Historical tools and current societal challenges: reflections on a collection of environmental migration cases

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Through considering a "Geo Archive" as a tool of history, this paper explores several conundrums concerning environmental migration in social sciences. It demonstrates how historical perspectives can problematize and unsettle various automatisms that are widely present in journalistic, public, and policy discourses. Through examples from the Geo Archive, the article illustrates how unavoidable historical dimensions can enrich our understandings on the interaction between environmental issues and migration flows. This paper engages with an open access "archive in-the-making". This Geo Archive includes case studies of migration flows and puts those flows in conversation with environmental transformations and climatic changes. The analysed collection presents high-profile stories which are representative samples of different approaches, temporalities, geographies, sources of information, narratives, and scales. This endeavour encompasses different disciplines and fields of expertise: environmental humanities, IT and communication experts, and political ecology. The archive places itself within the realms of public history, environmental history, and history of the present and aims to reach out to wider audiences. This digital humanities project stemmed from a support action funded by the EU initiative Horizon 2020 titled CLISEL whose overarching goal was to analyse and better inform institutional responses and policies addressing climate refugees and migrants.

Keywords: climate change, storytelling, history of the present, environmental migration, environmental humanities, digital humanities

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An experiment in context: the CLISEL Geo Archive

This article reflects upon a digital humanities project, a Geo Archive, as a means to make a case for historical analysis to better understand emerging societal challenges at the confluence of migration and environment. It considers both the implications of different interpretations of socio-environmental phenomena and the way in which specific narratives can be produced, disseminated, used, and for what purposes. Conceived as a freely available database and accessible since 2019, this Geo Archive presents not only historic cases, whose trajectories started and ended in the past, but it includes also

current high profile examples representing "environmental migration history" in the making in contemporary imaginations. Particularly, the online resource serves as a Geo Archive of environmental and climate driven migration case studies and argues that an emphasis on the historical dimension can contribute to the wider understanding of "environmental migration history".

The Geo Archive is one output of the Horizon 2020 Coordination and Support Action CLISEL. CLISEL stands for *Climate Security with Local Authorities. From Insecurity Takers to Security Makers: Mobilizing Local Authorities to Secure the EU against the Impacts of Climate Change in Third Countries*. This archival output straddles the overlapping spheres of scholars' and policymakers' expertise and at the confluence of a particularly fertile academic and public debate. Rather than a traditional research project, CLISEL is an action project intended to support local authorities' ability to deal with climate change migration through training, networking, policy advising, and IT tools, such as the Geo Archive (European Commission 2018). CLISEL's action project includes as partners the universities of Cagliari (Italy), Bern (Switzerland), and Lancaster (UK), the KTH Royal Institute of Technology in Stockholm (Sweden), and the Centre for Local Authorities of Sardinia (Italy). As Table 1 shows, each of these institutions brings a different disciplinary and societal perspective to the project.

Table 1. Consortium partners' expertise.

Project partners	Fields of expertise
University of Cagliari (Italy)	Multiculturalism and Multilevel Governance
University of Bern (Switzerland)	Labour Mobility and Migration
University of Lancaster (UK)	Global Climate Politics
KTH Royal Institute of Technology (Sweden)	Environmental History
Centre for Local Authorities of Sardinia (Italy)	Local authorities

The desire for the catalogue to be ideologically located between digital humanities and public environmental humanities is reflected in the choice of curating editors, comprising of two environmental historians, two digital experts, and a political ecologist. Researchers at the KTH Environmental Humanities Laboratory in Stockholm – Marco Armiero, Ethemcan Turhan and, at a later stage, myself – have looked specifically at the historical component of environmental risks. The online platform has been designed by Pierre Vanhulst and Francesco De Fino, both from the World Trade Institute at the University of Bern (Armiero *et al*. 2019).

The Geo Archive's approach enables not only cross-disciplinarian academic uses, as I will demonstrate further in the article, but also opens these issues to wider audiences by popularising the topic. By illustrating varied examples of environmental and climate (a distinction I expand in the article) based migration but also the varied institutional responses to it, users are invited to widen their understandings and are encouraged to critically examine history's influence on politics and the politics of ongoing narratives.

