arts.

Each contribution touches upon a key discussion or tension within the field of environmental history—its open veins. Through reflective engagement with the role of experience and memory in the writing of environmental history, the themes of belonging, disturbance and displacement, nostalgia, and (re)discovery of place emerge as common threads across the essays in the volume. From the rice and cornfields of northern Italy to the shimmering waters of the Elbe in Germany, the essays attempt to identify, translate, and interpret the forces—social, political, technological, and environmental—that have shaped and altered landscapes and the communities who dwell in them. Water—its rivers, dams, and canals—features prominently as a site of contestation in these histories, shaping social and political relationships, as much as the landscape, in powerful and often unseen ways.

A common refrain throughout the volume is the idea of translation as a means of anchoring the unfamiliar with the familiar, the objective with the subjective, the human to animal, and language to culture, exploring contested histories in the making of place. In the words of Sophie Lange, translating can mean “to make peace with.” Yet, paradoxically, environmental history has also been defined as “a field on fire”<sup>1</sup> situated in a world characterized by extreme climatic events, mass

1 Mark D. Hersey and Ted Steinberg, eds., *A Field on Fire: The Future of Environmental History* (Tuscaloosa, AL: The University of Alabama Press, 2019).

extinctions, forced migration flows, and environment-related health hazards. Even as we write, a pandemic is sweeping the globe altering the very conditions of our existence, challenging our existing relationships with the natural world and, more intimately, with each other. In such a world, how can we turn the tide of history from one of continued environmental degradation and despair to one of hope, liberation, and resistance?

The novel approaches taken to the writing of environmental history in this volume invite readers to answer this call by engaging with their own experiences of place, reflecting on the myriad of ways in which historical translation—even in our everyday actions—takes place, whether strolling the streets or trolling the historical archives. Fresh ideas are urgently needed to cool our burning planet and simultaneously warm the pages of emerging environmental histories. The essays in this volume take up this challenge, reclaiming a space in historical scholarship for literary intervention and experimentation, revealing the “rotten secrets and dirty treasures” of environmental history, to echo the words of David-Christopher Assmann. Perhaps most importantly, some of these histories speak to the potential for the restoration and recovery of once heavily polluted landscapes, gesturing to the future, as poignantly illustrated by Noemi Quagliati’s essay and photographs documenting the environmental recovery of the Western Front since the end of World War I.

We hope that this collection will inspire readers to continue to explore the permeability of place, deepening our understanding of ecological crises and our collective role in restoring peace to our warming planet.

### Acknowledgments

The inspiration for this volume developed out of a five-day workshop entitled *Environmental Histories—Environmental Futures: Perspectives from Germany and Italy* held in June 2019 at the astonishing Villa Vigoni residence in Menaggio, Italy, which hosts the German-Italian Centre for the European Dialogue.<sup>2</sup> Held in nineteenth century villas on the banks of Lake Como, the conference aimed to present and map ongoing research projects at the forefront of German and Italian environmental historiography. The event was convened by Roberta Biasillo (KTH Royal Institute of Technology, Stockholm), Claudio de Majo (Rachel Carson Center for Environment and Society, Munich), Serenella Iovino (University of North Carolina, Chapel Hill), and Christof Mauch (Rachel Carson Center for Environment and Society, Munich).

Inspired by Villa Vigoni’s beautiful landscape and the historical heritage of the venue, this edition of *Perspectives* is the result of a collective effort involving young German and Italian researchers. As editors, we owe many colleagues a debt of gratitude. In disorganized order, we wish to start by thanking Caterina Sala Vitale and the Villa Vigoni staff for the warm, welcoming atmosphere they provided, as well as their financial and logistical support. We would also like to thank all of the authors of the current volume. Being undisciplined, *stricto sensu*, is never easy, and the same goes for sharing personal anecdotes, childhood stories, and photographs. The second round of thanks go to David-Christopher Assmann, Wilko Graf von Hardenberg, Sophie Lange, Noemi Quagliati, Flora J. Roberts, Ansgar Schanbacher, and Fabian Zimmer.

We are also equally grateful to Serenella Iovino and Christof Mauch, who supported us from the beginning, and to Gabriella Corona, Nadin Hee, Astrid Mignon Kirchof, Gilberto Mazzoli, Marco Moschetti, Giacomo Bonan, Angelo Matteo Gaglioti, and Luigi Piccioni for their comments, presentations, and contributions to the discussions. Gabriella Corona and Christof Mauch generously agreed to conclude and anchor this edition with a final conversation that closes the volume.

We owe the most to Katie Ritson, environmental humanities scholar and RCC managing editor at the time, as well as to the award-winning nature writer, Rebecca

<sup>2</sup> To find out more, visit the website: <https://www.villavigoni.eu/>.



Giggs, who kindly pushed us to reread, discuss in groups, and rework our initial drafts. Without their guidance during the two-session workshop *Writing History for the Future* this special issue would not have been possible.

Last but not least, we express our gratitude to Kristy Henderson and Harriet Windley for their editorial support and trust.



Workshop participants: Backrow, left to right: Giacomo Bonan, Marco Moschetti, Claudio de Majo, Fabian Zimmer, Ansgar Schanbacher, Wilko Graf von Hardenberg, Flora J. Roberts, Rebecca Giggs, Katie Ritson, Nadin Hee. Middle row, left to right: Gabriella Corona, Maurizio Valsania, Serenella Iovino, Roberta Biasillo, Noemi Quagliati, Astrid Kirchhof, Sophie Lange. Front row, left to right: Christof Mauch, Gilberto Mazzoli, Luigi Piccioni, Angelo Matteo Caglioti. Absent: David-Christopher Assmann. (Photograph courtesy of Christof Mauch)



## Water Histories





Wilko Graf von Hardenberg

### **Making Sense of Water: A Personal Quest into the History of Irrigation**

It was a marvelous morning. A sunny day, most probably in May, not a drop had rained in the previous days, and yet the horse pastures in front of our house were suddenly swamped, covered in a film of water reflecting the sky. What better an occasion for my primary school aged self to finally launch my Playmobil® pirate ship to sail on actual water? This miraculous landscape of swamped meadows, paddock fences, and riding obstacles seemed the ideal backdrop to stage my toy figurines. Fantasy-filled images of buccaneers and maroons thriving and striving in some tropical tidal marsh filled my imagination, and there seemed to be no boundaries to what could be played out in this unexpected wet boost to reality. As soon as the real horses were put back in their stables, that is. You would not want to have to try to include oversized horses in your tall tales of piracy, even if your parents had allowed you to stay and play on the pastures while the horses were out.



**Figure 1**  
Horses on waterlogged  
pasture, 1984 (Source:  
Carola Gräfin von Hard-  
enberg)

In hindsight, I imagine that this sudden flooding might have been a more regular occurrence than the one, wondrous event I remember. Indeed, water management and the temporary, controlled flooding of fields have long been quintessential to the agricultural landscape in which I grew up. The city of Vercelli, in northwestern Italy, lies at the core of Europe's largest rice cultivation region, enclosed by the rivers Dora Baltea to the west, Ticino to the east, and Po to the south. Here, like elsewhere in the world, wet rice cultivation produces a characteristically amphibious landscape made up of waterlogged fields separated by low dikes and narrow dirt roads, every spring creating a chessboard of water and land, the so-called *mare a quadretti*. The ability to control access to water and distribute it fairly among farmers was quintessential to how this landscape came to be and, consequently, to daily life in this stretch of the plain north of the Po. In one way or another, the world surrounding irrigation features in many of my childhood memories. For instance, I remember fondly the line of willows lining the ditch marking the meadow's western boundary and with it that of my submerged playground. An orchestra of croaking frogs sitting by the ditches musically accompanied many mosquito-infested summer evenings. And grey herons flying from one rice field to the next were, some time later, the subject of quite a few rather unsuccessful photo-safaris.

I might be reading a tad too much into it, but in retrospect I cannot avoid thinking that this one childhood memory of irrigation water swamping, unrequested, our meadow gave shape to some of the research questions that, almost twenty years later, would lead me to dedicate part of my PhD to the history of conflicts over water access. How did that water come to be on those pastures on that spring morning? How was access to water regulated and controlled? How and by whom had the irrigation system been maintained over centuries? How had rice made and framed the local agricultural ecosystem?

About a meter wide and possibly just half that deep, the willow-lined ditch along the western boundary of our lot was one of the many capillaries that made up the complex irrigation system surrounding us. Derived, through the Cavo Montebello, from the famous Canale Cavour, the ditches reached virtually every field in the region. The two major canals were built within a decade of Italy's unification in 1861 and have been pivotal to the expansion of rice cultivation to the east of the river Sesia, where my childhood home stood. Grown in patches throughout northern Italy since



Figure 2  
Willow-lined ditch,  
1979 (Source:  
Carola Gräfin von  
Hardenberg)

the fifteenth century, rice became, in the nineteenth century, a transformative factor in the appearance of the countryside. As historian Piero Bevilacqua suggests, the canalization induced by the capitalist expansion of rice cultivation created a complex system of state-supported infrastructure that guided the development of social superstructures. In other words, agricultural practices, the way landscapes appear, and the region's systems of social interaction all depended on each other.

The quest for answers to the questions framing my research about the history of water management in the region has led me to effectively attempt to translate the historical materiality of water distribution around my hometown into text. Yet translating the complexity of a landscape into the written word is never an easy task. New questions arise at every single step: What is a landscape? How shall we make clear to the reader what it entails? What role may a willow play in it? And the mosquitoes? Or the frogs? And, finally, how can the local vernacular or technical vocabulary, developed over centuries to describe this specific landscape, be translated into English so that it is understandable to a broader audience? But the issue is even more wide-reaching than this and affects the matter of writing history itself. Indeed, the core question is how can the historian's experience of a place be translated into



historical understanding? The way I look at the archival record is influenced by my own embodied knowledge of the landscape I am describing. And the landscape I experienced is necessarily a contemporary one, with its wide fields, big machinery, and laser-levelled lots. The issue of how to convey the distinctive features of a rice field in the 1930s to the modern reader when my view of the place is filtered by childhood memories, the way it looks in the current day, and archival research is, unfortunately, one that I fear I have not yet been able to answer satisfactorily. Nonetheless, I have tried to find a way that makes clear how history has shaped the landscape at the same time as the landscape has shaped history.

Building upon the idea that power and its relational distribution among actors gives shape to agricultural landscapes, I focus on one specific angle: the interaction of rules, regulations, and conflicts. In particular, I look at the role of the centralization of water management by a few users' co-ops in the rationalization of water use and how this impacted during the years of the Fascist regime the landscape and its management. Humans transform the material aspect of ecosystems through the rules they impose on them and the conflicts that are produced by these same rules. Reading into many small acts of defiance or personal gain, such as breaking a floodgate or diverting a ditch, or long-lasting court cases brought forward by some of the richest landowners in the region in an attempt to preserve their feudal rights to water, I've tried to reconstruct the day-to-day interactions of farmers and agricultural workers with the swampy landscape of rice cultivation in order to understand why certain fields were irrigated and not others. What was the historical and legal context that shaped the routes of canals and ditches and the motive behind certain fields receiving less water than others? In the end, why were our meadows flooded on that sunny day in May?

Closer to town, maize takes the place of rice. A dry crop substitutes one requiring the flooding of fields. Due to the long-term influence of the miasmatic theory of malaria propagation, and in line with a long history of bans, provincial regulations first promulgated a century and a half ago limited the area in which rice could be grown. Such regulations are still in place. When the ones for the area around Vercelli were first drafted, they determined that there could be no rice fields within 4,200 meters of the town. By the beginning of the twentieth century this distance had been reduced to 2,400 meters, and by 1971 to just 500 meters. At the dawn of the twenty-

first century, the distance had been reduced to just 200 meters. Possibly by force of habit, the shift in legal obligations took a long time to become reality on the ground. Well into the 1980s, when I was a child, there were no rice fields in the area around my parents' house, a bit more than a kilometer as the crow flies from the town's borders. And even now there are none directly adjoining our former lot. Nevertheless, since many of its ditches predate regulations, the capillary irrigation system also reached the area surrounding our house. Water was everywhere, but the feeling of a farm in the middle of a rice-growing area, with the Alps looming towards the north, reflected for kilometers in the submerged fields, would be very different to that of our horse farm, surrounded by corn, which at the height of summer overshadows the horizon. Only in the aftermath of that one day in May, did our meadows also end up mirroring the sky. As far as I can tell, this memorable micro-flood was most probably due to human error, as were many previous floods I have encountered in my research. I doubt, however, that anybody opened the floodgate out of malice or defiance in this instance. A worker in the users' co-op might just have misread the instructions for the day, thus providing me with multiple days of watery playing bliss.

In conclusion, I must admit that I don't have any answers to the questions I have raised. For instance, I don't know how to translate the legal concept of *emphyteusis*,<sup>1</sup> which played a primary role in so many court cases about access to irrigation water, in a way that makes it clear how the legal mechanism materially affected the landscape. I am also still wondering how to fully include the history of labor in my narrative. What sources do I need in order to combine the history of how irrigation has transformed the landscape over time with that of the struggle of the workers to obtain more rights during the dark years of the Fascist dictatorship? Neither do I have a good answer yet as to how I can bring to the forefront the role of the willows in keeping together the banks of the ditches and how they resisted the cementification of the rural landscape promoted by the Fascists as part of their rationalization policies. In the 1980s, when I roved the area as a child, a row of willows was still a normal and cherished view in the flat, water-crossed landscape. Nowadays, more than 30 years later, the trees can still often be seen from a passing train as occasional symbols of a new sensibility towards how landscapes look and their eco-systemic

<sup>1</sup> According to the Webster's Unabridged Dictionary of 1913, an *emphyteusis* is a "real right, susceptible of assignment and of descent, charged on productive real estate, the right being coupled with the enjoyment of the property on condition of taking care of the estate and paying taxes, and sometimes a small rent." It is probably unnecessary to say that this definition seems rather unsatisfactory to me.

balance. I still do not yet really know how my experience of these landscapes has affected how I understand them historically, besides the fact that it has spurred me to try to understand the connection. What I can say is that archives alone will not be able to give us all the answers about how a place looked, felt, and worked in the past. Historians need to make their affective and emotional connections to the subject of their research explicit. Meaningful translations of the language of place into historical narratives can only be produced by walking, living, and inhabiting the land.

### Further Reading

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Fabian Zimmer

### What I Found at the Bottom of a Reservoir



**Figure 1**  
Schwarzenbachtalsperre,  
Black Forest, Germany,  
1997 (Source: Cornelia  
Echte-Zimmer)

### Schwarzenbachtalsperre, Black Forest, Germany, 1997

The photograph shows me as a seven-year-old boy walking along the crest of the Schwarzenbach Dam in the northern Black Forest in Germany. Even as a child, I loved water. Fountains in public parks fascinated me and so did the sea. I loved to watch the waves break on the shore, washing away the sand castles I had built. Growing up in southern Germany, the sea was always far away, mysterious, and frightening. Even today, the thought of taking a swim in the sea, or even a lake, makes me shiver. I fully appreciate why on the edges of old maps, the oceans abound with monsters and magical creatures. Who knows what waits below the surface?

However, in 1997 the Schwarzenbach Dam was not a frightening place. That year, its reservoir was emptied for maintenance work. As solid as a dam might seem, it is indeed a living thing. It is guarded by a *Talsperrenwärter*, a dam warden, who regularly patrols several kilometers of tunnels that run through the dam’s body.

The warden monitors the overall state of the concrete, its slight movements, as it expands and contracts with rising and sinking temperatures, and the constant flow of water that seeps through the massive wall at the rate of one liter every second. In order to make sure the movements of the dam and the flow of water remain within certain limits, a general overhaul is undertaken every 10 to 30 years.

These envirotechnical miracles did not interest the seven-year-old me all that much. I only remember the fascination of venturing into the dried-up, cracked mud-land behind the dam wall, studded with old tree stumps—a resurfaced subaqueous forest. The emptying of the reservoir must have been a major tourist attraction. Hundreds of visitors flocked to see the seemingly useless dam towering above the new, moon-like landscape behind it. Rumor had it that there was a drowned village in the lake, whose church bells could be heard ringing on holy days—an Atlantis six hundred meters above the sea. Even though there was never a church in the Schwarzenbach valley, and the foundations of two farmsteads were carefully removed before inundation, public interest was immense. There were guided tours through the dry valley and an information booth from the electricity company where original film footage from the years of construction was screened. When I returned to visit the dam almost 20 years later, the kiosk along the road leading over the dam was still selling postcards commemorating the emptying of the reservoir.

### **History I: The City**

For me, history was never in a book. Towards the end of high school, I had the worst history classes imaginable. History lessons consisted of two columns, one on the left with dates, another on the right with events. The task was to link them correctly. Yet during this time, I began realizing that history could be something very tangible. A new inner-city shopping mall had been built around the corner from where my family and I lived. When I saw photographs of how the place had looked before, I was shocked. Not because I mourned the buildings that had been demolished (a number of drab, pastel-colored, modernist houses from the 1960s), but because I realized how quickly I had forgotten an aspect of this part of the city that I was so familiar with. This must have been the moment I understood—even if only in blurry

outlines—that the built environment was far from static. It had a history that without the work of remembering would inevitably be lost. Walking and cycling through the city, I gradually realized I could read its history. I learned to decipher the year of construction from the style of a building. I learned to read the city’s annual growth rings, the physical scars left behind by the bombings of World War II, or the marks of later redevelopment sprees. I decided I wanted to study history.

### **History II: The Country**

A few years into my studies, I traveled north to live in Sweden for several months. It was only there that I began to understand that nature was not natural and that it was not just the city that was full of history—the countryside was too. I made friends with an archaeologist whose perspective on history has since deeply intrigued me. To him, history was a landscape, and landscape was history—sediments of time deposited in space. We were part of a larger group of fellow nature lovers, hikers, and daydreamers. As often as we could, we went out hiking in the woods, trying to read traces in the landscape, finding stonewalls from previously farmed fields, long abandoned and now overgrown with moss and trees. This is how I still try to see history today—it helps to think with the object of study rather than from a particular disciplinary standpoint. This approach is what I share with the field of environmental history.