The Geo Archive (https://geoarchive.clisel.eu/geoarchive) is an evolving pilot catalogue of climate change and environmental migration cases in different areas of the globe, spanning the 18th to 21st centuries, authored mainly by scholars in the early stages of their careers. It presents high-profile stories which are representative samples of different approaches, temporalities, sources of information, narratives and scales. The Geo Archive aims to offer a concise, jargon-free, but accurate historical perspective on migration flows. It denaturalizes environmental risks and questions the alleged automatism between environmental changes and societal responses. It indicates and contextualizes best and worst practices, traces historical trends by catalyzing episodes in public awareness and mobilization concerning these topics. The achievement of those goals demands a combination of historical documents, audio-visual sources, literary and artistic representations, and legal texts. To date, it includes thirty entries and is available online with open access. This collection will be regularly updated and expanded. Each entry is articulated using a template of paragraphs:

description and timeframe, actors involved, type(s) of environmental change, type(s) of migration and sources. It is important to note that the entries included so far were not chosen randomly. Social and political scientist Goertz has defined this process as "purposive selection" adopting a descriptive-causal approach based on previous information and selecting cases for a purpose (Goertz 2005). Moreover, in line with case-study research design and methods, each story represents "an empirical inquiry that investigates a contemporary phenomenon [environmental and climate migration] in depth and within its real-world context" (Yin 2014, 16).

Firstly, from a theoretical perspective, this collection roots into the realm of the History of the Present. It commits to a practice of history as a form of critique based mainly on evidence from archives, texts, and other sources, rather than writing about history from an abstract philosophical or historiographical perspective (Introducing History of the Present 2011, 1). Collected cases create spaces in which scholars can reflect on the role history plays in establishing categories of contemporary debate by making them appear inevitable, natural, or culturally necessary. Secondly, the CLISEL digital tool locates itself within the emerging trend of "historicizing climate change", which implies that the cases all serve as examples of intellectual, political, and social responses to climate-related phenomena and their consequences. They are not simply about past climates, although climate change itself is always directly or indirectly present in the story, but rather about history as the social space where encounters take place and where new conditions for humans and societies, their companion species, and their life worlds in natures and environments are unfolding and negotiated. In agreement with Sörlin and Lane, I argue and demonstrate that "with climate change as a growing phenomenon historicizing climate change in this version will become increasingly relevant" (Sörlin & Lane 2018, 1). Thirdly, the following reflections align themselves with the call for "a new research agenda on 'climate mobilities' that moves beyond simplistic assumptions and more accurately advances knowledge of the nexus between human mobility and climate change" (Boas *et al*. 2019, 901). The Geo Archive has the ambition to contribute to challenge misleading claims about mass migration induced by climate change that continue to surface in both academia and policy.

Similar endeavours have been recently conducted. In the early 2000s, a new field of climate science research emerged, to explore the human fingerprint on extreme weather, such as floods, heatwaves, droughts and storms. The number of events studied each year has grown rapidly over time: from 8 in 2012 to 59 in 2018. A UK-based team of researchers processed more than 230 peer-reviewed studies of weather events around the world published over the last 20 years and translated them into an interactive map, which can be explored using specific filters (Carbon Brief n.d.). Last year, 23 million people were forced from their homes by disasters linked to the weather and climate change. Inevitably, as the planet warms, this number is likely to rise. This risk has led many international agencies such as the UN Migration Agency and even the World Bank to promote the idea of "migration as adaptation." Another UK-based project gathered informative resources for governments and civil society. They are organized around types of disasters, issues and places, and intended to influence policy, law and international relations (The Climate and Migration Coalition n.d.). The two databases are born out of these two seemingly insoluble problems: climate change effects and environmental driven migration and displacement.