### **Trollhättan Power Plant and Waterfall, Western Sweden, 2015**

Like many other people standing next to me on a summer’s day in 2015, on the brink of the once world-famous waterfalls of Trollhättan in Western Sweden, I took a photograph to mark the view. Since the 1920s, the only thing to be seen at the falls on a normal day is a dry rock gorge. But since the late 1950s, every year in early summer they come back to life again, with the power company that operates the waterfall using a portion of its precious resource not for the production of electricity but for the production of a spectacular view.





Figure 2  
Trollhättan power  
plant and waterfall,  
Western Sweden,  
2015 (Source:  
Author)

My first, rather unspectacular, encounter with hydroelectric dams had occurred a few years earlier when I moved from Sweden back to Germany. It was during a university course, not unlike the history lessons I suffered through during high school, that I learned about dams around the world: their size, length, weight, retention volume, kilowatts, investment costs, and the number of people displaced by them (it was a history course, after all). Yet, I still sensed something mythical about dams, with their promethean force to alter rivers, landscapes, and the people around them. They seemed to bear within them a deeper meaning, something that I felt inclined to bring to the surface. Something, perhaps, like the story of an invented church at the bottom of a lake.

I have myself gone from being a dam tourist, gazing at the technological sublime of emptied reservoirs and revitalized waterfalls, to being an observer of dam spectators. I study acts of seeing and the art of making the power of water visible to the public. I have traveled around Europe and through the archives to understand the

national histories that are so frequently told about dams to distill a common experience of modernity out of numerous, often very similar, narratives. I have learned that the spectacle at the Schwarzenbach Dam in 1997, as extraordinary as it seemed to me back then, was quite normal. I understand now that large dams have always attracted spectators, and that companies and other hydro-enthusiasts have developed intricate strategies to guide and frame the perceptions of these dam spectators. Indeed, the history of hydroelectricity implies a history of vision. On the one hand, this is a history of displaying and seeing hydroelectricity, mediated through touristic activities, photographs, and films. On the other hand, these displays embody a history of hopes, fears, and utopian desires of an electrical life, made possible by clean and quiet “white coal”—a vision of the future voiced prominently by figures like Lewis Mumford in the first half of the twentieth century. By the latter half of the century this had become hotly contested, as the environmental disadvantages of hydroelectricity became apparent. This history of vision thus not only tells us stories about dams and rivers but also about the contested views people had of the technology and the future it represented, testifying to the physical power of dams to transform landscapes, as much as to their power to capture the imagination of the public.

There is, one might say, a church spire below the surface of every lake.



Sophie Lange

### The Elbe: Or, How to Make Sense of a River?

I didn't know Hamburg had a beach, but just recently I strolled along it together with a friend. The sun broke through the clouds and made the large river on our left-hand side sparkle and glitter. Romans once called the river "Albis," whereas Teutons called it "Albia." It simply means river. "White water," according to Latin and old German, might also be a possible meaning. As a historian, you are taken on a journey by your research project, a journey involving temporal shifts, changing places, new perspectives, and decoded translations. When I first visited the Elbe, I was aware of what I already knew and curious about what mysteries it would further reveal. This is what happened to me in Hamburg, as I walked along the river Elbe. On this white, shimmering eau a huge container ship glided slowly and silently into the harbor. We enjoyed our *Fischbrötchen* (fish buns), the sun, the view, and the presumed peacefulness.

#### A Change of Time

Almost forty years ago, this place was not at peace. In 1981, Elbe fishermen and "friends" blocked access to the harbor with five hundred boats, while around fifty thousand environmentalists protested on the streets. The mercury content of Elbe eel had risen to 3,000 micrograms per kilogram of fish, which is about a third of the legally allowed amount. When combined with water, mercury becomes methylmercury. The human body cannot break this down, and it accumulates in muscles, kidneys, the nervous system, and the brain. The consequences of mercury poisoning range from headaches, gingivitis, speech and concentration disorders, nausea, insomnia, hair loss, contact aversion, nervousness, drowsiness, and dizziness, to kidney and liver damage, cognitive disability, and life-threatening disorders of the immune system. The fishermen were banned from selling the contaminated fish under the threat of fines of 50,000 German marks. This actually meant a quasi-professional ban on work and the end of a proud guild.<sup>1</sup> However, the culprit and cause of the contamination was quickly identified: East German factories.

<sup>1</sup> "Elbe: „Wir hängen jetzt total auf Null“,“ *DER SPIEGEL*, 25 May 1981, 52–57, <https://www.spiegel.de/spiegel/print/d-14333614.html>; "Bi de Bux," *DER SPIEGEL*, 15 March 1982, 86–89, <https://www.spiegel.de/spiegel/print/d-14335705.html>; "Der Geist aus der Flasche," *DER SPIEGEL*, 24 August 1981, 62–76, <https://www.spiegel.de/spiegel/print/d-14339131.html>.

As an environmental historian, my dissertation project is about the environmental-political relations between the Federal Republic of Germany (FRG) and the German Democratic Republic (GDR), so I mainly analyze documentation relating to expert meetings and talks between these two German countries. The Elbe is the focus of one of several environmental conversations that took place between both sides in 1983. And as historians often say, things are not as simple as they seem. In searching through old files, documents that had been classified or marked for official use only, I try to translate the information of the past to enrich existing knowledge with previously unknown material. Such investigations not only transform knowledge about the past but also disenchant myths, deconstruct preconceptions, and question cherished narratives. Yes, East German factories heavily polluted the Elbe. This became apparent after the fall of the Berlin Wall when the companies were closed and the river slowly recovered. Yet, in 1983, the West German government could hardly put any pressure on the GDR given that the West's internal south-north flowing Rhine shared approximately the same levels of mercury pollution as the Elbe. There was also only one monitoring station located at Schnackenburg (FRG), directly behind the inner-German border on the western side. As this station was located so far to the east, it did not reflect true pollution levels, making the truth hard to discern. At the same time, Hamburg remained silent about the amount of pollution generated through its own industry and harbor. Environmental historians must unravel the truths about the past—but how, when sources are incomplete or unreliable? One possible way to overcome these obstacles is by crossing disciplines and translating. While this is a difficult task, it is worth it, as it has the potential to disentangle the complexities of environmental history, revealing a comprehensive historical narrative.

### A Change of Perspective

I had not been to Wittenberg until a friend celebrated his birthday there. This famous small town, located on the Elbe in Saxony-Anhalt, formerly in the GDR, also hosted Martin Luther during his studies at the University. We enjoyed a barbecue in a riverside garden with a relaxed view to the torrent. Instead of swimming and risking getting caught up in the rapid current, we sat on the wooden landing and let our feet dangle in the water. The river flows fast and has a yearly average outflow of about 870



Figure 1  
The Elbe river at  
Wittenberg, summer  
2019 (Source: Author)

cubic meters per second at its mouth (368 cubic meters in Wittenberg), or about three to five kilometers per hour. In Magdeburg, the Elbe can at times reach an outflow of eight kilometers per hour depending on the water level.

A river is not just a river. A river has a beginning, a spring. A river has floodplains, whirls, and rapids, as well as shallow and deep stretches. And a river leads to something—most often to the sea. Our white waterway begins in the Riesengebirge (Giant Mountains) in Krkonoše in the Czech Republic. After 370 kilometers it enters at Schmilka into German territory, or—in divided Germany—the GDR. When West Germans accused East Germans of polluting the river and causing fish mortality and other problems in Hamburg, East Germans pointed out that the GDR did not share the same problems as Hamburg. They argued with the tide. The Elbe flows quite quickly through the GDR. This means there is little chance of self-purification along the way. The water needs five days to flow from Prague in the Czech Republic to Geesthacht,

a city southeast of Hamburg. Between Geesthacht, Hamburg, and the North Sea, the water needs about twenty days, as it goes back and forth with the ebb and flow from the coast.<sup>2</sup> With this in mind, geology provided me with a fact-checking source.

### A Change of Language

As an environmental historian, I have to alter my perspective in order to interpret stories from very different sources—from numerical data and foreign languages to different classification systems. Putting the pieces of a story together leads to questions, not just about the sources themselves but about the subjectivity that governs how they are interpreted. This in turn can open new doors of enquiry, but it also raises challenges. I was thinking about my topic and new found interest in geology when I visited two different locations on the Elbe. I checked the flow of the river's current at Wittenberg and the marks of the tide in the Speicherstadt (the warehouse district) in Hamburg. I hope to transform these observations and impressions into an academic language that is understandable for environmental historians, yet also, first and foremost, for non-environmental historians and those who may have no background in history or the natural sciences.

Keeping these firsthand experiences in mind will hopefully turn “dry” facts into a comprehensive historical narrative. Having no formal higher education in the natural sciences myself, I was as surprised by the geological variability within the river as my potential readers might be. On the one hand, lacking this scientific knowledge might provide an opportunity to identify interesting issues and contexts that might be too broad or peripheral for a specialist in the discipline. On the other hand, it also carries with it the danger of having incompletely permeated this biological, chemical, and geological complexity, and thereby spreading underdeveloped interpretations. Am I right in questioning natural scientists' analyses and comparative methodologies in relation to pollution levels in the Elbe? To what extent can one compare the pollution levels of the Rhine and the Elbe by using differing measurements: one week of a year

<sup>2</sup> Bundesinnenministerium, “Protokoll über das Expertengespräch zwischen der Bundesrepublik Deutschland und der Deutschen Demokratischen Republik über die Verschmutzung der Elbe, Referat U 1 4,” in *Political Archive in the Foreign Office (PA AA): ZA, B 38, Vol. 132688*, (Bonn: Bundesinnenministerium, 1983); “Sauerstoffloch in der Elbe – eine Analyse, Rettet die Elbe,” December 2005, [https://www.rettet-die-elbe.de/5kapitel/o2loch/o2loch\\_analyse.html](https://www.rettet-die-elbe.de/5kapitel/o2loch/o2loch_analyse.html).

for one river and the yearly average for the other river? Translating and interpreting multifarious bits of evidence is a tightrope walk between diverse disciplines that lies at the feet of all environmental historians.

Alongside the language of academia and that of the natural sciences, a German environmental historian has to switch easily between at least two languages, in this case German and English. The more languages, in fact, the better. English is not my mother tongue, but I still try to present my work at English-speaking and thus international conferences. Some might think a presentation about German rivers in English sounds a bit specialized, especially for an audience without any particular ties to the place. However, in academic circles, examples such as the Elbe River also bear “translations” relevant to other people's research. For example, rivers at borders always inherit an upstream–downstream conflict, the frameworks of which can be transferred from one river to another, helping to identify similarities or differences. West Germany had an interest in starting talks with the GDR about river pollution because 90 percent of the rivers within our (now reunified) country flow from East to West. It may be worth looking at these examples in contrast to the Danube, which has its spring in the West and flows to the East. Here, motivations and interests move from one side of the former Iron Curtain to the other, but the problems are similar and remain part of upstream–downstream conflicts.

One might think that the study of German-German relations is relatively simple in comparison to German-Italian or French-Spanish relations, as the two (former) countries share a common language. Yet there is still a surprising amount of translation work to be done. In this case, it begins with two different classification systems for evaluating river pollution: the GDR had one grade more than the Federal Republic, which had five pollution level grades. When West German experts talked about river quality, they were referring to the pollution of *the sediments*, whereas East German experts understood river quality as a measure of toxins in *the water*. Having the same language does not mean that one is speaking about the same thing—especially not in a divided country where ideological differences are influencing the language. For this reason, a deeper exploration of the types of dialogue, forms of communication, and the language used between the GDR and the FRG might enlighten our understanding not just of the environmental differences, similarities, successes, and failures of the time, but also of the ways we understand German society and perceptions of the environment today.

### A Change of Environment

Speaking of East and West—the border and the river, the disciplines and languages—the translational work of an environmental historian seems to be a never-ending story. The tales of rivers and their pollution are not confined to the riverbed, either. They also connect different (nation) states and cross borders without customs and passport controls. They link water, air, and soil to each other. The Elbe carried metals and toxic substances from production sites in the ČSSR and GDR to Hamburg and the North Sea. Mercury, cadmium, and other dangerous elements were deposited in the sediments. The city of Hamburg excavated these sediments to enlarge their port. In earlier days, this silt was taken to the countryside around Hamburg to fertilize the fields. By the early 1980s, when this became ill-advised due to the high level of toxic materials in the silt, it was instead brought to a landfill site. This landfill was located in Schönberg—a city in the GDR close to the inner-German border and not far from the West German town of Lübeck.<sup>3</sup> People in the nearby Federal Republic feared that this dumpsite was leaking and that the seepage, enriched with toxic metals from the silt, would reach the groundwater and “travel” back to the Federal Republic. The same could happen with toxic emissions from the dump blown by the wind above and over the Wall. Thus, the mercury from the Elbe changed from water to soil to water to air. Nature “knows” about this—and it is the job of environmental historians to uncover the winding paths of man-made pollution.

### “Wind of Change”

The voice in the song “Wind of Change” by the Scorpions followed another river, the Moskva, “down to Gorky Park.” But the wind of change in 1989/90 actually brought about real changes for the Elbe. After the reunification of Germany, the international river that once crossed three countries now crossed just two. The upstream–downstream conflict changed from the inner-German to the German-Czech border. The river has since recovered to the extent that bathing and fishing is once again possible. Some of the toxic silt from Hamburg’s port is still being deposited in landfills though. There, the Elbe inherits the ecological memory not just of a divided Germany but also of World War

<sup>3</sup> Sophie Lange, “A Deal over Dirt: Worldwide Waste,” *Journal of Interdisciplinary Studies* 3, no. 1 (2020): 1, <http://doi.org/10.5334/wwwj.35>.

II and previous periods of industrialization. Each period of time has its own (toxic) substances.<sup>4</sup> What was once mercury, an inorganic material, during the period of the Cold War, is now a range of organic substances stemming mainly from agriculture and pharmaceuticals. The water, the geology, and the silt of the Elbe contribute another source to the environmental historian’s dusty archives, each waiting to be found and translated into a (his)story. As I said, a river isn’t just a river, and this one even has a beach!

### Further Reading

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<sup>4</sup> Axel Schröder, “Endstation Hafenbecken. Giftiger Schlick in Hamburg,” *Deutschlandfunk*, 12 June 2018, [https://www.deutschlandfunkkultur.de/giftiger-schlick-in-hamburg-endstation-hafenbecken.1001.de.html?dram:article\\_id=420169](https://www.deutschlandfunkkultur.de/giftiger-schlick-in-hamburg-endstation-hafenbecken.1001.de.html?dram:article_id=420169).





Figure 1  
Babur supervising the laying out of the Garden of Fidelity. Miniatures from an illustrated copy of the *Baburnama* prepared for the author's grandson, the Mughal Emperor Akbar, attributed to the painters of Babur via Wikimedia Commons.

Flora J. Roberts

### Places in Translation: Of Rivers and Dams in Central Asia

The Emperor Babur (1483–1530), homesick ruler of Mughal India, owes a large part of his reputation today to his memoir. In the *Baburnama*, he channeled nostalgia for his native lands into lyrical descriptions of his birthplace in the Ferghana Valley. From his vantage point at the center of his newly founded empire in Agra, he lovingly described the landscapes, familiar sights, smells, and tastes of the valley in which he was born—and to which he would never return—a thousand miles to the north. In his memoir, Babur praises the violets, tulips, and roses of Osh, the great irrigation canals, and the beautiful orchards found in Akhsi. As an environmental historian of the Ferghana Valley currently based in Western Europe, Babur's writings are a precious resource for me, and I feel a distinct kinship with his nostalgia and keen sense of place.

Babur lingers over the astonishing variety of delicious fruits grown in the Ferghana Valley, many of which he associates with specific towns: the *subhani* apricot and the *dana-i kalon* (big seed) pomegranate of Marghilan, the almonds of Isfara, the *Mir-Timuri* melons from Akhsi, the excellent grapes and *ashpati* melons of Andijan.<sup>1</sup> Being distinctly less impressed by many of the fruits and trees of his new home (though he did appreciate the mangoes), the Emperor Babur ordered gardens be laid out in Agra, which can still be visited today. In figure 1 we see Babur in a yellow cloak, supervising work in the garden, which has already been planted with several pomegranate trees.

I have brought back apricot stones from my research trips to the Ferghana Valley and planted them in the Tuscan countryside where I grew up. For the past four years, while based at the University of Tübingen, I have been working on a project I call *The Sea in the Valley*, an environmental history of the Syr Darya river as it runs through the Ferghana Valley, which today is shared between Uzbekistan, Kyrgyzstan, and Tajikistan. The Syr Darya is a generous river. From its impetuous birth in the Tien Shan mountains it follows a leisurely flow through the whole Ferghana Valley from east to west, varying its course here and there over time, and looping continuously as it bestows the rich deposits that have given the valley its legendary fertility.

<sup>1</sup> Babur, *The Baburnama in English (The Memoirs of Babur)*, translated by Annette Susannah Beveridge, (London: Luzac & Co, 1922), <https://archive.org/details/baburnamainengli01babuoft/page/6>.

Plenty of delicious fruit continues to be grown in the bountiful valley, the most densely populated area of Central Asia, but today Ferghana's most important crop is cotton. The rapid expansion of cotton across the valley began in the nineteenth century following the region's conquest and incorporation into the Russian Empire, sharply increasing during the mid-decades of the twentieth century under Soviet rule. After crossing the Ferghana Valley, the Syr Darya passes on through hundreds of miles of relatively arid steppe land before eventually pouring into the Aral Sea. During the Soviet period, it was determined that any drop of water—whether from the Syr or the Amu, the region's other major river—that happened to reach the Aral was a drop of water wasted. It was also determined that cotton should always receive the highest water allocations in preference to any other crop. Under Khrushchev, thousands more acres of previously uncultivated steppe were sown with cotton.

The twin goals of reaching cotton autarky—so that the Soviet Union would no longer be obliged to buy raw cotton from its Cold War enemies—and of kick-starting the region's industrial development led to the construction of a series of large dams along the Syr Darya river. These dams, in combination with the hundreds of miles of channels irrigating cotton sown on former steppe land, drastically reduced the volume of water reaching the Aral Sea, thus precipitating the demise of one of the world's largest inland water bodies. The slow agony of the Aral Sea continues to create new, largely silent victims.

As I see it, environmental history extends social history's commitment to giving voice to the voiceless *beyond* human communities, proposing to consider the mutual interactions over time between people and their ecosystems—flora, fauna, and landscapes (mountains, rivers, swamps, and forests). In my research, I chart the relationship, as it developed in modern times, between the Ferghana Valley and the river that sustains it, the Syr Darya. My story centers on one Soviet era dam built at Kairakkum in 1956, which created a large reservoir known as the Tajik Sea. Through archival documents, interviews, memoirs, and environmental fieldwork guided by local ecologists, I seek to plot the cascade of consequences, intended and otherwise, that stemmed from the decision to block the Syr Darya's path, and the attitudes towards nature informing that decision. The voices that I uncover, unsurprisingly, do not speak in unison—working like a detective, I try to assess the register, intended audience, and motivations of each before being able to craft a coherent narrative that reflects the historical truth as

I see it. The advent of the Anthropocene demands that we take seriously the profound interdependence of humans with other life forms and take stock of the potentially irreversible impact of human activity and technology on the landscape.

The path that led me to study rivers in Central Asia and the footprint of a dam has a few twists and turns. I was born in Florence and raised in the beautiful hills south of the city, free to roam as I pleased through the olive groves with my brothers and sister. I studied Classics at Oxford, continuing the direction set by my Italian Liceo Classico. Upon graduating with no clear career plans in mind, I moved to London where I benefitted enormously from internships at the Refugee Council, the Fairtrade Foundation, and openDemocracy. In hindsight, each of these internships brought me urgent evidence of a profound and dangerous imbalance in humankind's relationship with the natural world. Harriet Lamb, my wonderful boss at the Fairtrade Foundation, described meeting babies with horrific birth defects born to banana plantation workers whose Del Monte bosses advised them to “stay inside” their straw huts whenever the crops were being doused with pesticides by helicopter. Meanwhile, most of the battered and yet strong refugees I met at the reception center in south London were fleeing precarious existences in fragile natural environments where twentieth-century modernization drives had led to accelerating desertification, habitat loss, and forced migration.

London, a central node in global capitalism, sucked in rivers of riches and resources, with a few lucky fugitives slipping in through the cracks—but I wanted out. Having made a pact with my traveling companion, an aspiring Persianist, I left a great job at openDemocracy for a leap into the unknown of Tajikistan where we would become freelance English teachers. We chose Tajikistan, as the safest of the Persian speaking nations, in preference to Iran and Afghanistan. As a classicist, it comforted me to know that the city we were headed to—Khujand—had been visited by Alexander the Great, who called it Alexandria Eskhata, the furthestmost Alexandria.

And what did we see there, in 2003? Tajikistan, predominantly Muslim, agricultural, and very poor, clearly belonged in Asia, and yet it was also an OSCE member state whose local field office organized popular summer camps for teenagers, and so also, somehow, partly European. Most urbanites lived in rather familiar 1970s apartment blocks where everyone seemed to have read *The Count of Monte Cristo* and had mid-



**Figure 2**  
Bahoriston resort,  
north bank of  
the Kairakkum  
reservoir, aka the  
Tajik Sea, 2017.  
The manicured  
lawn and artfully  
landscaped pool in  
the foreground con-  
trast with the forest  
of high voltage  
electricity pylons  
from the nearby  
hydroplant visible  
in the background.



middle-class aspirations, such as a nice car, an office job, and weekends in the countryside. Unlike most of the country, which is mountainous, Khujand lies in the Ferghana Valley and is the valley's only city to have been built on the banks of the Syr Darya river, which bisects it. I was taken to apricot orchards, between the city limits and the expanse of cotton beyond, and began to hear stories of the upheavals the twentieth century had visited upon the local population.

The favored destination for relaxing at the weekends, then and now, was by the shores of the so-called “Tajik Sea,” the large reservoir created just a few miles upstream of the city of Khujand by the dam commissioned in 1956. The Tajik sea is widely acclaimed on social media and in daily conversation as a place of great beauty with a perfect, health-giving climate: there is a large sanatorium on its shores, as well as several summer camps and simple holiday resorts. These aesthetic properties are far more prominent in discourse today than the economic rationales that animated the project's early years, when it was hoped that electricity generated due to the Tajik Sea would spearhead the region's industrialization, while its waters were to feed thousands of acres of cotton.

Press coverage in the 1950s, in both local (Tajik language) and all-Union (Russian language) newspapers, celebrated the dam at Kairakkum—a toponym glossed as “black

emery sands”—as bringing new life to an arid wasteland, an empty desert where the oppressive silence would only occasionally be “pierced by the cry of a solitary eagle.”<sup>2</sup> The dam was touted as a “fraternal collaboration,” to which not only the neighboring republics of Uzbekistan and Tajikistan contributed but also thirty-five other nationalities, according to official propaganda at the time. A Russian poet, Kirillov, waxed lyrical about the speed with which a garden city had sprung up on the shores of the sea that had submerged the “khanate of lizards and stones.” In reality, thousands of collective farm workers were recruited to the site, who under the supervision of Russian engineers and specialists toiled under the hot sun with rudimentary tools to bring the project to fruition.

I did not realize until I began researching the Kairakkum dam that the project had been very controversial and bitterly contested by the leadership of the Tajik Communist Party.<sup>3</sup> Local leaders mourned the hundreds of acres of orchards and cotton fields to be submerged by the reservoir, alongside the “empty” steppe land focused on by propaganda. They argued that if—as was often alleged—hydropower was the main goal, a dam much further upstream in the mountains would be more efficient. Furthermore, at higher elevations less water would be lost to evaporation, allowing for greater storage capacity. These valid objections were disregarded, as the Kairakkum dam was also expected to regulate flow (and thus maximize capacity) for the hydropower station downstream in an important industrial region. If the perspectives of local party leaders, whose letters to Moscow I was able to track down in the central archives, were ignored, the suffering and resilience of those most directly impacted hardly made it into the historical record at all.

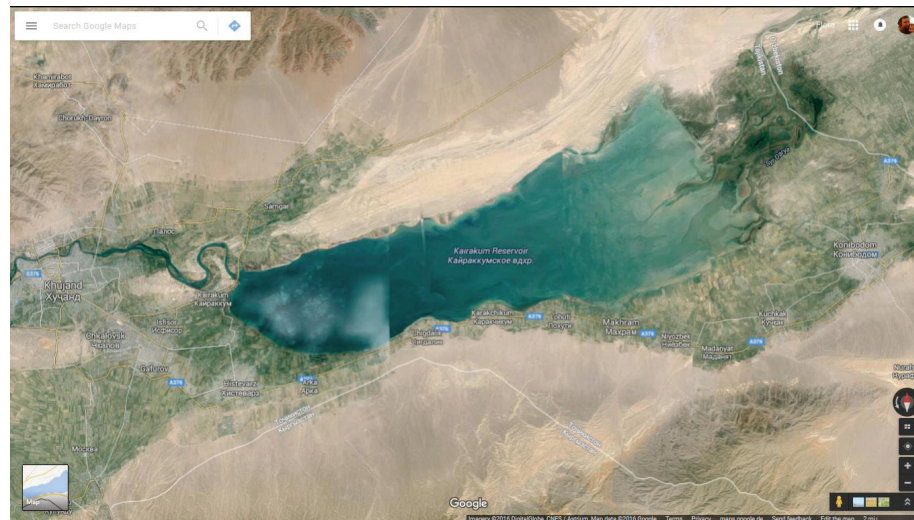
In May of 2018, I entered the home of an elderly Uzbek lady living alone in an almost derelict house in the town built beside the Kairakkum dam in the 1950s. I was hoping she would agree to an interview and tell me her life story, which she did. Following a quick introduction and minimal prompting, she began in a hoarse, keening voice in a headlong mix of Tajik and Uzbek to describe how she had been brought there as a child by her peasant parents, drafted to dig out the construction site with simple mattocks. No housing was provided, and her family were reduced to living in a dugout—a

<sup>2</sup> “Na beregakh Syr Dar’i” (On the shores of the Syr Darya), *Izvestiia*, 16 February 1955. Article credited to the editors of the Leninabadskaiia Pravda regional newspaper.

<sup>3</sup> Flora J. Roberts, “A Controversial dam in Stalinist Central Asia: Rivalry and “Fraternal Cooperation” on the Syr Darya,” *Ab Imperio*, no. 2 (Feb 2018): 117–143.

partially shaded hole in the ground, exposed to stifling summer heat by day and a desert chill by night. She mimed the cutting motion her mother used to share out tiny slices of bread for her children, several of whom died in the first few months on the site. Drinking water was scarce, and the workers and their family were constantly parched. The suffering and confusion of those years seemed as sharp in her telling as if it were yesterday, surely in part because the intervening years had hardly been gentler. Of the grand visions of modernization and development that echoed around the dam project, she had nothing to say. She had never received an education and had toiled for decades on a nearby collective farm before retiring on a miserable, ever-dwindling pension.

Figure 3  
The Tajik Sea, as  
seen on Google  
Earth, 12 January  
2016



The dam at Kairakkum was given the green light and left—I argue—an outsized footprint on human and nonhuman life in the valley because of all the competing ministries, economic goals, and political agendas it was supposed to satisfy. The high rate of evaporation, though injurious to irrigation aims, palpably transformed the microclimate, while the slow flowing river almost immediately began to silt up the eastern end of the reservoir.

Contemplating the brief but tumultuous life span of this artificial “Sea in the Valley” is what made an environmental historian out of me. Nothing seems more important than to use our voices and historical training to parse out the effects of human attempts to harness and transform nature. Yet questions still remain: How does one write about nature in a way that gives due weight to human and nonhuman agency, without overdetermining either? How best to acknowledge both the joy and solace that the artificial Tajik Sea brings to those who visit her, as well as the pain, economic devastation, and loss caused by its construction? This is the challenge I have set myself in researching and writing about the “Sea in the Valley.”



A landscape photograph featuring a potted orange tree in the foreground, surrounded by dense foliage and a view of a town and mountains in the background. The orange tree is the central focus, with its branches laden with bright orange fruit. It sits in a reddish-brown terracotta pot. Behind it, a thick wall of dark green trees and bushes fills the middle ground. In the far background, a town with white buildings is visible on a hillside, with a body of water and more mountains in the distance under a clear sky. The text "Reading and Writing Landscapes" is overlaid in white on the right side of the image.

Reading and Writing Landscapes



Claudio de Majo

### **Life Among the Giants: Translating Ecology into History through Mountain Studies**

I observe the mountain from below and it looks still and peaceful. Actually, from afar it doesn't even look so big, with its blurred frame recalling a pencil sketch from some street artist improvising a landscape from the side of the road. From the concrete jungles where I have lived all my life to these rugged mountain peaks is a huge leap—it takes sharpness, flexibility, and even some imagination to adjust from one to the other. Soon enough, I will be crossing its slippery roads, driving a motorized vehicle along the asphalt strips that have been built to allow city dwellers like myself the luxury of visiting these natural giants with ease and convenience. At least this is how I like to think about it, open to the sense of guilt that comes with driving a car through a mountainous path. I guess the local communities must have benefitted from the construction of the roads, but I also know from my studies that major infrastructural projects like these were at the core of land grabs that led to the disappearance of traditional customs. It is hard to picture local inhabitants rejoicing at the construction of these roads. One of the downsides of fieldwork is that reality kicks in, and sometimes it isn't very pleasing.

The road climbs up the steep hills, violently twisting and turning around the mountain peaks. These sharp bends look like recent scars in the old, yet still solid, body of this imperious creature. There is something disturbingly *natural* about these peaks, especially as you cross the mountain through countless ups and downs and approach inhabited centers. At times, however, these mountainous scars look like they have been deliberately inflicted—like an unnecessary masochistic act. Seeing a huge concrete bridge with a couple of fast lanes cutting through these mountainous giants on a semi-suspended structure is among the most painful things you could ever see. You actually start wondering about the purpose of such constructions: Who actually needs this? One may be able to reach the closest city further down the valley more easily, but it seems like a stark concession for proponents of remote mountain lifestyles.

These are the thoughts that affect me during my fieldwork in the mountains of Sila in Calabria, southern Italy, and in Brazil's southeastern mountain range known as Serra



**Figure 1**  
The Fiumarella Viaduct (Viadotto Fumarella) in the province of Catanzaro, 2013. One of the many bridges built in the uplands of Sila in order to connect different zones otherwise hardly reachable. (Source: Wikipedia, CC BY SA 3.0)



**Figure 2**  
Serra Gaucha, 2017. Picture taken from the front seat of our car while driving through the uplands of southern Brazil. (Source: Vitória Fank Spohr)

Gaucha. As part of my doctoral research, I am writing about the history of these two beautiful mountain ranges and the human civilizations that inhabit(ed) their peaks and surrounding territories, developing collective governance practices in close relation with these beautiful biomes. Ultimately, I would define my research effort as a work of translation: I use written sources, such as laws and archival records, and relate them to the complex ecological realms in which they are or were enacted. The main challenge I face is in applying ecological insights from the natural sciences as critical tools in order to interpret the choices made by populations in the past who lived in close relation with these colossi.

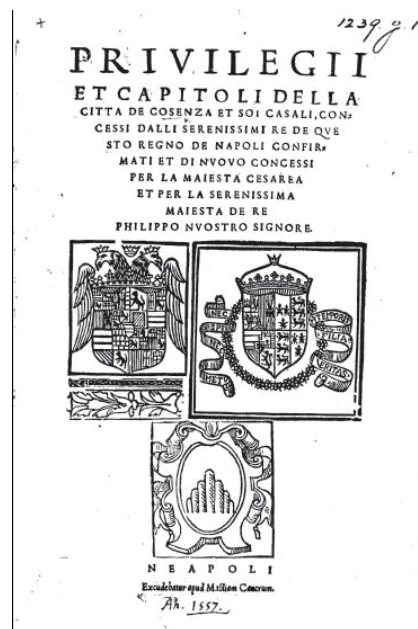


**Figure 3**  
*I Giganti della Sila, Fallistro (Giants of Sila)*, 2013, contains around 50 European black pines, among the oldest on the European continent and certainly the most remarkable remaining evidence of the ecological value of this biome. (Source: Flickr, CC BY-NC SA 2.0)

We should perhaps define these people as the Indigenous civilizations who lived in close contact with the local ecosystems, developing a wide set of subsistence practices resting upon traditional environmental knowledge. As an example, in both southern Italy and in southern Brazil, these civilizations devised subsistence strategies in close contact with certain types of local trees—in both the uplands of Sila and in the Serra Gaucha, respectively. In both cases, these species are today vanishing. The so-called “Giants of Sila,” the ancient species at the core of the local ecosystems of these southern Italian uplands, only survive in a circumscribed conservation area open to the



few tourists who are still aware of their existence. The Araucaria trees in southern Brazil, while still delighting the tables of local inhabitants through their extremely nutritive fruits—the so-called *pinhões*—might also disappear. They migrated several millennia ago from the northeastern belly of Brazil to the colder south, which is today heating up just like the rest of our planet. However, while in their prime, these species were at the core of local ecosystems, providing local inhabitants with essential resources for daily subsistence. As the ecological sciences teach us, these species possess refined communication systems, with an underground network of roots and fungi acting as mediators between different trunks. The thick trunks that characterize these giants, both in Italy and Brazil, have evolved and rested upon complex systems of governance between communities of local tree species, which is an example of coexistence in ecological systems. Such well-regulated networks benefit the local ecosystems and the species communities that survive on their resources.



**Figure 4**  
Documentary evidence of collective governance rules in the mountains of Sila since the fourteenth century. *Privilegii et capitoli della città de Cosenza et soi casali* (Naples, 1557), Biblioteca del Senato.

systems, the collectivist choice devised by human beings appears as the foundation of a way of life aimed at managing and nurturing physiological cycles.

The human groups that chose to inhabit these territories based some of their most essential daily practices on the fruits of this thriving collective system, devising patterns of environmental knowledge. Remarkably, these were also based on a collective ethos, laying the foundation for the so-called commons economies. So far, historical studies have mainly explained the existence of these collective governance systems in terms of basic economic laws, such as the maximization of income through a mechanism of shared risk. Looking at these patterns through the lens of environmental history might provide us with a different overall picture. Observing the natural laws at the core of local ecosys-

This is the beauty of environmental history, as well as its most controversial aspect: the capacity to describe the encounter between what at first glance might look like two completely different worlds, using what would commonly be considered to be divisive geographical entities, such as mountains. Several academic disciplines would rightly regard these rugged mountain giants as boundaries between different states and populations, isolating groups of otherwise fellow human beings from each other. Mountains are considered to be the barriers that have made people foreign to their own neighbors, discouraging interrelations. From a human perspective, this makes perfect sense. It has only been a few decades since city dwellers such as myself have been able to actually enjoy access to such difficult territory with relative ease. Yet, in thinking as an environmental historian, one cannot help noticing how these ecological giants have allowed different groups of people to nurture themselves in their rich natural realms. Humans have literally lived off the trees, soils, and water flows at the core of these complex mountainous organisms. They have done this through practices that reproduce ecological patterns of restrained predation and coexistence, which characterize the ecology of these territories, and allow the creation of multispecies patterns of interaction.

In regarding humans as just another piece of this fascinating puzzle, I feel particularly aligned with fellow researchers such as Edmund Russell and Tim LeCain, skilled explorers of the relational nature of human existence, who have been looking at human history as the result of coevolutionary relations with animals, plants, and the like. In this sense, my research weaves together traditional historical sources obtained through archival research (e.g., legal regulations about the management of natural resources, correspondence between different actors, and historical accounts) and scientific sources describing the ecological characteristics of mountain ecosystems (e.g., forest studies, botany, plant biology, and microbiology).