Climate change and its impacts are generally spoken of in the future or present tenses, and they are generally coupled with current emergencies, desirable propositions for upcoming times and less desirable scenarios (BBC 2018; European Union 2018; IPCC 2018; The Guardian 2019a; The New York Times 2019). Yet people moving as a result of disasters, environmental transformation or degradation is hardly a new phenomenon. Disasters have always forced people to move, long before climate change became a pressing issue. Some stories of environmental migration are now common knowledge and provide us with a lens for reading the present. In 2009, the UK based newspaper The Guardian revisited John Steinbeck's best-known novel, The Grapes of Wrath (1939), which portrays the harshness of the Great Depression and the struggles of migrant farmworkers. The series of articles, videos and photo galleries compared past and present migrants who made precarious journeys across the United States (McGreal 2009). Nowadays, The Guardian (2019b) is documenting "America's era of mass migration" due to climate change anew, both showing the transformations that have already occurred and predicting how fire, floods, and temperature rises will gradually force millions of

Americans to move. In a recent piece, columnist Milman made explicit room for history. He compared the current US population shift to both the 1930s Dust Bowl upheaval in which 2.5 million people moved from the dusty, drought-ridden plains to California and to the Great Migration (United States Census Bureau 2012), a period spanning a large chunk of the 20th century when about 6 million black people departed The South for cities in The North, Mid-West and West (Milman 2018).

In this age of climatic change, we are called on as historians and social scientists to think about the potential societal function of our knowledge as a means to contribute to the development of a more critical "culture of risk" that stresses responsibilities, injustice, loss and damage, and the cultural legacies embedded in catastrophic events. Furthermore, tracing the common roots of modern migration and environmental transformation, and highlighting the structures of power hidden in environmental risks and vulnerabilities, are not only societal tools for reading and acting in our own present, but also methodological and theoretical enquiries. Climate change, along with an increase in extreme events and societal stresses, offers an unmissable window of opportunity to question the separation between levels and spheres of governance, and to pry open cracks in the theory of history and the humanities in general.

Fig. 1. Geographical distribution of the Geo Archive's cases. Designed by Elisa Privitera.

Lessons from history

The Geo Archive explores the empirical phenomenon of environmental migration. One of its products is the use of 'histories' to test social science theories (Victor 1995), or, as stated in the project description, to "criticize the alleged automatism between environmental changes and societal response" in the context of climate change and migration (CLISEL 2015, 22). An in-depth reading of the cases allows us to challenge and show the limits of some policy discourses and media engagement.

Automatism #1. It is widely assumed by journalists and institutional actors that environment overlaps with extreme climatic events (Benko 2017; Mixed Migration Platform 2017; Apap 2019; International Organization for Migration n.d.; Wikipedia n.d.). People are expected to be on the move as weather-related disasters such as extreme precipitations and temperatures become more frequent and intense (Pachauri & Meyer 2014), and changes to climate conditions impact on livelihoods. This assumption has the remarkable corollary that environment represents a determinant and clearly confined factor (Climate Refugees Project 2016; National Geographic n.d.; UNHCR The UN Refugee Agency n.d.). Studies have examined the effects on migration of environmental causes limited to climate variability (Henry *et al*. 2004; Dillon *et al*. 2011; Gray & Mueller 2012a, 2012b), large-scale natural disasters (Smith & McCarty 1996, 2009; Halliday 2006; Groen & Polivka 2010), and local environmental conditions, such as soil quality and fuel-wood availability (Massey *et al*. 2010; Gray

2011; Leyk *et al*. 2012). However, those elements have been analysed mostly in isolation and in a specific point in time; insights have been limited by the lack observations of multiple phenomena obtained over multiple time periods for the same actors and places involved.