During my fieldwork, I do not simply visit local archives collecting traditional historical sources; I also look for scientific studies that describe the ecological characteristics of the mountain biomes. This allows me to look into the natural specificities of the mountain ecosystems that I strive to understand, attempting to explain how environmental factors have contributed to shaping historical processes, influencing human decisions and the distinctive cultural features that emerged from meaningful interrelations. How did the ecological characteristics of these mountain biomes influence the development

of governance strategies aimed at ensuring a mutually-enriching relation with these ecosystems? Why does human history present recurring examples of collective governance practices as a strategy to create a human ecological niche within a fully formed, functioning ecosystem? Thinking through the innovative research methodologies pioneered by environmental history, mountains are therefore more of a *trait-de-union* between different groups of people in several historical and geographical contexts than an insuperable ecological barrier. For this reason, from an environmental history point of view, southern Italian and southern Brazilian mountains appear to be part of the same discourse of human-nature evolution, involving the complex interaction of many different organisms.

This is what it means to do environmental history; it entails looking at human experiences and stories in order to develop a more nuanced understanding of the relationship between human cultures and specific ecosystems. To some extent, this is a truly scientific enterprise. Environmental historians are just like scientists working in a lab. At first, we look at a natural phenomenon and its specific qualities, isolating it in order to better understand its characteristics. Then, we attempt to put it into context, or into an ecosystem. We proceed like a bull in a china shop, stumbling upon elaborate scientific concepts and ecological notions. These, united with a humanist philosophical background that informs most of us, produce an explosive mix of ideas. It takes an immeasurable effort before this convulsed ensemble can actually be transformed into a coherent discourse. Building a bridge between human culture and the natural world, which we so often regard as foreign, means to think beyond the enclosures of traditional academic disciplines. To some extent, this can look like one of those eco-monsters that crosses the beautiful giants that I like to study (see fig. 1)—these bridges are suspended and profane; they look quite unnatural, but they are also at times disturbingly *natural*.

This statement might sound controversial and perhaps this is environmental history at its best; it brings uncanny realities to light by putting human history into contact with ecology through a complex linguistic enterprise. It entails taking a step back and abandoning a reified and hierarchical idea of nature, embracing ecological dynamism and horizontality. It means leaving our safe Garden of Eden and entering an unbalanced and uncertain reality made up of symbiotic relations that constantly evade our perception. It means leaving aside an essentialist vision of nature as a harmonic whole



**Figure 5**  
The complex landscape of the southern Brazilian uplands, 2017. Remaining Araucaria trees are individually scattered across the landscape, with thick woods in the background, cultivated fields, and small pasturelands by the river—an animated, dynamic riddle in the making. (Source: Author)

in favor of an ecological view of the world as the combination of different beings, strangers to each other but also indissolubly interconnected. It is not just about looking at what things are in a universe of perfection, but attempting to understand how they behave in the chaotic ecological mesh that we inhabit.

In this sense, to do environmental history means to think and write ecologically every day, breaking the abstract barriers of the human-nature divide at the core of our modern world. I might sound like an idealist living off the map, but in fact I—and by extension other environmental historians—are not alone in this process. We can rely on fellow disciplines both from the ecological sciences (such as evolutionary biology and climatology) as well as from the emerging field known as the environmental humanities. Further, we can count on a growing movement against climate change, involving young citizens from all over the world willing to explore new patterns of living informed by game-changing moral values. In light of what will be an inescapable revolution of our bodies and minds, we should insist in our efforts on bringing ecologi-

cal relations to the core of our narrative efforts. We need to work across boundaries and disciplines with the aim of contributing to a better future for humankind and the other species that inhabit our beautiful earthly realm, including the beautiful giants that I have described here.

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**Figure 1**  
D38 road connecting the city of Verdun  
with the Vauquois memorial, France, 2019  
(Source: Author)

Noemi Quagliati

### The Most Famous Land|Scape

At the center of a quiet tarmacked road punctuated by the rhythmic presence of trees, I spot what seems to be a “classic” French landscape. Immediately, I ask myself, “Come on, what does a ‘classic’ French landscape really mean?” A Van Gogh painting then flashes into my mind. But again, I notice that the Van Gogh oil painting I am picturing represents a landscape of Provence, as well as many of those famous natural scenes portrayed by Cézanne in the Région Sud of France. Due to a background in the visual arts, my “classic” idea of a French landscape is, therefore, actually a painted scene of the French region Provence-Alpes-Côte d’Azur. However, I am instead experiencing a landscape of Northeast France for the first time. Although some elements of the painted rural landscapes of the European art tradition also occur in the environment I am standing in, the gray, low horizontal clouds that veil the summer sky of the north substitute the warm Mediterranean light portrayed by the two nineteenth-century painters.

It always surprises me how mediated knowledge, gained by means of recurrent or popular images of landscapes from as much as a century ago, influences my physical experience of diverse locations. I often struggle against these ready-made mental images in order to tangibly feel a new environment. In a Cubist exercise to etch in my mind the multiple sides of this new space, I slowly spin around. The tree-lined road divides my frontal view in two: the maize on the left, the wheat on the right, and at the center, the line of the road moves away, narrowing into the distance (fig. 1). Behind me, a green spot indicates a forest. I tell myself, “A piece of wild in this farmland!”

About a century ago, when neither Van Gogh nor Cézanne were still alive, this area constituted the most famous landscape in Europe, photographically mass-reproduced everywhere. These photos were accompanied by the title: The Landscape of the Western Front.

During World War I, positional trench warfare extended from the North Sea to Switzerland, passing through Northeast France. It represented an enormous theater of war not only from a military point of view; it was literally a stage on which military operations, technological innovations, and soldiers' lives were constantly photographed and reproduced in the printing press. All around Europe, the press released images in which the landscape, besides being the background of military (often staged) actions, also constituted the principal character of photographic scenes. Since representations of brutality and death were usually censured (except for enemy casualties and dead horses), one of the main visual categories depicted during World War I was indeed the landscape itself, which was generally understood to be a neutral subject, despite being pervaded by allusive meanings.

Illustrated magazines showed scenery never seen before, with new descriptive landscape categories, such as lunar landscape, red zone, irreparably lost landscape, and no man's land, becoming popular straight after the conflict. All of these terms referred to the highly damaged area of land between the two enemy trench lines. In collective memory, World War I is captured by a black-and-white photograph of a devastated landscape completely transformed by unprecedented destructive technologies. A landscape that has lost all of its landmarks, such as vegetation, trees, cultivations, and villages, remains a barren land—a broken, flattened no man's land without a vanishing point from which to gain perspective (fig. 2). Essentially, the landscape had turned into land|scape.



Figure 2  
Winter battlefield in Passchendaele with shell holes filled with water  
(Source: *Berliner Illustrierte Zeitung*, no. 1, 1918: 4.)

Bild der (sonstigen) Schlachtfelder im Winter mit den weißgefüllten Granatkratern: Eine Aufnahme aus der Gegend des heiß umkämpften Passchendaele.  
(Quelle: *Illustration*)

In other words, representations of World War I displaced all the compositional elements that in the landscape painting tradition had directed the viewer's gaze across a landscape, allowing them to embrace it entirely. In fact, since seventeenth-century Western art, the landscape genre has corresponded to a wide view, usually ensured by a horizontal picture format in which all the visual units of the composition are coherently arranged to ensure total unity. Above land or sea, the upper portion of these views always included the sky, with weather phenomena dominating the composition, artistically represented in the form of clouds, rain, and fog (fig. 3).

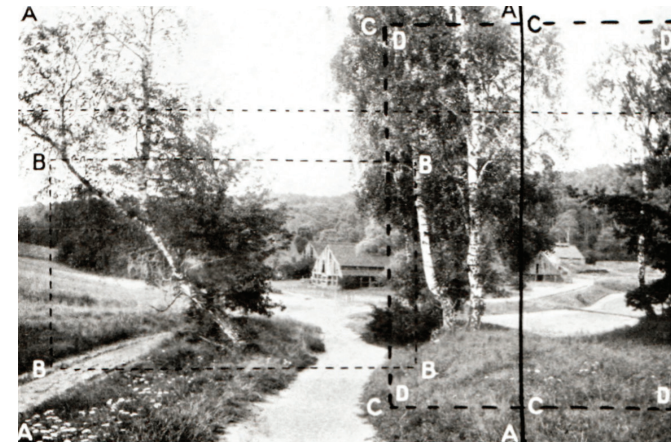


Figure 3  
Different framings of a picturesque landscape  
(Source: Weiß, Karl. "Die Komposition in der Landschaftsfotographie." In *Deutscher Camera Almanach: Ein Jahrbuch für die Photographie unserer Zeit* Vol. 9, edited by K.W Wolf-Czapek, 11–23. Berlin: Union Dt. Verl.Ges. Roth & Co., 1914.)

However, these iconographic elements changed their meaning in World War I photography. The sky space was drastically reduced and the representation of air in the form of clouds was transformed into clouds of gases (or the effects of mine and shell explosions), which indicated that the landscape ended up being a toxic environment that required soldiers to wear gas masks (fig. 4). Between 1914 and 1918 militarized visuals substituted the completeness of the landscape with the primordial element of the *terrain-soil-ground*. During the conflict, the earth was excavated, perforated, blown up, and turned inside out and upside down (fig. 5). Similarly, the photographed landscape of World War I was scrutinized, fractioned, dissected, measured, analyzed, disguised, and recomposed. Rather than panoramic landscapes, photographs depicted individual sections of land in correspondence to specific targets.







The large-scale exploitation of the landscape for military purposes was accompanied by the use of aerial photographs as sources of intelligence, which were produced automatically at short intervals within an industrial process aimed at providing as much information as possible about a specified territory. The study of the geographical and climatic conditions of an area and the constant observation of the enemy through innovative photo-optical devices therefore transformed photography from an informative-propagandistic medium to a military weapon used to map, survey, detect, and bomb targets.

It has been estimated that Germany alone took around four thousand aerial photographs a day covering the entire Western Front twice a month in the last year of the war. The land was photographed in every possible manner, from every available perspective. Cameras used in an aerial context could provide both oblique and vertical images. The oblique perspective emphasized the shape of three-dimensional elements, while vertical views taken at higher altitudes with the camera axis perpendicular to the earth's surface included greater areas, allowing photo interpreters to recognize changing patterns on the ground.

If warfare mutated the canonical subjects of landscape representation, turning them into a shell-torn *terrain-soil-ground* that could be sectioned, measured, and scientifically analyzed, the most radical transformation in depicting the shape and features of the land were defined by the aerial vista. The “God’s-eye view,” an innovative point of view on the world, defined a new topography and a different paradigm for understanding the landscape. For the first time, people were exposed to a great circulation of aerial landscape photographs, which appeared incredibly unusual, distant, and abstract. In World War I, the land was therefore photographed from “above” and from “below,” the juxtaposition of images in continuous tension between the abstraction provided by vertical aerial views and empathic representations of the battlefield at ground level (fig. 7).



Figure 7  
 The landscape of the Western Front (top) and aerial pictures of Fort Douaumont in 1915 and 1916 (bottom) (Source: Berliner Illustrirte Zeitung, no. 4, 1916: 6.)

One of the largest World War I aerial photographic collections still accessible today is housed in the Bavarian War Archive in Munich. Representing only a small portion of the aerial photographic material produced by German aviators during World War I (the rest of the collection, originally located in Berlin, was destroyed during the Second World War), it includes 127 boxes of files. Each box contains thousands of photographs, including 2,663 images taken by a special aviation unit active in Egypt and Palestine and more than 10,000 aerial photographs taken by training units of various places and military installations in Bavaria. Opening these boxes packed with black-and-white prints, films, and glass plate negatives gives a sense of the enormous amount of visual data accumulated during what was the first aerial warfare in history. Each photograph shows a portion of a new kind of militarized landscape.

Like a military photographic interpreter, I have spent the last few years constantly analyzing, classifying, and reflecting on these photographed landscapes. Pieces of paper, produced and distributed for the most diverse reasons a century ago, reached me, conserving their fragmentary history. My first encounter with the Western Front was, therefore, through these visual traces: a mediated experience of place, expressing a historical understanding of landscape. These images have, nevertheless, influenced the collective interpretation of the interaction between humans and the environment, visually introducing the concept of the endangered landscape.

However, my second encounter with the front lines was of a different kind. Realizing that I theoretically knew enough regarding visual reproductions of the battlefields and the aftermath, I decided it was time to experience these sites through my senses. I left the role of photographic interpreter to do literary fieldwork, visiting a battlefield that is now an agricultural field.

Today, the 700 kilometer frontline is mainly farmland, an agricultural landscape dotted with cities and towns. From time to time, war cemeteries and memorials come into view. In August, the tone of the countryside follows the strong yellows of the cereal crops in eastern France, with endless large round straw bales leaning on the fields, while in Flanders, green hues color the fields due to the heavy clouds (figs. 8–9). Here, during the war, the torrential rain combined with a war-damaged drainage system to create the muddy landscape that has come to symbolize the Third Battle of Ypres. However, between the French region of the Grand Est and West Flanders, the desolate

landscape impressed in the popular imagination does not exist anymore, at least not at first glance. The landscape is instead widely cultivated, spreading from the hilly territory of Verdun through to the rolling uplands of the Somme region and the flat coastal plains of Flanders. To the contemporary aesthetic, which generally links beauty to wilderness rather than to land use, this landscape would probably be described as uniform, perhaps a bit too monotonous, but still pleasing (figs. 10–11).

Soon after the war, tractors substituted tanks. Besides the mechanical noises associated with agricultural activities, natural sounds, including those of animals, replaced the uproar of explosions, which in many images from World War I were represented by soldiers covering their ears with their hands. The relicts of the war are, therefore, only detectable by trained eyes. One of the most impressive features created by the war is the mine craters, which are so huge that from the border they cannot be entirely framed in a single shot, not even using a wide-angle lens. When physically standing on the protected margins of these enormous deep holes, the eyes need to move following an imaginary triangle: from the left to the right, from the right to the bottom of the crater, and then from the bottom to the left again.

Some of the craters have changed their shape and meaning, with the *Spanbroekmolenkrater*, for instance, becoming the Pool of Peace (fig. 12). Some of the other craters, such as the *Lochnagar* crater (which being 30 meters deep and 100 meters wide was amply photographed by the Allies and even portrayed by the Irish artist William Orpen during wartime), have been subject to severe erosion (fig. 13). Visiting the region is like being on a treasure hunt: you have to search to find the craters. However, they can be immediately spotted through a drone's aerial view, with strange circles distinguished from the repetitive lines of the cultivated fields. Observing from an elevated position is essential to recognizing the extension of the front line. In fact, where not constantly preserved (fig. 14), trenches are only visible through the different colors and patterns of the cultivations, as seen from an aerial perspective.

Nowadays, the remains of military forts constitute the reign of birds. Fortifications, which are incorporated into artificial hills, house birds' nests in the nooks and crannies of the building's concrete surfaces. Moreover, flocks of swallows dart around the ruins and often perch on rusted metal pickets, which were used to support barbed wire during battle (figs. 15–16). Inhabitants returned to regions occupied by the Western



Front, again reshaping the landscape for human use by rebuilding towns, flattening the battlefield, and rehabilitating the land for agriculture.

Repopulation has not occurred in the *Zone Rouge* (Red Zone), however, where only some species of nonhuman life survive. This zone was originally a 1,200 square kilometer area designated after the war as being “completely devastated.” This meant that damage to both property and agriculture was estimated to be 100 percent, making it impossible to rehabilitate the land in order to sustain human activity. Today, this area, banned by law from public entry and agricultural use, has been reduced to 100 square kilometers. Here, the “catastrophic anthropogenic disturbance” caused to soil by unexploded chemical munitions, heavy pollution, acids, and animal and human remains will not be fully remediated for at least another three hundred years, according to the latest studies.

In some of these areas, such as in the Place-à-Gaz in Verdun, so called due to the high level of arsenic in the soil caused by the incineration of chemical shells, only three types of plants (*Holcus lanatus*, *Pohlia nutans*, and *Cladonia fimbriata*) grow. Therefore, the most severe scars of World War I still lie underground, a realm which has, in the meantime, become an archeological archive. Visitors only recognize the invisible toxicity of this region through warning signs like “Danger” and “Interdit au Public” announcing that access is prohibited.

Besides the off-limit areas, natural recovery has softened the effects of the war on the landscape of the Western Front. As poppies thrived on the disturbed soil caused by warfare, they became a symbol of remembrance, while other flowers such as *Salvia officinalis* now randomly appear on the green, artificial hills, which were created as a result of mine explosions (figs. 17–19). In the same craters, deer and boars bathe and drink. Visually, the forestland that nowadays emerges from the cultivated fields in Verdun was once the most heavily impacted section of the battlefield. Paradoxically, what at present seems to be the “wildest” part of the region was previously the most brutally devastated by the war. After World War I, the French government reforested the battlefield in Verdun, prohibiting it from human use. As part of war reparations, Germany provided 153,000 small conifer trees together with 1,400 kilograms of acorns and 180 kilograms of resin-tree seeds. The region was, therefore, abandoned (nine villages were never reconstructed) and covered with vegetation. For security reasons,


the place was designated a military exclusion zone, later becoming an “artificially spontaneous” (un|natural) living entity.

Without human activity, the landscape quickly evolved, altering its micro-environmental properties, allowing flora and fauna to repopulate the area. In fact, the sole area of the Western Front excluded from heavy mechanical flattening, which occurred due to agricultural needs after the war, is this man-made forest, with reforestation occurring in the aftermath of an ecological disaster. Due to soil pollution, the landscape is now mainly influenced and framed by nonhuman processes (fig. 20).

Venturing into these green, morphologically atypical woods reveals both the scale of the environmental destruction caused by human activities and the capacity of nature to transform landscapes given time. Vegetation hides the scars of war but simultaneously conserves a novel microcosm, a type of landscape that functions simultaneously as a source of collective memory and admonition, while also attesting to the possibility of natural regeneration.

The photographs I study every day for my PhD are historical, although incomplete, traces of real or ideal places. Similarly, the forest of Verdun is one of the last visual witnesses of the devastated and toxic landscape of the Western Front. Nevertheless, it is a hybrid environment that is slowly recovering its nonhuman properties: a long process that might symbolize an idea of the landscape of the future.



A wide landscape photograph showing a vast field of harvested, golden-brown crops, likely corn, stretching to the horizon. The sky is overcast with grey and white clouds. In the distance, a line of trees and a few small buildings are visible on the left. A dark, vertical post or fence marker is visible in the foreground on the right. The foreground is a dark, wet surface, possibly a road or a large puddle, reflecting the sky and the field.

The Lesser-Known  
Landscape

The Western Front in Photographs, 2019  
By Noemi Quagliati





**Figure 8**  
Fields in West Flanders,  
Belgium, 2019

**Figure 9**  
Fields in West Flanders,  
Belgium, 2019





Figure 10  
Fields in the Somme,  
France, 2019



Figure 11  
Fields in the Somme,  
France, 2019





Figure 12  
Spanbroekmolen Crater, Heuvelland,  
Belgium, 2019



Figure 13  
Lochnagar Crater, Pacardy,  
France, 2019





Figure 14  
Preserved trenches in  
Vauquois,  
France, 2019



Figure 15  
Ruins of Fort Douaumont,  
France, 2019



Figure 16  
Birds on the ruins of Fort  
Douaumont, France, 2019





Figure 17  
The Vauquois Hill  
battlefield, France 2019



Figure 18  
The Vauquois Hill  
battlefield, France 2019



Figure 19  
Beaumont-Hamel New-  
foundland memorial site,  
Somme, France, 2019





Figure 20  
Verdun forest margin,  
France, 2019

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Roberta Biasillo

### (Under) Grounding Italian Colonialism: Practices of Historical Displacement

At the time, my research was nothing more than a vague idea in my mind, an idea of a new exploration into an unknown territory. I was about to start outlining a project on the environmental history of Italian colonialism in Africa, and I did what historians are supposed to do—namely, read books and papers and review archival sources. I remember enjoying this sense of cloudiness and nebulosity, the fascination of an aerial picture crystallizing every now and then in tentative titles and unstructured paragraphs.

I spent days browsing folders and documents under the impression of knowing exactly what I was searching for in amongst the fascist administrative files. And the less you know, the more you think you are right. I thought I was scanning the right collection, yet I was merely passing from one folder to another, getting lost while deeming to be perfectly on track. Several times, I believed I had found what I was after: maps of city plans, cottage house plans, names of agrarian technicians, Mussolini's face carved into African rocks, op-ed pieces celebrating farming achievements, travel reports, inquiries on resources by company rapporteurs, and descriptions of the royal train crossing the empire. All these relics and the environments they capture have migrated into papers, traveled back and forth from Italy to North and East Africa, survived across times, passed from one person to another, and been translated into different media.

While I was literally exploring corridors of boxes and digging through papers of various weights and formats, I came across something different: finally something more solid and weighty in the midst of lightness and flexibility. I found an unopened envelope, and suddenly I was the one to be breaking its wax seal for the first and only time. I was experiencing one of the typical joys of a historian: being the first person to “discover” something.<sup>1</sup> Such discoveries are gifts from the past that collapse the distinction between temporalities. The envelope was an attachment to a document sent in January 1938 from Ethiopia to Italy from a company employee to the Italian Ministry of Colonies containing transparent disks of something in-



Figure 1  
Mica samples (Source:  
Central Archives of the  
State, Rome, Italy, January  
2017)

<sup>1</sup> Talking about discovery, especially with regards to colonialism, is always problematic. If the reader would like to know more, see: Matthew H. Edney, “Creating “Discovery”: The Myth of Columbus 1777–1828,” *Terra Incognita* 52, no 2 (2020): 195–213, doi: 10.1080/00822884.2020.1779982.



between plastic and glass. I had no idea what I was touching.

Academia is a wordy place, and even in this case it was words that helped me. A label attached to the disks read: “MICA. Società Anonima per le Industrie Estrattive in A.O.I., Milano.” These were mineral samples extracted from the underground of Italian East Africa by a private company that had a concession from the state. Still, I was not able to read what I was holding, so I googled “mica” and found the passage summarized below.<sup>2</sup>

#### Micas

Their perfect cleavage into thin elastic sheets is probably the most widely recognized characteristic of the micas, with their cleavages being a manifestation of their sheet structure. Distinct crystals of the micas occur in a few rocks, but when they occur in large crystals, they are often called books. When micas occur as irregular tabular masses or thin plates (flakes), they appear, in some instances, as pages. Flexibility and elasticity, infusibility, low thermal and electrical conductivity, and high dielectric power allow micas to serve as electrical condensers, insulation sheets between commutator segments, or in heating elements. Sheets of particular thicknesses are used in optical instruments. Ground mica is used in many applications, including as a dusting medium to prevent asphalt tiles sticking to one another, as a filler, an absorbent, and as a lubricant. It is also used in the manufacturing of wallpaper to provide a glittery luster.

To cut a long story short, I was in the archives with pages of rock asking to be read, and I felt as though I was dipping into underground Africa. Besides the experience of historical displacement, the finding hinted at something further. In my naive vision of colonial appropriation, precious metals shaped unequal exchanges. I had never heard of micas before, which are neither gold, silver, platinum, nor palladium, so why extract them? Micas are one of the innumerable resources that Italians dug out of the colonies, with metropolitan chemical industries and fascist modernity relying on a huge array of minerals from Africa for their development. Colonialists took everything they could, regardless of its value.

<sup>2</sup> *Encyclopaedia Britannica*, s.v. “Mica,” accessed 6 April 2020, <https://www.britannica.com/science/mica>.

This material encounter was the missing link I was searching for in amongst the fascist administrative files. The environment of my history lay in the very material traces I found in the unopened envelope, which contained the scramble for resources, records of modernity, competition between empires, and dreams of prestige and wealth.

#### Archives of the National Institute of Social Security, Rome, Italy, June 2018

In the following months, archival findings helped me refine my research, merging personal and historical pasts to perceive the present. In 2018, I visited the archives of the Italian Agricultural Colonial Institute in Florence where documents were arranged by plants and places, available for consultation in the historical headquarters of the institute. A fascist building with fascist façades, fascist plant and seed samples on exhibit along the hallways, with fascist desks to study at, and a tropical garden in the inner courtyard. During the same year, I had the opportunity to work as a guest researcher at the National Institute of Social Security in Rome. In its archives, traces of environmental flows—humans, animals, plants, concrete, energy, money, nitrogen, water, and boats—literally unfolded in front of me. Thanks to these collections, the Italo-Libyan environment became a synonym for agriculture, and my research idea crystallized into a plant-based table of contents with a focus on select plants.

My encounters with photographs of farming scenes confirmed that I could well be following a fruitful path. Looking at photographs taken in a private plant nursery in ‘Aziziya, a small town in northwestern Libya sometimes described as one of the hottest places in the world, I noticed different soils. The agricultural colonial company “De Micheli” took and sent these images in 1940 with the purpose of selling hundreds of olive trees to the National Institute of Social Security, which at the time was carrying out agricultural colonial enterprises in Libya as a means of tackling unemployment in rural Italy. Soil was not the lead character in these photographs, yet it captured my interest: The sight of the soil triggered memories about my past and displaced me into two very different settings...



Figure 2  
‘Aziziya, Libya, 1940  
(Source: National Institute  
of Social Security, Rome,  
Italy)

the ground, flying around and depositing itself everywhere. I have generally associated this volatile characteristic of the soil with hot climates and countries with sandy landscapes and heavy agricultural practices. Yet there I was experiencing it firsthand during a Swedish spring in Stockholm.

Such dryness in an almost arctic region seemed incongruous. Indeed, two summers ago in August, northern Sweden had experienced the unexpected and unusual phenomenon of an arctic wildfire. The term “arctic wildfire” sounded almost like an oxymoron a couple of years ago, yet now it is a familiar term. In July 2018, fires spread easily in the hot, dry weather and raged across Sweden as far north as the Arctic Circle, prompting authorities to ask for international assistance. Given the soil, Sweden was prone to burn.

The soil in this second photograph (fig. 3) looks more like that which used to cover my hometown in Central Italy, midway between Rome and Naples, not too far from

The soil in this first photograph (fig. 2) brought me back to the 2018 Swedish heatwave and drought, with the May and July of that year recording their warmest ever temperatures.

A few years ago, I started spending time in Sweden, including during the spring and summer months. The geography is so different to that of Italy, and I experienced several physical epiphanies while I was there. I have never before felt soil so loose, dry, dusty, and atomic. During the drier months, I noticed it right throughout the house, covering my shoes when I went out for a walk, and layered across the grass in the garden. It was light but created a thick and consistent layer. It disassembled itself from

the coast. In this photograph, I can easily see myself at the age of five or six, wearing green rubber boots and messing around with plants and tools in my grandparents’ orchard. I can still feel the texture of the soil under and around my shoes—consistent but soft—and I can still see the footprints of my boots on the ground, the tiny little squares arranged in semicircles. Wet, if not soaked, quite dark and heavy, with insects and worms inhabiting it—I had walked on soil like this before.

As in the photograph, the earth of my childhood ran like waves, with the highest crests rich in vegetation and the lowest ones a balance of bare soil and water. Much of my hometown is actually located below sea level, as it is near the coast, with a lake and a system of channels connecting it to the sea. Our relationship with this mesh of soil and water has always been one of both confrontation and cooperation, always boasting high fertility.

Once again, I was in the archives with many photographs of soils just waiting to be read. I felt like I was wrapped in volatile sand, and I could feel my shoes sinking below Africa’s surface. Once again, materiality and sensory reflections were the middle ground on which my academic persona met the everyday person, and where my research met my inner-self to make this far-away-in-time-and-space story somehow meaningful. It was here, as my work and personal life crossed paths, that the experience of historical displacement and the recovery of my childhood memories carried along with them the juxtaposition of the two images that would reveal a startling, human-made transformation. I could visualize the trajectory of the fascist colonial scheme: from an arid, light-brown, and sandy soil to one that is wet, almost black, and rich in decaying organic matter.



Figure 3  
‘Aziziya, Libya, 1940  
(Source: National Institute  
of Social Security, Rome,  
Italy)



During the early 1920s, the coastal regions of Tripolitania and Cyrenaica (part of modern-day Libya) were deemed to be “a vast sandy box.” Yet its remote past speaks of a hidden and forgotten fertility, which can be uncovered in the myths of Libya as one of the richest Roman provinces. Having first trashed the place, the Romans eventually fancied it for themselves; a new city was built over the ruins of Carthage, and Tunisia became the granary of the Roman Empire. It was this past that the Fascists wanted to resurrect. They envisioned a green colony, and in order to achieve it invested huge amounts of capital, promoting scientific and technological innovation, which also involved the movement of Italian fascists to Libya, displacing Libyans from the most fertile areas.

The soil in figure 2 poses the question: Could a fascist imagine a better place to conduct a radical socio-ecological experiment than a country that is 95 percent arid and infertile and populated by Berber and Arab nomadic and semi-nomadic tribes? The soil in figure 3 suggests that, very likely, the answer is no, and that the Libyan experience both featured and shaped the fascist regime. Libyan soils started to produce fruits and fascists that sustained one another. The North African landscape offered the regime an extreme environment in which equally extreme—even heroic—gestures could be performed, an alien territory to be tamed, appropriated, and radically transformed. Fascist soils, fascist plants, and fascist Libyans—that is what these photographs portray.

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Ansgar Schanbacher

### Sealing the Land: Recognizing Urban Developments in Past and Present Göttingen

Today, it is considered normal that before entering historically and culturally interesting city centers, we have to overcome a broad belt of monotonous suburbs built on previously fertile soils. Even a freeway interchange can cover the same surface area as the historic center of a small town it passes or dissects. At a glance, it is easy to see that a large proportion of built-up areas and their infrastructure have arisen in the last few decades. Yet few people seem disturbed by the rapid pace at which the landscape has changed. Perhaps the human mind just does not recognize these changes. However, such developments did not only take place during the second half of the twentieth century. Rather, they are rooted in the nineteenth century when together with the acceleration of industrialization, the landscape people had been used to for centuries was subjected to a process of radical change. As a result, the view of rural landscapes today is often visually ambiguous, as can be observed in the Leine River valley in Central Germany.

The wide valley of the Leine River between Göttingen and Hanover is, relatively speaking, a peaceful place. On both sides of the dale are rolling hills full of green trees. Sometimes a medieval tower shines through, recalling times when knights controlled the dues of merchants passing from Kassel to Hanover. Yet, in parts of the valley, the view is far from empty and less than beautiful. Several highways, the national A7 freeway, and four railway tracks cut through the landscape, which is flooded with industrial developments and residential housing near Göttingen (fig. 1).



Figure 1  
Commercial buildings north of Göttingen constructed in 2019 on what was previously green space (Source: Author)

I am wondering what this landscape—which I cross several times per week—looked like before industrialization took place, which was ignited by the building of the Göttingen to Hanover railway in the 1850s. How did inhabitants and visitors back then perceive the Leine Valley, the university town of Göttingen, the surroundings, and the changes taking place?

Delving even further into the past helps to provide a better understanding of the answers to these questions and a perception of landscape changes across time. In my current research, I am therefore working on the environmental history of early modern cities, with a focus on how their inhabitants dealt with resource scarcities and natural hazards, while trying to bring attention to pre-industrial interactions between humans and the environment, including examples of urban agriculture in and around cities. For me, the great importance of fertile soils for city inhabitants of the eighteenth century is a starting point for looking at developments in the Leine Valley during the nineteenth and twentieth centuries when the landscape was understood as a resource for infrastructure and industry rather than as a fertile agricultural plain.

Understanding the concept of landscape can be challenging when one relies solely on the interpretation of written sources. By using a multitude of different, sometimes unusual, source materials we can create more tangible and relevant environmental histories of regions such as the Leine Valley. An etching by Matthäus Merian d.Ä., who edited a band of 30 fine volumes of townscapes in the seventeenth century (*Topographia Germaniae*), shows with surprising detail and realism the meadows, gardens, fields, and hills surrounding Göttingen around 1610—scenery that hardly changed until the 1850s (fig. 2).

Fortunately, following the founding of the university in Göttingen in 1737, many students and scholars documented their experiences of landscape changes, allowing historians like myself to gain a more intimate view of the landscape in the eighteenth and nineteenth centuries. One of them, the Danish student Johann Georg Bärens, drafted a description of Göttingen and its surroundings in 1754 alluding to the fertile lands, the plain fields, and the nearby villages. Thirty years later, the traveler and theologian Christoph Friedrich Rinck from Karlsruhe described how



Figure 2  
Matthäus Merian d.Ä.  
Göttingen, Gesamt-  
ansicht von Westen,  
1641. Copperplate  
etching, 20 × 30.5 cm,  
<http://www.zeno.org>,  
Contumax GmbH &  
Co. KG

he could observe fields, woods, cottages, and villages when standing on the town's ramparts. When I tried to repeat his experience by walking these same ramparts one cool morning (together with many joggers and dog owners), I also saw much green because the circle encompassing the city center is today like a narrow park. Starting in the 1760s, after the defortification of the city, trees were planted in this area. Yet I know that behind these trees, traffic now rushes by—I could distinguish broad streets, noisy construction sites, and high buildings breaching the canopy. In contrast, historical sources show that back in the eighteenth century, open landscape began more or less directly beyond the city gates. Göttingen was also clearly separated from neighboring villages such as Weende and Grone, which are today integral parts of the city.

One source that has proved particularly informative in gaining an understanding of cities and their surroundings in the eighteenth century is a detailed map from 1784 (fig. 3). Created during a landscape survey of the electorate of Hanover (*Kurfürstentum Hannover*), it took the officers of the Corps of Engineers 20 years to complete. In its fine lines, one can see not only how land was previously used but also the





**Figure 3**  
Göttingen and its surroundings in 1784 (Source: Kurhannoversche Landesaufnahme des 18. Jahrhunderts, Folio 155: Göttingen, scale 1:25,000, LGLN Hannover)

extension of settlements, gardens, fields, and meadows. At the time, approximately 4,000 cows, pigs, and sheep still lived in the city of Göttingen, which were regularly driven out onto the surrounding pastures directly outside the city gates, as well as into the woods in the distance.

The map also shows buildings outside the city that formed an important part of economic and social life, which can also be tracked in written sources. There was a factory (*Fabrique*) in the north of Grone, a fulling mill (*Walck Mühle*) and dye works, which were part of the city's prospering textile industry, water mills (*Masch Mühle*) along the Leine River, garden cottages, and even restaurants near the moat. When comparing this survey map with today's landscape, one prominent feature of Göttingen that exists today, but which did not exist in 1784, stands out: the wood east

of the town (*Hainholz*), which is now a popular location for walking and recreation, surmounted by a lookout tower called the Bismarckturm. This wooded area was reforested from as recently as 1872. When looking at today's woods around Göttingen, a curious and informed eye can distinguish the areas that were previously species-rich, with a mixture of old and young trees, shrubs, and coppice, from the monotonous high canopy forests that shape our current view of a "normal" wood, thus translating the present landscape into historical insights.

Around 1800, leaving a town like Göttingen was rather easy—so much so that it even inspired the writings of authors such as Heinrich Heine, who lived in Göttingen for a short time in 1820 and again in 1824/25 while he completed his legal studies. On departing the town in 1824 to wander to the famous Brocken—the highest point of the Harz mountains—he described his feelings in *Harzreise* after passing the Weender Gate to the north of the city.

Fresh morning air blew over the road, the birds sang cheerily, and little by little, with the breeze and the birds, my mind also became fresh and cheerful. [...] Milk-maids occasionally passed, as did also donkey drivers, with their grey pupils.