Although these two premises are valid, they require a more critical engagement. The environment acts as a determinant in cases of phenomena generally labelled as climate-induced migration, when extensive climate risk is associated with high frequency or persistent weather and climate events such as drought or recurrent local flooding. A clear and stated connection between climate-change effects and mobility can be observed, for example, in the development of the village of Vunidogoloa in Fiji, a Pacific country made up of 333 small islands. Starting in late 2006, the relocation stretched over a period of seven years and was completed in 2014. It was the first community relocation plan in the world managed entirely by the government and framed as an adaptation strategy. A similar top-down strategy was used in the village of Dhe in Nepal. This case of planned relocation began in 2009 on the climate frontline of high altitudes in the Himalayas. It demonstrates that, even if this kind of intervention tends to involve coastal communities and small island developing states, relocation also occurs in the context of other hazards (drought and water insecurity) and other climate frontlines (high altitudes). Similarly, in cases of disaster-induced migration, when human mobility happens in the aftermath of a disaster, it is not problematic to infer causal effects between societal and natural changes. Typhoons threaten the Philippines each year. In particular, Typhoon Yolanda (internationally known as Haiyan), which hit the central Philippines on November 8, 2013, clearly illustrates the causal link between disaster and displacement. Haiyan affected 171 municipalities in 14 provinces, leading to an estimated 6,300 deaths, over 1,000 people missing, around 1.5 million families (around 7.5 million individuals) displaced, in all affecting 3.4 million families (about 16 million people), and damaging or destroying 1.1 million houses.

In the previous cases environment, nature and climate emerge are readable and well-defined, while in other cases these factors are embedded – and partially disappear – in socio-ecological formations. Exactly when "the sharp separation between environmental and social or cultural becomes blurry," to use Armiero's (2017, 49) words, historical analysis becomes instrumental in the development and implementation of policies. The archive includes examples of "slow violence," long-lasting and hardly visible environmental transformations spanning over decades and expressing uneven socio-economic relationships (Nixon 2011, 2). These examples show how inequalities affect the residential planning of areas and relative mobility patterns. Since the 1960s, the building of an industrial plant has unexpectedly turned the coastal city of Gela, Sicily from a pole of attraction to an area to avoid or even escape. Its huge oil refinery brought a high incidence of cancers, prenatal deaths, malformations and other health problems that the local population and organizations are still confronting. Elsewhere, in the Carteret Islands, an atoll with a 24 kilometer diameter in Papua New Guinea, a 60-year sequence of long relocation attempts carried out during the colonial and postcolonial periods led to failures. Exponential population growth, coastal erosion, sea level rise and intense rainfall, damaged its agricultural system, making the population no longer self-sustainable but dependent on imports from the nearby island of Bougainville.

These two models of interaction between environment and migration combine and coexist. A well-known example of how societal structural dynamics generate 'natural' disasters is the so-called Dust Bowl, a period of prolonged drought and deadly dust storms that took place in the 1930s in the Midwestern US. One of the most dramatic effects was indeed the migration of hundreds of thousands of impoverished farmers who left their land to relocate mainly to California. The data are not precise, but several sources speak of 300 or 400 thousand Dust Bowl refugees. An in-depth analysis of this history shows that environmental changes always involve social and economic changes, and that those farmers were climate *and* economic refugees, escaping the harshness of the drought and that of the banks to which they were indebted.

A contemporary example of how the political and the ecological are not easily demarcated is the migration flow across the Mexico-United States border (Morrissey 2018). In December 2018, the US Supreme Court ruled that the Trump administration could bypass the Endangered Species Act and the Clean Air Act to construct a border wall through a butterfly sanctuary near the Rio Grande River in southern Texas. In the early decades of the 21st century, US sanctuary cities and wildlife sanctuaries

came under siege. As xenophobia and fears of racial diversity weakened federal legislation designed to preserve ecological diversity, people and butterflies traversing the southern border of the United States confronted common challenges. During this period, the monarch butterfly emerged as a symbol of the Immigrant Rights Movement.