Today, the scene described by Heine in the above revelation is dominated by noisy major roads leading to a freeway, a gas station, and multistory buildings. While the scenery depicted by Heine in *Harzreise* may appear quaint, even nostalgic, to the contemporary sensibility so often besieged by the noise and pollution created by industrialized landscapes, it was not approved of by everyone at the time. Supporters of "progress" in high positions within the city administration, such as the mayor Georg Julius Philipp Merkel, in retrospect complained about the jumble of field paths, the disturbing flocks of sheep, and the disorderly mosaic of fields that lacked proper drainage surrounding the city. Here, we get a sense of one of the numerous conflicts concerning land use at the time. In environmental, economic, and social history research, such conflicts are widely discussed. They often centered on issues like who was allowed to collect firewood in local forests or drive cattle on meadows, which were part of the city's fortification, or extract ore from certain parts of the landscape, thereby destroying the livelihoods of people living nearby. Similar conflicts confront us today as global population growth reduces the area available for use by individuals, aggravated by environmental pollution and climate change. Land and water use conflicts thus now take place on an even greater scale than was ever imaginable in the past.

During the nineteenth century, more and more people came to live in the prosperous university town of Göttingen, especially after the introduction of the railroad in 1854. In 1860, there were 12,200 inhabitants—over twice as many as one hundred years earlier (today, there are 134,000, a similar size to Cambridge, England). The resulting housing shortage inside the city, together with the supposed “neglect” of the city’s surroundings, led to administrative activities such as the creation of a new building law (*Bauordnung für die Stadt Göttingen*) in 1877. This law can be traced back through a vast array of documents in the city archives—and subsequently led to the expansion of the sealed areas due to buildings and infrastructure from the 1860s onwards, with developments beginning in the north and southeast of the city. Around 1900, new buildings had already reached the borders of the city and the merging of neighboring villages began. Whether it was despite these urban advances—the city’s denser population, its sprawl, and the reduction of untilled areas—or because of them, well-to-do citizens of Göttingen around this time favored quiet and bucolic places. One example of this trend is the cottage of the writer Lou Andreas-Salomé (1861–1937) and her husband, the Orientalist Friedrich Carl Andreas, which looked out onto the city from the east, boasting old trees, an orchard, vegetable patches, and even a chicken run.

In the 1920s, the historic town center of Göttingen became encircled by land belonging to the railroad, apartment buildings, a hospital area, developments with two-family houses with gardens, a villa quarter to the east, and barracks to the south. Quite a lot had changed since the days of Heinrich Heine, in part due to advancements in building materials driven by new ideologies and infrastructure. The use of asphalt in road construction distinctly increased in the second half of the nineteenth century, and concrete had already become a widespread building material, as we learn from a 1905 edition of *Meyers Encyclopedia*. This development was intimately linked to novel 1950s/60s ideals of a car-friendly town—ideals that did not consider the historic worth of the fabric of the city and its surroundings. Indeed, the number of commuters to Göttingen notably increased from the 1950s onwards, while the number of family houses in neighboring villages such as Rosdorf and Bovenden soared.

Today, approximately seven percent of the land in Lower Saxony, where Göttingen is situated, is sealed by buildings and infrastructure, which equals 3,340 square kilometers, or four times the area of Hamburg. The sealing of the soil with infrastructure prevents the filtration of contaminants, lowers water storage capacity, and precludes the use of

underlying fertile soils. The regional government in Lower Saxony is at least trying to limit land consumption to four hectares a day by 2030, and Göttingen’s city council is also well aware of the value of open, green spaces for its inhabitants, but admits in its policy guidelines from 2012 (*Leitbild 2020*) that there is an economic need for new commercial areas.<sup>1</sup>

As a result of such policies and the economic push of the twentieth and twenty-first centuries, many central European landscapes, especially in the fertile river valleys of the Rhine, Main, and Neckar, have been sealed by infrastructure, with buildings replacing the original soils, altering the landscape for good. These changes occurred in many very small steps from the nineteenth century onwards, with most people becoming accustomed to them and tending to quickly forget how things looked just a few years or months earlier. I, for instance, no longer recall how the area covered with new buildings near the railway tracks in Göttingen looked beforehand (see fig. 1). There was probably a field, a park, or garden plots there. The brief glimpses afforded of the landscape when traveling by train perhaps lead me to forget. Nevertheless, I cannot ignore a feeling of loss when thinking of what was surely an “ideal” open landscape, and the improbability of getting it back. In 1824, Heinrich Heine took a whole day to walk from Göttingen to Osterode, over 40 kilometers, and remarked that evening, “I was as tired as a dog and slept like a god.” The fast pace of modern life has apparently led to my more cursory perception of this now urban environment.

Changes within urban space often go unnoticed either because of their relative slowness, or, as shown in the nineteenth century, because they are tied to new and unquestioned ideals of progress and economic development. Many such ideals still offer convincing arguments for sealing the land today, even though this is one of our most valuable and sensitive resources, which is easily neglected by people—including myself—who hurry past in a train or car thinking about their daily grind. One task for the environmental historian is, therefore, to record these changes and uncover and translate diverse records documenting landscape change throughout time. Although much has changed in Göttingen since the times of Heinrich Heine, when bucolic scenery surrounded the town, not everything points to deterioration. For example, the reforested hills east of Göttingen are highly regarded by residents of the city, showing that a return to more sustainable land use practices is indeed possible in the long run.

<sup>1</sup> “Städtebauliches Leitbild 2020,” Stadt Göttingen, accessed March 2020, <https://www.goettingen.de/rathaus/konzepte/wohnen-und-bauen/staedtebauliches-leitbild-2020.html>.



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### David-Christopher Assmann

#### Stubborn Stuff: Translating Rubbish

The steaming hills never end, and I can barely see the horizon.<sup>1</sup> The terrain is extensive and somehow unreal. Somewhere far ahead, on another hill, William is trudging through the masses of piled-up material that surrounds us. I can only guess at his gray contours, far in the muddy distance. Dawn wraps everything in a warm, dirty yellow, the hills stinking of sulfuric acid, rotten food scraps, animal carcasses, and oil. The toxic air stands still making it hard to breathe, while the rubbish sticks to my shoes, dirtying my pants. Faraway, I hear the uncanny noise of incredibly big excavators and dozens of trucks bringing evermore material: broken mirrors, car tires, phone books, used toothbrushes, flowerpots, ripped jeans, lost cell phones, broken glasses, rotten shoes, discarded plastic, and paper bags. There seems to be nothing one cannot find here. The garbage dump devours everything our daily routine leaves behind. Every year, every one of us in Germany and Italy disposes of nearly 500 kilograms of material<sup>2</sup>—things that we no longer need, or that we do not like or use anymore because they no longer work or are out of fashion, or just because they bother us or others. However, these things do not disappear once we have thrown them in the rubbish bin. A large amount is stored in landfill—a technique that goes back to the Stone Age when humans kept their “kitchen waste” in places outside of their living quarters. Nevertheless, landfill, as we know it today, only gained relevance from the middle of the nineteenth century onwards. Industrialization has made it necessary to find new, technologically advanced practices for dealing with our mountains of discarded waste.<sup>3</sup>

Garbage workers seem to be continually rearranging the piled-up material, creating ever new and higher heaps. Birds—gulls, pigeons, and ravens—are circling

1 I would like to thank Barbara Pisanu and Kristy Henderson for their helpful comments on previous versions of this essay.

2 According to the German Federal Statistical Office, in 2015 an average of 455 kilograms of household waste per inhabitant was produced. See table “Aufkommen an Haushaltsabfällen: Deutschland, Jahre, Abfallarten” (Code: 32121), <https://www.destatis.de/DE/ZahlenFakten/Datenbanken/Datenbanken.html>. See the figures for Italy for 2014 (488 kilograms) of the Istituto Superiore per la Protezione e la Ricerca Ambientale: Rapporto Rifiuti Urbani. Edizione, 2016, 5, <http://www.isprambiente.gov.it/it/pubblicazioni/rapporti/rapporto-rifiuti-urbani-edizione-2016>.

3 Martin V. Melosi, *Garbage in the Cities: Refuse, Reform, and the Environment*, revised edition (Pittsburgh, PA: University of Pittsburgh Press, 2005).

above the gigantic piles and cannot wait for the arrival of a new truck of rubbish. For months, William had repeatedly asked the authorities for a knowledgeable employee who could guide us through the unclear terrain of the landfill, which had turned out to be an apparently difficult task of translation between disciplines, professions, and habitats. “All we need is for someone to show us the landfill for half an hour, answer a few questions about the technological processes used, and explain the sort of materials that pile up. We would like to prepare our research,” William explained. Yet research about landfill must have sounded too absurd to the personnel whose business it is to cope with all of the discarded material every day. Why analyze garbage, worthless stuff by definition? Finally, after several e-mails and a number of forceful phone calls, we found someone who was willing to take a step out of the sticky trash for a moment and show us the facility—its rotten secrets and dirty treasures. At the official entrance of the disposal site, William announced our visit, promptly setting out together with one of the workers, seemingly completely forgetting about his actual research companion.

I have invented this scene. Yet William is not just a figure of a fictional narrative but rather William Rathje, an American researcher who established the archaeology of garbage as an academic discipline. In the 1970s, together with his research group at the University of Arizona, he founded what has since been called “Garbology.” Together with journalist Cullen Murphy, Rathje wrote a popular non-fiction book on his adventures with landfills, garbage, and garbage workers. I stumbled upon *Rubbish! The Archaeology of Garbage* (1992) when I became interested in garbage as a cultural and literary phenomenon and was looking for some theoretical perspectives on the topic. Indeed, *Rubbish!* not only offers insights into the world of discarded materials but also translates them into a readable narrative. The book addresses nearly every topic related to garbage in the United States, including what and how much garbage is thrown away, where and how it is dumped, the types of materials most commonly disposed of and the degree of toxicity and danger associated with them, and how garbage can be scientifically studied so as to help in the development of ecological solutions.

Climbing up the massive hills of the garbage dump, the two of us try to answer at least some of these questions. However, you might ask why an archaeologist like William Rathje would allow someone like me—a literary scholar—take part in his research

project. Certainly, we discuss the topic repeatedly, even as we are making our way through the dump. Still, Rathje is unconvinced by my approach. “William, I’m interested in how rubbish is translated into texts, articles, books—just like the one you wrote with Murphy,” I explain, once again trying to make my point clear. But, somehow, we seem to be forever lost in translation. “These are two completely different things,” he shouts from the other side of the garbage heap, almost falling over. “Do not mix up real rubbish with rubbish in fictional worlds.” In some way, he is right, of course. Textual rubbish does not stink; it does not cause dust; and it is not harmful to the environment or hazardous to health. Therefore, we cannot or must not eliminate, sort, or recycle discarded things in (literary, journalistic, and scientific) texts. Yet, the distinction between real rubbish (such as that which surrounds us, as we are walking through the dump) and textual rubbish (the subject of this text) is far more hybrid than William assumes. Immaterial rubbish includes semantics, discourses, and practices of coping with discarded things. As Serenella Iovino would put it, rubbish is “a mesh of agencies that are both material, industrial, political, chemical, geological, biological, and narrative.”<sup>4</sup> Whatever the term “garbology” defines, in the end it also describes practices of translation. Doing “garbology” means classifying, sorting, ordering, and—if you like—reading discarded things. William takes the stuff he finds on the dump as a meaningful resource. Indeed, his trips to landfills serve to gather significant information. In this sense, practicing garbology means to translate so-called “raw” data into “useful” information. Garbology is the practice of translating discarded material into text. William’s “Garbage Project” deals with discarded things—and not with things that are stored in official archives, collections, or libraries—because it assumes that rubbish, once translated into readable texts, gives us “better” or more “authentic” information about our daily life (and its secrets). “Waste does not lie,” William says ever so often.

In a certain sense, the concept of the “Wasteocene” points in the same direction,<sup>5</sup> only the perspective is slightly different. At the same time as landfills are supposed to conceal things that we have thrown away, they bring them back into sight, with discarded materials ever more frequently reentering our daily lives. More precisely, such materials have in fact never been away, with waste defining our contempo-

4 Serenella Iovino and Serpil Oppermann, “Theorizing Material Ecocriticism: A Diptych,” *Interdisciplinary Studies in Literature and Environment* 19, no. 3 (2012): 456.

5 Marco Armiero and Massimo De Angelis, “Anthropocene: Victims, Narrators, and Revolutionaries,” *The South Atlantic Quarterly* 116, no. 2 (2017): 347–362.





Figure 1  
Information sign on  
a Sardinian beach:  
*Micro Isola Ecologica*,  
2019 (Source: Author)

rary epoch. There is no such thing as eliminated materiality. Our world is the dump—even in the most beautiful places. Take for example the Sardinian information sign that I saw only days before I went to the garbage dump with William. The sign indicates the importance of waste collection and separation on the beach (fig. 1). The result of a school project, the installation called *Micro Isola Ecologica* (Micro Waste Depot) clarifies in four languages (Italian, English, French, and German) that visitors should leave the beach clean and put their rubbish (“plastic,” “glass and cans,” “paper,” and “nonrecyclable”) in one of the four dustbins. The sign reminds us that the beach is not a dump. It changes or, if you want, translates our perception of the beach into a certain kind of image that connects

with our nature-culture experience and knowledge.

The installation closes with the demand “*Porta via i ricordi della vacanza ... lascia solo le tue impronte sulla sabbia*” (Please, take nothing but memories ... leave nothing but footprints in the sand<sup>6</sup>). Paradoxically, this phrase integrates ecological consciousness with capitalist tourist marketing. Indeed, the sentence is not a unique selling point of the Sardinian beach. It is part of a paradigm of mass consumption concerning the world’s most beautiful places. The well-traveled tourist will find it elsewhere and is, therefore, able to interpret the beach he or she is visiting as being equal to the places that are worth leaving untouched. Take a photograph, quote the phrase, and post it on Instagram: #nothingbutfootprints. However, it is not just marketing that translates the discarded materials on the beach into something that

<sup>6</sup> Author’s own translation.

disturbs your vacation. The sign has even deeper roots, with the phrase “footprints in the sand” linking my summery scenery with the history of English literature and Daniel Defoe’s 1719 novel *Robinson Crusoe*, in which the phrase originated. With a kind of strangely twisted allegorical drift, the image of a *Micro Isola Ecologica* places me in the role of Robinson Crusoe and Sardinia as an ecological (“macro”) island, which—just like every other beach—should be left as untouched as possible. To convince visitors to think and act ecologically, the sign thus uses quite poetic language, with a prosaic dustbin becoming an “island.” The image of the *Micro Isola Ecologica* adopts a cultural framework that everybody knows and that presents islands and beaches as untouched nature. The appeal to keep the beach “clean” inscribes itself into the romantic idea of idyllic places distant from any civilization and pollution, only temporarily occupied by human beings.

Still, the sign and its practice of translation are rather one-sided. As we know from (literary) history, an important element of idylls is that they are threatened. Indeed, it is more than a footnote to say that the Mediterranean Sea is also a huge garbage dump. One can study the effect of illegal, ignorant, and naïve dumping practices, which see discarded materials left on beaches right around the world. Sooner or later, the waves wash up all sorts of material—especially plastics—that have been discarded in other places, or by ships and boats at sea. Discarded materials are not only difficult to translate into useful information; they also resist discursive orders and practices. This is what I argue with William. I am interested in how, under what premise, to what extent, and with what effects, this material stubbornness is translated into (literary) texts.

Material resistance—or stubbornness—such as that shown in the garbage dump and the Mediterranean Sea is what Jane Bennett observes when she speaks of “thing-power.” I am not sure whether William is familiar with this theoretical concept—I cannot ask him; he is already too far away from me—but reading Bennett’s study *Vibrant Matter* helped me understand what discarded things really do—and what I would like to add to her perspective. From my point of view, what is missing in Bennett’s philosophical perspective is a sense of textual translation, of what garbage does in and with texts. In the first chapter, for example, she refers to a passage from Robert Sullivan’s *The Meadowlands: Wilderness Adventures at the Edge of a City* (1998). Bennett quotes a passage in detail in which the autodiegetic narrator

visits a garbage dump:

The ... garbage hills are alive ... there are billions of microscopic organisms thriving underground in dark, oxygen-free communities. ... After having ingested the tiniest portion of leftover New Jersey or New York, these cells then exhale huge underground plumes of carbon dioxide and of warm moist methane, giant stillborn tropical winds that seep through the ground to feed the Meadowlands' [sic] fires, or creep up into the atmosphere, where they eat away at the ... ozone. ... One afternoon I ... walked along the edge of a garbage hill, a forty-foot drumlin [sic] of compacted trash that owed its topography to the waste of the city of Newark. ... There had been rain the night before, so it wasn't long before I found a little leachate seep, a black ooze trickling down the slope of the hill, an espresso of refuse. In a few hours, this stream would find its way down into the ... groundwater of the Meadowlands; it would mingle with toxic streams. ... But in this moment, here at its birth, ... this little seep was pure pollution, a pristine stew of oil and grease, of cyanide and arsenic, of cadmium, chromium, copper, lead, nickel, silver, mercury, and zinc. I touched this fluid – my fingertip was a bluish caramel color – and it was warm and fresh. A few yards away, where the stream collected into a benzene-scented pool, a mallard swam alone.<sup>7</sup>

Although I tried to imitate Sullivan's narrative approach in the introduction to this text, Sullivan is, as you can see, a much better writer of textual garbage dumps than I am. Maybe that is why Bennett uses this passage to introduce her concept of "thing-power." She writes, "Sullivan reminds us that a vital materiality can never really be thrown 'away,' for it continues its activities even as a discarded or unwanted commodity."<sup>8</sup> Even or especially when they are to be disposed of, "vibrant things" attract attention and elude their status as passive objects, as their agential powers, their "activities," can neither be switched off nor negated.

As plausible and ecocritically insightful as the observation of "vital materiality" in Sullivan's book may be, Bennett uses this passage merely to illustrate her argument. There is nothing wrong with that. From the perspective of literary criticism, however,

<sup>7</sup> Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, London: Duke University Press, 2010): 6.

<sup>8</sup> Bennett, *Vibrant Matter*, 6.

it is noticeable that the form of presenting the discarded materiality (its translation into text) is completely ignored. To put it more sharply, Bennett is so caught up in the "vital materiality" of the narrated world that she misses the "vibrant matter" of the passage itself. Indeed, the purpose of the passage in Sullivan's book is far less clear than Bennett would let us believe. The passage presents the garbage dump that exists of "billions of microscopic organisms" as an agentic and vivid materiality ("The ... garbage hills are alive," "ingest," "exhale," "eat away," "birth," etc.). However, the associated environmental impact and consequences for the city and its human inhabitants, such as the pollution of groundwater, are only briefly touched upon. At the center of the passage lies something different, with the metaphor "espresso of refuse" naming the reverse side of consumption, illustrating the narrator's specific attention. His heightened visual and tactile sensibility ("I touched this fluid") transforms the garbage dump into an aesthetic object which, as such, owes itself to the perspective of the narrator. At the same time, the narrator only realizes this in the moment *hic et nunc* ("here," "in this moment"), and is thus deprived of human control. At the end of the passage, the equally melancholy and apocalyptic image of a lonely (and thus anthropomorphized) floating bird ("a mallard swam alone") indicates the artificial and yet fragile nature of Sullivan's idyllic scenery.

The latter is strangely twisted, as just as the passage stages a temporal ("One afternoon," "the night before," "In a few hours") and spatial ("along the edge of a garbage hill") turn, which—once again—is tied to the narrator but also emancipated from him, it performs an ambivalent, if not also twisted, form of "nature writing." The reader is not confronted with a transfigured image of untouched nature but with an image of unspoiled, pure garbage, as it were. The *contradictio in adjecto* "pure pollution," framed by the semantics of "pristine stew," "birth," and "warm and fresh," represents its linguistic emblem. Neither does the asyndetically organized *accumulatio* that follows point the reader to the enumerated substances. Rather, the absence of a verb partially creates an accumulation of signifiants, emancipating themselves in their detailed abundance from their *signifiés*, thus suggesting that the "vital materiality" of the garbage dump has inscribed itself into the technique of the text. And, indeed, as condensed in the term "pure pollution," the passage emphasizes alliterations ("cadmium, chromium, copper," "caramel color") and assonances ("a mallard swam alone"), hence making the material of signs sound. The text draws attention to its own material. Not only is the materiality of the garbage dump in the foreground of the passage, it



is also tied to the materiality of the text.

However, in another respect, the passage also illustrates that these effects occur involuntarily and are to be thought of independently of the author's intention. Bennett does not fully quote the passage from *Meadowlands*. For pragmatic reasons, she cuts the passage from Sullivan's book several times and marks the omissions with suspension points. As much as Bennett makes the passage an object in this way, the text nevertheless escapes its intended function. The effect of the omissions, which are intended to shorten the passage, is not necessarily reader-friendliness. Rather, their accumulation (ten digits) and their sometimes intrusive position (partly between article and noun) disturb and interrupt the flow of reading. As with the *accumulatio* and the alliterations and assonances, the visual omissions transform the passage into "vibrant matter," an aesthetic but stubborn object.

"Stubbornness"—maybe that is the word that also best characterizes William. In the meantime, this text and I have completely lost sight of him.

### Further Reading

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### Gabriella Corona and Christof Mauch

#### German-Italian Encounters: A Dialogue on Environment, History, and Politics

*A year after the Villa Vigoni workshop, environmental historians Gabriella Corona (National Research Council, Institute of Mediterranean Studies) and Christof Mauch (Rachel Carson Center) met to discuss national traditions, current issues, and future challenges in environmental history in Germany and Italy.*

**Gabriella Corona:** What is a key topic or debate within current German environmental history?

**Christof Mauch:** We are in the middle of a pandemic. If there is a "debate" at present, then it is about what is happening in the world: the Covid-19 crisis and racism in the United States, Germany, and elsewhere. Both of these topics are closely linked with environmental questions. They bring to light key issues of environmental and social injustice. At the Rachel Carson Center (RCC), these two topics are being "debated" by scholars on a daily basis. When we were at Lake Como, the world looked so tranquil, the landscape so pleasant. Today, things look different, very different. The current situation has alerted us to the vulnerabilities and inequalities of our systems, which were not as visible before. Thus, in a way, we should be grateful. The crisis has politicized and activated our scholarly community. At the RCC, several projects about pandemic threats are planned. Gregg Mitman and a team of younger scholars are using the example of West Africa to look at the intersection between the colonial exploitation of natural resources, racism, and the emergence of new types of infectious diseases. His EU-funded RCC research group will also study how changes in the environment have caused new pathogens to thrive. Another project, an empirical project in medical anthropology, will investigate how vulnerability to Covid-19 is unevenly distributed among different social groups in Munich. These are topics that are on our mind today, and they are closely connected to political debates in our country and elsewhere. I know that environmental historians in Italy have studied the impact of the current pandemic in agricultural areas. They have found that areas of high intensity agriculture show up to five times

more infections than low energy rural areas in Italy. But perhaps your question was about a different type of debate?

**Gabriella Corona:** There have been some interesting studies carried out by the University of Florence, in particular. I believe, however, that their hypotheses should be carefully evaluated, just like the whole idea of a direct relationship between Covid-19 and pollution. In fact, it is necessary to understand to what extent the relationship between populations heavily impacted by the pandemic in areas of intensive agriculture is related to other variables. These areas are, in fact, located in flat and mostly densely populated territories. Maybe this explains the higher rates of infection? The relationship between pollution and Covid-19 still needs further investigation. One aspect that environmental historians might find interesting to research is the relationship between environmental upheavals and new pandemics. How intertwined are these? And how do you explain the relationship between them?

As the climate changes, the logging of forests, the creation of gigantic megalopolises, the industrialization of agriculture and farming, and the reduction of biodiversity seem to have altered the relationship between humans and animals, favoring pathogenic jumps, such as HIV, Ebola, avian and swine flu, Sars, and Mers.

**Christof Mauch:** Besides research on pandemics, and long before the current crisis, environmental historians in Italy focused on catastrophes—floods and landslides, earthquakes, and toxic events.

**Gabriella Corona:** Yes, exactly. Since the end of the last century, the theme of natural and unnatural catastrophes has been a central theme in Italian historiography. It seems to me that in Italy debates and reflections on the relationship between nature and society have intensified. These are normally analyzed through the category of resilience—that is, the way in which we relate to catastrophic and destructive events. Think of the literature on earthquakes, hydrogeological instability, landslides, and floods: Emanuela Guidoboni's studies at the Institute of Geophysical Environment History of Bologna, Walter Palmieri's work on landslides and floods, Giacomo Parrinello's research on earthquakes, and the work of Gabriella Gribaudo and her research group from the University of Naples Federico II on the earthquake of 1980, which affected some regions of Southern Italy. These themes are

born from the environmental and historical characteristics of Italy, a geologically fragile, highly seismic country where 77 percent of territory is made up of mountainous hilly areas. Since the 1950s, the Great Acceleration in Italy has forced the population to move from mountainous hilly areas to areas near to the coast, which constitute a mere 23 percent of the country's land surface. This shift has led to the depopulation of Italy's inland areas, accompanied by gigantic socio-environmental pressures and upheavals, with disastrous environmental and social consequences. Today, the question of inland areas is one of the most relevant issues in Italian public debates. As far as environmental historians are concerned, many associations have been created in order to deal with these issues, analyzing them through a historical context, recreating a sort of memory exercise with local communities, with the aim of supporting vulnerable inhabitants. Environmental history that becomes public history is a very common pattern in Italy. Such a transformation has been achieved among the communities affected by the earthquake of 2016 and 2017. Augusto Ciffetti and Rossano Pazzagli are among the main protagonists of this militant historiography aimed at supporting communities in participatory and bottom-up reconstruction processes after catastrophic events in order to rediscover the value of places. These studies focus on the history of mountains in both their environmental and social dimensions. They intertwine the story of trees and soils with that of communities and the governance of these territories. Through a *longue durée* approach they take their cue from the Middle Ages reaching right through to the present day. There are also avenues of research that approach the history of the Alps from a long-term perspective in which the study of the mountains is intertwined with that of the commons. These studies are bearing interesting results, such as with Giacomo Bonan's research on the Cadore woods.

**Christof Mauch:** But resilience is an interpretative category that is used in other contexts as well in Italy—beyond “nature,” isn't it? Italian environmental history has had a stronger focus on social factors, on labor, on the health and well-being of the working classes, on industry...

**Gabriella Corona:** Yes, it has been applied to the study of industrial catastrophes and calls into question the relationship between health and environment, as well as labor and nature, which is an interesting new trend developing in Italy with the studies of scholars such as Stefania Barca, Bruno Giglioli, Elena Davigo, and Salvatore Romeo.



This theme takes into account the post-industrial revolution as a relevant aspect of the Great Acceleration. We have recently published an issue of the social sciences journal *Meridiana* covering similar topics. Here, issues related to the decontamination of toxic substances are intertwined with those related to poverty and social despair, to disease, and to the crisis of the labor system. Neoliberalism is also linked to the immense devastation caused by modernization. The environmental remediation of these areas is strongly linked to the question of scientific knowledge of toxic substances, to the definition of ecological thresholds, and to the history of bureaucracies engaged with recoveries and risk perception. This is the story of a great number of areas located in the hinterlands surrounding Milan and Naples, as well as many other northern Italian territories and territories along Italy's coastlines and islands.

But Germany has considerable research on toxic catastrophes as well, doesn't it? And on economic history?

**Christof Mauch:** The short answer is, yes. A couple of excellent scholars have worked at the intersection of economic and environmental history. Roman Köster and Heike Weber have done groundbreaking research on the history of waste in Germany and Western Europe. Toxic catastrophes have also played a major role in recent research, including in Simone Müller's project on "Hazardous Travels," which looks at the global waste economy and specifically at international trade in toxic materials since around 1970. One of the researchers in Simone's team, Jonas Stuck, works on the millions of tons of toxic waste that West Germany exported to its East German neighbor, the GDR, during the Cold War. The travels of toxic waste shed light on inequalities and injustices around the globe. The interest in toxicity is a relatively recent one in German environmental history—Italy was far ahead—but urban pollution has been one of the key interests of German environmental historians for a long time.

**Gabriella Corona:** Would you say—and this is my impression—that urban environmental history has been quite prominent in Germany? More prominent than other areas of study and research? And if so, why?

**Christof Mauch:** Well, urban environmental history has been quite strong, especially at the Technical University in Darmstadt with Dieter Schott and his

colleagues and at the Technical University of Berlin with Dorothee Brantz, who runs the Center for Metropolitan History. The volume *Greening the City: Urban Landscapes in the Twentieth Century*, which Dorothee wrote together with Sonja Dümpelmann, is still something of a bible on the topic. In comparison to the United States, where environmental history comes, arguably, out of a political debate and academic discourse on wilderness, one string of German environmental history has its roots in social and economic history. A few social-economic historians, most prominently Franz-Josef Brüggemeier, integrated environmental issues into their studies. Brüggemeier wrote about the Ruhr, the largest urban area in Germany outside of Berlin. He was inspired, I guess, by German Chancellor Willy Brandt, a social democrat, who pushed for "the sky over the Ruhr area to become blue again." Industrial pollution had already entered high-level political debates by the 1960s and Brüggemeier—and later others like Frank Uekötter—developed an interest in chimney smoke, if you will. In the 1950s, chimneys were a symbol both of the "*Wirtschaftswunder*" (the economic miracle) and of bigtime environmental polluters. Germany is quite urban—more so than Italy. Less than a quarter of Germans live in small towns of less than 5000 inhabitants. It may be too simple to assume that the high degree of urbanization accounts for scholarly interest in urban environmental history, but it could be a factor.

Having said that, for every environmental history article or book that Germans have written about cities, you will find one on forests. German environmental historians have written a lot about forestry and nature conservation. I am thinking of scholars from different generations: Martin Bemann and Bernd Grewe, Richard Hölzl and Joachim Radkau, Sigrid Schwenk, and Johannes Zechner. *Der deutsche Wald* (the German forest) is ever-popular; research on German forests is an "evergreen."

But let me get back to the topic of resilience, which I find exciting. I find your analysis of resilience as a key concept in environmental studies particularly enlightening. Now, one area that you have not mentioned is climate. Climate resilience is a key concept in environmental studies, and to some extent in environmental history as well. In Germany, environmental historians—Uwe Lübken and Franz Mauelshagen, for instance—have been interested in topics such as

climate migration. German, Swiss, Czech, British, and French environmental historians have shown great interest in climate history and historical climatology. What about Italy?

**Gabriella Corona:** Contemporary research addressing the way Italy has historically faced crises and catastrophes using the concept of resilience has not yet addressed the risks posed by climate change. My hope is that this line of research will be addressed soon, as we have a large amount of available data, especially concerning the last twenty-five years, detailing the risks posed by climate change. In this respect, a particular characteristic of Italian environmental historiography is that it has not had much dialogue with the so-called hard sciences. Rather, it has tended to engage with the social sciences and, in particular, with sociology, economics, demography, urban planning, geography, and political science. The exception to this is engagements with geologists, seismic and hydraulic engineers, and agronomists, who have represented important partners for environmental historians. Yet there has been little dialogue with biologists, climatologists, epidemiologists, botanists, chemists, and physicists.

So are Germans more interested in climate change and Italians more in natural catastrophes?

**Christof Mauch:** Ha! Isn't that an interesting suggestion! At first sight, it seems paradoxical because Italy, the Mediterranean region altogether, is more likely to suffer from extreme weather conditions and global warming than is Central or Northern Europe. So why are Italians not interested in climate issues? As far as research on natural catastrophes is concerned, Germans seem to be obsessed with flooding—more than with any other catastrophe. This could be because we don't have a lot of earthquakes, avalanches, or landslides. It could also be because Germany has a number of big rivers—the Rhine, the Danube, the Oder, and the Elbe—as well as around 200 smaller rivers that flow for more than 50 kilometers, which is a considerable length. The omnipresence of rivers and rivulets all over Germany might account for a strong interest in the environmental history of floods and flooding. Scholars like Dieter Schott, Guido Poliwođa, Felix Mauch, and Christoph Bernhard have studied the Elbe and Rhine rivers. Others, such as Elenora Rohland and Uwe Lübken, have focused on flooding

and catastrophes outside of Germany. German historians have also—my guess would be more than Italian historians—taken an interest in fire catastrophes, early modern catastrophes, storm surges, and insurance issues. I am thinking of scholars like Manfred Jakubowski-Tiessen, Cornel Zwielerlein, Elenora Rohland, and Franz Mauelshagen. Early modernists, in particular, have come out of a tradition of intellectual history. And there are some great scholars who have focused on nuclear catastrophes, most prominent among them is Melanie Arndt.

**Gabriella Corona:** At the beginning of our conversation, you talked about the pandemic when I asked you about current debates in environmental history. This was all very interesting. But let me come back to my actual question, that is: Are there any research controversies among German environmental historians regarding Germany's past?

**Christof Mauch:** Your question is eye-opening. Real controversies, heavy debates, I do not think exist anymore. Your question makes me wonder about the current culture of historical debate. One of the great environmental histories of Germany entitled *Schranken der Natur* (Gates of Nature) by Franz-Josef Brüggemeier “de-dramatizes” German environmental history, as one reviewer described it. It is neither a declensionist story about the destruction of nature nor does it foreground current political topics such as climate change. German historians used to be eager to debate, and the German media are generally happy to give historians a platform. One of the most famous historical debates, the *Historikerstreit* (Historians' quarrel) of the 1980s was about the crimes of Nazi Germany, including their comparability with the crimes of the Soviet Union. Regarding the environment, we also saw some heated debates among German historians a couple of decades ago about *Holznot*, the shortage of wood in the eighteenth century. Some historians took the records at face value, whereas others claimed that *Holznot* was politically constructed. They argued that the shortage-of-wood argument served the elites and was used to deprive peasants from gaining access to the forests. Another more recent debate was about conservation in Nazi Germany. Some historians argued that the Nazis worked hand in hand with German environmentalists, whereas others emphasized their ideological differences. Joachim Wolschke-Buhlmann and Frank Uekötter stood



on different sides of the aisle in this debate. I am currently involved in a project about Germany's first national park which has its 50th anniversary in 2020...

**Gabriella Corona:** This was rather late, wasn't it? In the United States, national parks were established in the nineteenth century. In Italy, the Gran Paradiso National Park goes back to 1922, and several other parks were established in the 1920s and 1930s.

**Christof Mauch:** Yes, Germany was a latecomer. I used to argue that the two world wars made Germany a latecomer. But of course Italy had a similar history and two world wars. Perhaps one of the differences between our two countries is that Italy had more pristine and remote spaces that nobody cared about.

**Gabriella Corona:** But you were hoping to make a point about Germany's first national park, the Nationalpark Bayerischer Wald.

**Christof Mauch:** Yes. One of our researchers found that most of the ideas and projects that the Nazis sold as radically new can be traced back to the Weimar period. Five out of the six National Park Projects (none of them was ever realized by the Nazis) were designed during the 1920s. In reality, the Nazis, as they planned for a transnational park with Czechoslovakia, used the guise of conservation to hide their plans for the expansion of the Reich into the east.

This brings me to another point. German environmental historians are not very national. Most of us are not working on Germany proper; I am mostly working on the United States. The same is true for Elena Rohland, Dorothee Brantz, and Uwe Lübken. Many of the doctoral students who finished their degrees in Munich have worked on the United States, Canada, Brazil, the Netherlands, Britain, Scandinavia, etc. Melanie Arndt who holds the Chair in Social, Economic and Environmental History in Germany is an Eastern Europeanist. The same goes for Julia Herzberg. Many of us are working on international environmental history, on global, comparative, and transatlantic issues. This is true for Jan-Henrik Meyer, Iris Borowy, Frank Uekötter, Joachim Radkau, and Sonja Dümpelmann. Books like *The Age of Ecology* and *Nature and Power* by Radkau are truly global in nature and their readership outside of Germany is probably

larger than within. Germans have produced non-German research, regional research—I am thinking of scholars like Martin Knoll and of scholars who have worked on Eastern Germany like Astrid Kirchhof, Sebastian Strube, and Tobias Huff—and transnational research. At the RCC, we just started a project with partners in Britain that looks at nature protection through a transnational perspective. One of the individual research projects—that of Pavla Šimková—deals with the intertwined history of Šumava in the Czech Republic and of the Bavarian Forest. Another one, which is being pursued by Katie Ritson, looks at the German-Dutch Wadden Sea. Some scholars have also done comparative work: Birgit Urmson worked on the environment of war cemeteries in Italy and Germany; Talitta Reitz is comparing Munich and Portland (Oregon) as cycling cities, while Dorothee Brantz has compared slaughterhouses in Berlin, Chicago, and Paris. It almost seems to me that Germans are staying away from specifically national topics.