Against a backdrop of critical literature (Reuveny 2007, 656–673; Clark 2008; Dun & Gemenne 2008, 10–11), the Geo Archive conveys the need for a relational and comprehensive definition of the environment. Many changes in the environment cannot simply be blamed on the climate. Socio-political factors such as misguided development strategies, unequal distribution of power and resources, conflict and lack of rights are part of the explanation for why people have been victims of drought and famine. Climate is only one aspect of the environment. The concept of 'the environment' includes both the natural, built and social surroundings (Jónsson 2010, 4). If humans have always migrated in response to a complex array of elements, a broader notion of environmental migration less tailored to circumstances unique to climate change is required. Going back to the very first attempt to define the term 'environmental refugees', the 1985 United Nation Environment Program highlighted the high degree of complexity and interconnectedness of all aspects of life on Earth. In this document, researcher Essam El-Hinnawi defined environmental refugees as individuals who are "forced to leave their habitat, temporarily or permanently because of a marked environmental disruption that jeopardised their existence and/or seriously affected the quality of their life" (White 2011, 21). Certainly, nowadays climate change dominates debates related to environmental concerns, and climate refugees are emerging characters of global transformation, but what climate encompasses in contemporary discourse and practice is not self-explanatory.

> Automatism #2. The state is the most eligible actor for taking action against climate/environmental disruption and the architecture of the global environmental governance assumes that environmental problems can be tackled and somewhat 'contained' within individual nation states. The Conference of the Parties (COP) is the supreme decision-making body of the United Nations Framework Convention on Climate Change (UNFCCC) (United Nation n.d.) and was designed to take the crucial steps in the UN climate change process.

This top-down global approach within UN and EU climate policy prioritizes the national scale at the expense of local climate actions, which now represent the lion´s share of the total ongoing policy experiments. International climate negotiations consistently highlight that countries are diverse and have different interests, which complicates reaching international agreements and passing national laws (Bulkeley 2010; Bulkeley & Castán Broto 2013; Castán Broto & Bulkeley 2013; Vanhala & Hestbaek 2016, 111–112). In this critical vein, some cases reflect upon the problematic role of national institutions due to either a lack of intervention or excessive centralization. For example, despite having experienced the very same emergency a few years earlier, there was no evacuation plan in Greece when a series of wildfires raged in July and August 2018, causing a humanitarian and ecological tragedy, furthermore, the government, proactively 'un-declared' the protection of Greek forests. On the other hand, resettlement plans in the aftermath of the April 6, 2009 earthquake in Central Italy, illustrated that strongly centralized policy responses, rather than assuring a return to a certain kind of public order, can trigger speculation of corruption by the establishment during a state of emergency. As Dawson (2017) argues in *Extreme Cities: The Peril and Promise of Urban Life in the Age of Climate Change*, state actors do not have a monopoly on policy interventions. Especially in emergencies, non-governmental actors can play a decisive role in collecting and distributing first aid. Sometimes, their interventions go beyond the first aid mission by engaging in wider debates on the causes of emergencies and the possible solutions. The Geo Archive provides several cases in which non-state actors have acted both in emergencies and in their aftermath. Exploring this path entails asking questions about the short and long-term results of such interventions, about the conditions under which solidarity practices can flourish and about the policies they foster.

The planned relocation of the village of Dhe in Nepal was supported by international aid, by a Swiss NGO (*Kam for Sud*) and a French NGO (*Du Bessin au Népal*) in particular. In 2009, the local council concluded that relocation was the adaptation option best suited to the needs of the community and with support from Swiss NGO *Kam for Sud* and the *Lo Mustang Foundation*, a relocation site was identified on the Thangchung plain to which almost all the village's families were in the process of

moving. After many struggles, Gela in Sicily was recognized at the national level as a dangerous and fragile territory in the 1990s. More specifically, in 1998, the Italian Ministry of the Environment included Gela on its list of highly contaminated areas. In 2006, the grassroots movement *Families of the Victims of Chlorine Soda of Gela* was established. Its constituents decided to fight for environmental justice by mean of civil and criminal lawsuits, and in 2011 for the first time, the pollution generated by the plant was recognised as a determinant factor for the death of a worker.

> Automatism #3. Political and social science scholarship argues that climate denial stems from the strong ideological commitment of authoritarian regimes, government conservatives and libertarians, and their strong opposition to regulation and their endorsement of the status quo (Collomb 2014; Krange *et al*. 2019). Climate change denial is deemed a latecomer to neoliberal anti-environmentalism (Antonio & Brulle 2011, 197) and "there is now a well-recognized right-wing counter-movement challenging the trend, attribution, impact, and civic implications of orthodox climate change science" (Jacques 2012, 9).

Automatism #3 is widely proven (Michaels 2017; Forchtner *et al*. 2018; Huges 2018; Lockwood 2018). In a similar vein, resistance to changes, defence of privileges and acceptance of inequalities have provided fertile terrain for the ideological roots of climate change denial (Jylhä 2016; Mandell 2008). Like the first two, automatism #3 also relies on an oversimplification of the picture that can be rectified by considering studies of the East and Middle East. Researcher in international and comparative climate policy, Schreurs, has analyzed the case of China. On the one hand, China's leaders have used its status as the world's second largest economy to demand greater voice in international climate negotiations, and on the other hand, they have exploited its status as a transition economy with millions who still live at various levels of poverty to resist international demands that China take on binding climate mitigation goals. Schreurs (2011) proposed the concept of "environmental authoritarianism" because, despite this ambivalence, the country has taken a few steps to strengthen institutional capacity. Plans, laws and programs that have been introduced to combat climate change, such as developing renewable energies and improve energy efficiency. Moreover, to some extent Chinese authorities are permitting critical voices, and specifically environmental groups, to be established and active.

The acknowledgment that anthropogenic climate change is occurring does not always imply a more socio-environmentally just approach. The Geo Archive includes an analysis of the environmental causes of the Eastern Mediterranean migration route from 2011 to the present. Before the Syrian uprising that began in 2011, the Greater Fertile Crescent experienced the most severe drought in instrumental record. For Syria, a country marked by poor governance and unsustainable agricultural and environmental policies, the drought had a catalytic effect, contributing to political unrest (Kelley *et al*. 2015). The decade-long Syrian conflict and the effects of climate change represent key push factors motivating people to move. Despite the Assad family having promoted unsustainable rural initiatives to boost productivity at the expense of the country's limited water resources (Gleick 2014, 334), the Syrian regime used the climate change argument to downplay its own responsibilities (De Châtel 2014), and as a geopolitical instrument. In November 2017, Syria decided to sign the Paris agreement on climate change, as the world's last functioning state to do so. The surprise decision, made during a brutal civil war, left the US as the only country outside the agreement. According to The Guardian, this decision was intended to isolate the US on the world stage (Harvey 2017). The environmental issue was not new in the propaganda of the Syrian regime and its allies, especially in messages intended for Latin America, Africa and the European environmental left. From the first moments of the Syrian revolution, it was rumoured that one of the reasons for "the war against Syria" was the refusal of "the Syrian government" to allow the cultivation and trade of genetically modified food, which represented a threat to the economic interests of large US corporations (Portocarrero Valda 2016). In the Syrian case, environmental issues offered Bashar Assad the ability to 'embarrass' other nations (Swehat 2017). Thus, taking action against climate change cannot be considered an univocal sign of democracy and a just society.

> Automatism #4. "There are currently 64 million forced migrants in the world fleeing wars, hunger, persecution and a growing force: climate change. UN forecasts estimate that there could be anywhere between 25 million and 1 billion environmental migrants by 2050" (Bassetti 2019). This

extract exemplifies the way in which official documents and conventions issued by international bodies have framed and addressed both the general threat of climate change and the impact of climate change on migration: in quantitative terms and through science-based description, prediction and understanding (Raleigh *et al.* 2008; European Environmental Agency 2016; Australian Government 2017; Nature 2019). Such quantitative interpretations have permeated the everyday and public debate imposing a global scale single narrative echoing institutional actors and top-down responses.

Although this approach is extremely relevant and has grounded all the initiatives that address global warming so far, growing bodies of literature are emerging in different areas of the knowledge production realm and are enhancing a more complex reading of the ongoing transformations. Recent social scientists' and humanities scholars' works are unsettling the objective and quantitative account of environmental transformations (Imagination and Climate Futures Initiative n.d.). Climate fiction is helping us to indirectly face our most intimidating challenges and to dramatize our hopes and offer us different visions of the future (Sayler 2019). Scientists themselves have taken up the autobiographical genre and are narrating the demise of the ecosystems they have spent their lifetimes studying (Kolbert 2018).