But let me get back to Italy and to the “origins question,” the question about the roots of environmental history in Italy. When I think of Italian environmental history, it seems to me, Gabriella, that research in your country often comes out of social history. This seems to be the case with the Naples School of Environmental History that you, Stefania Barca, and Marco Armiero come from. Italian environmental historians seem to be truly engaged and rather political. There is a strong focus on environmental movements and environmental conflicts, and several scholars are inspired by political ecology. Would you share this impression?

**Gabriella Corona:** Marco Armiero and Stefania Barca are developing a line of research that stems from political ecology intertwined with the practice of protest movements and environmentalism. It is a very important contribution. In addition, it was due to their commitment that a group of young Italian researchers was formed in Stockholm, including Roberta Biasillo, Wilko Graf von Hardenberg, Gilberto Mazzoli, and Daniele Valisena, which has the merit of having “de-provincialized” Italian historiography giving it an international character. There have been other groups in Italy whose historiographic work is characterized by a strong political and civil commitment. This includes scholars associated with the Micheletti Foundation in Milan, such as Pier Paolo Poggio, Marino Ruzzenenti, and Andrea Saba, who have researched conflicts related to the theme of pollution, and the research group

that stems from the journal *Altrionovecento*, as well as researchers such as Luigi Piccioni. Even Piero Bevilacqua in his most recent research has written books, such as *La terra è finite* (The Earth is Finished) and *Miseria dello sviluppo* (Poverty of Development), that have a strong political ecology imprint.

However, this is only a part of Italian historiography. Italian environmental history is a very rich and complex field, not commonly recognized by Italy's academia. As a consequence, even studies with a less "militant" identity have been inspired by a profound need for civil commitment and a strong bond with public debates. We have always "spoken" to students, teachers, public officials, and politicians and been present in the media and in social networks. In this sense, we have always had a reformist agenda related to left-wing parties and environmental associations.

The birth of environmental history is commonly traced back to the late 1980s when Alberto Caracciolo organized a large exhibition in Rome in 1989 entitled *The Environment in the History of Italy*.

**Christof Mauch:** But the roots of Italian environmental history go further back in time...

**Gabriella Corona:** Yes. In hindsight, it becomes clear that environmental history follows a trajectory set in place many years before in the 1960s by historical studies on the agricultural landscape, taking its cue from this discipline. It is a historiography that emerges from Marxism, influenced by the thought of Antonio Gramsci, a philosopher and one of the founders of the Italian Communist Party. These studies historicized the contribution of the working classes in terms of the labor and value they added to the creation of a vast array of diverse agricultural landscapes, such as the rice fields in northern Italy, the valuable agricultural fields in the north of Tuscany, the mulberry trees of Calabria, the olive trees of Puglia, the vegetable gardens of Campania, and the almond orchards and citrus gardens of Sicily. The most emblematic book related to landscape history is by Emilio Sereni, a proto-environmental historian, intellectual, and communist politician, entitled *History of the Italian Agricultural Landscape*.

During the 1980s, social historiography, very attentive to Italian territory, emerged

from this intellectual culture, strongly influenced by the *Annales* school and, in particular, by Marc Bloch (*Les caractères originaux de l'histoire rural française* and *Apologie pour l'histoire*) and geographer Vidal de la Bla. Much of this regional research (by Piero Bevilacqua, Giuseppe Barone, Augusto Placanica, and others) has contributed to the collective volumes published by Einaudi entitled *The Regions in the History of Italy*. Other strands that have contributed to the birth of research more attentive to the relationship between nature and society have stemmed from economic and energy history (e.g., Alberto Caracciolo, Paolo Malanima, and Ercole Sori), or from the historical ecology of Diego Moreno, an exponent of a historiographic current of great prestige in Italy called "micro-history." Catia Papa's research on environmental movements and Elisabetta Bini's research on nuclear energy have also been influential.

It is only since the 1990s that a more explicit environmental history research trend has emerged in Italy. A decisive contribution was made by Piero Bevilacqua and by the group that contributed to the magazine *I Frutti di Demetra*. This new movement addressed the realization that the categories we had used to analyze the relationship between nature and society were obsolete and inadequate for answering new questions arising from international environmental and climate-related questions. It was therefore necessary to find new interpretative categories and sources. Piero Bevilacqua's book *Between Nature and History* was illuminating for me. It represented a turning point in considering nature as a historical subject and as a cooperating partner in the production of wealth. Nature is now taken into consideration as a resource, as something perpetually alive, that constantly reproduces itself, with its own times and laws. It is not considered as historiographical inert matter. During those years, we began to understand that we had to criticize many of the intellectual categories we had reasoned with up until then, and most of all that of development, which was losing its universally positive meaning.

During these years, research on the Italian woods was carried out by Marco Armiero, Mauro Agnoletti, Walter Palmieri, Renato Sansa, and Pietro Tino. Just as important were Luigi Piccioni's research on the history of environmental protection, Stefania Barca's studies on water, and Federico Paolini's studies on the history of transport. As far as I am concerned, it was thanks to a trip to the United States that I began to enthusiastically discover how much the issue of the commons could help



us better understand and interpret the disastrous social and environmental implications related to the construction of capitalist markets, and how much this was a global interpretative key for environmental history.

**Christof Mauch:** During those years, when Italian environmental history internationalized, you went to the United States. And you and other Italians were also engaged in an international group of urban environmental historians.

**Gabriella Corona:** Yes. Simone Neri Serneri and I were engaged with an international group of urban environmental historians, which allowed us to develop new interpretative categories for studying urban realities from an environmental point of view, such as the city as an ecosystem and the concept of urban metabolism. There is no doubt that our urban environmental history has been greatly influenced by German historiography and classic texts by Peter Sieferle and Joachim Radkau, as well as by Franz Josef Brüggemeier's pollution studies and Dieter Schott's technological approach. Particularly memorable for me was a conference held in Clermont-Ferrand, the proceedings of which were published in a book called *The Modern Demon*. While I continued to deal with cities, developing the theme of urban planning as a relevant aspect of the history of environmentalism in Italy with the publication of the volume *I Ragazzi del Piano* (The Boys of Urban Planning), Simone Neri Serneri published *Incorporating Nature*. Together, we established a research group with Salvatore Adorno investigating the relationship between industrialization and the environment.

**Christof Mauch:** I have to say that I am impressed by the breadth of topics that Italian environmental historians have covered over the past decades. It is also interesting to see how you can draw out the lines of thought from early research to the present. We don't have the same traditions in Germany. The study of German environments does not have a home; it has never really had one. We do not have longstanding traditions or schools. For a decade or so, the University of Göttingen was the epicenter of environmental history in Germany. Two full professors, early modernist Manfred Jakobowski-Thiessen and biologist Bernd Herrmann, ran the Göttingen Graduate School of Interdisciplinary Environmental History. Herrmann's approach was unique; it was inspired by zoology and anthropology. Some of his students, among them Jana Sprenger and Patrick

Masius, conducted cutting-edge research on caterpillars in environmental history, on the common viper, and on wolves. But there is no environmental history left in Göttingen. The Göttingen center shut down for good. Moreover, very little of the research conducted in Göttingen found its way into international publications. It is a pity that much of the literature is not published in English. This is true for German environmental history, and even more so for Italian environmental history. For me and for many of my colleagues, it was both exciting and enlightening to see an English translation of your *Breve Storia dell'Ambiente in Italia*. White Horse Press published it under the title *A Short Environmental History of Italy: Variety and Vulnerability*. And I have to say that the Villa Vigoni encounter of Italian and German scholars last year was a true highlight. We were able to discuss our research in English and discovered a lot of potential for future exchange and collaboration.

**Gabriella Corona:** The meeting at Villa Vigoni was fantastic and above all an original experience. Italy and Germany have long been linked in the field of environmental history. If only for the fact that we—you, Mauro Agnoletti, and I—jointly publish one of the major journals in environmental history, *Global Environment: A Journal of Transdisciplinary History*. Our editorial focus, particularly open to young researchers from the Global South, has pushed us to publish lesser-known historiographies, granting contributors the opportunity to make themselves known internationally.

Perhaps what I found most extraordinary about this volume of essays was its conception at the Villa Vigoni residence, which brought the German and Italian authors of this volume into dialogue. The intertwining of autobiographies, histories of places, historical sources, and memory exercises was a new and original experience. It creates an environmental history based on practices of dialoguing with an ethnoanthropological approach. It is an invitation to look at the historian's role as a "mediator" between the source and what he or she reads and sees. The historian is a "translator," so to speak. The contributions in this volume intermingle with the story of what is being told and with that of the writer, who in most traditional approaches remains in the background. There is a passion for knowledge and a love for the places that are studied and the emotions they evoke in us. These texts convey a "thirst" for history and memory, without neglecting intellectual analysis, as expressed by the historiographic contributions that emerge from the texts. The result

is very effective and compelling.

Wilko Graf von Hardenberg's contribution deals with the memory and history of the region near Vercelli, a story of irrigation techniques but also of work and fatigue, malaria, and struggles against the fascist regime. The history of the Schwarzenbach dam is described through the eyes of Fabian Zimmer as a boy, who sees it in a completely different way to how he will as an adult with greater vision. The result is the account of a great transformation of nature based on the use of "white coal." Sophie Lange shows us the difficulties of a researcher who makes history out of themes, such as the pollution of the Elbe divided between two Germanies, each with a profoundly different way of interpreting and measuring the same phenomenon. The history of the Aral Sea and Syr Daria before the Soviet intervention appears in the refined and suggestive story that Flora J. Roberts makes of it. A strong cultural and scientific tension permeates Claudio de Majo's text, creating a dialogue through the study of the commons between the southern Italian and the Brazilian mountains. His text intertwines environmental history with evolutionary biology, with the rules of mountain communities dialoguing with sources from botanists and naturalists. There is Noemi Quagliati's story of France devastated by the war and its transformations in visual history, which conveys a great passion for photographic sources. Roberta Biasillo's text intertwines the exhilarating discovery of new sources with reflection on the theme of the role of soils, their natural characteristics, and human intervention during Fascist Italy's colonization of Libya. The story of a German city emerges from Ansgar Schanbacher's study of ancient maps and walks through the streets of a modern city. David-Christopher Assmann shows us that such a central theme for environmental history as waste can be transformed into a literary experience and be perceived through a wide range of feelings and emotions.

Now, Christof, you were a convener of the Villa Vigoni conference. If you had been asked to submit a piece, what would you have written? How does your personal story intertwine with environmental history? Which place would you have chosen and which story would you have told?

**Christof Mauch:** What a wonderful question. I find places like Menaggio, the

site of Villa Vigoni at Lake Como, absolutely intriguing. Picturesque and tranquil places. Villa Vigoni is a romantic oasis with ancient trees and beautiful vistas of the lake. But today's setting is hiding a history of exploitation of human labor and of nature. Silk worms and mulberry trees and the labor of multiple workers produced the wealth that created the villa and paid for the art. I live in a similar place at Lake Starnberg, south of Munich. This place in Upper Bavaria was once a poor village. The fishermen and peasants were exploited by the aristocracy through taxes and tithes. With the arrival of the railroad, the upper classes and artists settled at the lake, as well as wealthy Nazis. I might have written about Villa Vigoni or about the beauty of my current home and about the violence that beauty can hide. But most likely, in the spirit of our collaboration and dialogue, my text for this volume would have focused on the connections, both environmental and cultural, between Bavaria and Italy. A glance at a topographical map will suggest that Northern Italy and Southern Germany are fully separated by the Alpine mountain range. But our worlds are also connected. Bavarian and Italian hills are part of the same activity that created a rough climate and a barren landscape, and our lakes are of glacial origin, north as well as south of the Alps. Against many odds, migrants and their skills, animals and plants, food and customs, spices and textiles have found their way through mountain valleys and gorges across the Alps. Munich's architecture is inspired by Italian styles. Italian laborers helped build Bavarian railway lines. Understanding how weather and seasons, altitudes and forests, and rivers and gorges have connected and separated us would be a project worthy of Villa Vigoni and our collaboration that I hope will see many more chapters.





About the Authors



## About the Authors

**Wilko Graf von Hardenberg** is senior researcher at the Max Planck Institute for the History of Science in Berlin where he coordinates the Art of Judgement research cluster. He holds a degree in history from the University of Turin in Italy and a PhD in geography from the University of Cambridge, UK. Through a combination of disciplinary approaches his research looks at political power, scientific concepts, and material practices, analyzing the ways in which nature has been perceived, measured, interpreted, and managed in late modern Europe and its global ramifications and repercussions.

**Fabian Zimmer** is a PhD student at the Rachel Carson Center and the Deutsches Museum in Munich. His research focuses on the cultural history of modernity in Europe, which he explores through the history of technology, environmental history, visual and architectural history, and the history of science and medicine. He studied at the universities of Heidelberg and Lund and has worked as a research assistant at the Institute for History and Ethics of Medicine at Heidelberg University. He was a guest researcher at the division of History of Science, Technology and Environment at the KTH in Stockholm in 2018 and at the German Historical Institute in Paris in 2019. His PhD project analyzes the public relations practices of hydroelectricity companies and their use of film in managing public emotions towards technology and landscape change.

**Sophie Lange** has been a PhD student at the Humboldt University of Berlin since 2016. Her research interests include international relations, contemporary German history, environmental history, and the Cold War. Her doctoral dissertation focuses on German environmental politics between 1970 and 1990 and relations between East and West Germany. She works as a student research assistant at the Berlin Center for Cold War Studies and is funded by the Federal Foundation for the Study of the Communist Dictatorship in Eastern Germany. Her most recent publication “A Deal over Dirt,” published in the *Journal of Interdisciplinary Studies*, focuses on the waste trade between former East and West Germany.



**Flora J. Roberts** is a historian focusing on Soviet Central Asia. She is currently writing an environmental history of the Ferghana Valley. She has a BA from the University of Oxford and an MA and PhD from the University of Chicago (2016). For five years beginning in 2016, she was a member of the Junior Research Group on the Environment and Society in Central Asia at the University of Tübingen led by Dr Jeanne Féaux de la Croix. She has also held a fellowship at the Leiden University Institute for Asian Studies. Beginning in 2020, she will take up a new post as lecturer in Environmental History at Cardiff University.

**Claudio de Majo** is a PhD candidate at the Rachel Carson Center for Environment and Society (Ludwig-Maximilians University, Munich). He has carried out research with the University of Naples L'Orientale, the Institute for Housing and Urban Development Studies at Erasmus University of Rotterdam, the University of Utrecht, and the Federal University of Minas Gerais, Belo Horizonte (Brazil). His publications include articles on the relation between collective action and ecology, as well as on environmental history and neomaterialism. He is a founding member of the American studies academic journal *JAmIT!* and associate editor of *Global Environment: A Journal of Transdisciplinary History*.

**Noemi Quagliati** studied painting and visual arts at Brera Fine Arts Academy (Milan), and she is now a PhD candidate in art history and a member of the Doctoral Program Environment and Society at the Rachel Carson Center at Ludwig-Maximilians University in Munich. Her doctoral project engages with the photographed landscape of the Great War and the impact of militarized visualities on German visual culture. Her interests include history and philosophy of photography, photo-optical technology for military and environmental applications, visual communication, multisensory aesthetics, and landscape iconography. Noemi has been a visiting researcher at Istanbul Bilgi University, University of California, Berkeley, and at the Research Institute for the History of Science and Technology at the Deutsches Museum where she is collaborating in modernizing the museum's historical aviation section by investigating the topic of military photoreconnaissance and aerial photography.

**Roberta Biasillo** holds a PhD in Modern European History from the University of Bari (Italy). She is currently a Max Weber Fellow at the European University Institute where she is further pursuing her research project on the making of Fascist Libya. She has worked at the Environmental Humanities Laboratory, KTH Royal Institute of Technology in Stockholm in a FORMAS (Swedish Research Council for Sustainable Development) project on climate change, cities, and grassroots movements. She has been a researcher at the Italian National Institute of Social Security and a fellow at the Rachel Carson Center for Environment and Society at Ludwig-Maximilians University, Munich. Her research interests include property regimes, territorial and forest issues, natural disasters, modernization and nation-building processes, and ecological imperialism. She is also interested in historical theory and environmental humanities research methodologies.

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**David-Christopher Assmann** is an assistant professor at the Institute for German Literature at Goethe University, Frankfurt. His work comprises research in three areas: literature and rubbish, practices and structures of literature, and literary enlightenment. He is the editor of *Entsorgungsprobleme: Müll in der Literatur* (2014), together with Norbert Otto Eke and Eva Geulen, and *Narrative der Deponie: Kulturwissenschaftliche Analysen beseitigter Materialitäten* (2020).

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Design by Stefan Zinsbacher

Cover and subtitle page photos: Cover image, "Water Histories," & "Reading and Writing Landscapes,"  
© Noemi Quagliati, "About the Authors" © Christof Mauch

Printed on recycled ENVIROTOP paper by PAPER UNION GmbH.

**ClimatePartner**<sup>o</sup>  
printed climate-neutrally

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ISSN (print) 2190-5088  
ISSN (online) 2190-8087  
DOI: [doi.org/10.5282/rcc/9116](https://doi.org/10.5282/rcc/9116)

In this experimental volume, researchers from Germany and Italy draw on autobiographical reflection to engage in environmental storytelling. From the translation of historical artifacts to reflections on the role of experience and memory in interpreting landscape change, this collection provides an exciting glimpse into the nature of environmental translation.

Working across disciplines at the cutting edge of environmental humanities research, each essay probes the boundaries of its own historical context, questioning the ongoing dynamic between people and our finite planet.



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ISSN 2190-5088