The effects of climate change are more apparent than ever. Individual and collective stories open a space for everyone – not only scholars and professional writers – to relate and make sense of the current socio-ecological crisis, to imagine alternatives and to contribute to their interpretation. The entire Geo Archive has a clear narrative approach to the nexus of the environment, climate change, and migration. In its very essence, it is a narrative device offering stories from the past to make sense of the present and discuss the future. All the cases trace storytelling paths. The novel, *While the Gods Were Sleeping: A Journey Through Love and Rebellion in Nepal* by Elizabeth Enslin (2014), is an entry point for engaging with human resilience against increased political turmoil and environmental change in the Himalayas, including the disastrous flood in Terai in 1954. The disaster provoked by that flooding was the inspiration for a Rubin Museum exhibition that took place in New York from May 6, 2016 to March 27, 2017, named *Nepalese Seasons: Rain and Ritual*. The documentary, *Sun Come Up* (2011), directed by Jennifer Redfearn, tells the story of some of the world's first environmental refugees, the Carteret Islanders. The film portrays the relocation of the community leader, Ursula Rakova, and of a group of young families as they search for new homes in war-torn Bougainville, an autonomous region of Papua New Guinea.

Paintings are also powerful tools for storytelling. The colours of pollution have captured artists' imagination. An appropriate example from the Geo Archive are the visual sources used to describe migration to and from Europe occurring in the aftermath of the so-called 'Year without Summer' in 1816. A global decrease of temperature, probably linked to volcanic eruptions in Asia, resulted in failed harvests in Europe and disrupted global climatic phenomena. In same parts of Europe in the spring and summer, a persistent "dry fog" reddened and dimmed the sunlight, such that sunspots were visible to the naked eye (Oppenheimer 2003). In that very year British artist William Turner (1775–1851) captured yellow skies and sunsets in his artworks that are said to have been inspired by the typical effects of the sulphate aerosols in the stratosphere he observed over London in 1815 and 1816.

Conclusions

Human migration and displacement is just one facet of the manifold ecological crises that the Earth system is experiencing under the umbrella term of climate change. If our lifestyle is no longer sustainable even in the short term, humanity finds itself in the position of needing to invent new ways of living with and on the Earth. The search for other possible ecological relationships has been clearly expressed in the prominence of science and climate fiction, and their ability to describe both utopian and dystopian futures. The importance of fictional accounts has opened a space for other words and called the clear-cut distinction between reality and imagination into question. Likewise, history aims at reconstructing other pasts as much as sci-fi constructs other futures, both merge realism and expectations. Historical and fictional accounts are critical tools for responding to an unprecedented crisis. Unbearable and irreversible human-made transformations and disasters require us to rewrite

our futures under unrealistic circumstances and, in the midst of apocalyptic scenarios, the role of history is to rebalance the equilibrium between reality and imagination.

Unquestionably, climate change has become a major concern for the international community. Among its consequences, the impact on migration is the object of increasing attention from both policy-makers and researchers (Piguet *et al*. 2011). In relation to the purpose of the CLISEL action and to the different areas of expertise included in it, this paper has explored potential directions that a conversation between history, policy-making strategies and media coverage could take. Through reflecting on the Geo Archive, I explored the weight of environmental and climatic factors in migration and their relationship to other push or pull factors, whether social, political, or economic. Through considering divergent approaches, I illustrated the necessity to integrate institutional levels of governance with the informal and mutualistic infrastructures of non-state organizations. I wanted to acknowledge non-science based forms of knowledge production and dissemination; the power of story-telling to engage people and make them aware of the catastrophe that we produce and feel every day. Furthermore, I wanted to illustrate how these are a few of the lessons history is teaching us and the fact that climate change arguments serve as powerful political instruments.

Acknowledgements

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