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# Migrants and the threat of resources shortages: Demystifying perceptions[1]

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## Abstract

Europe is embroiled in a series of tense debates that characterize the current political climate. Two challenges, in particular, have come to represent the hottest topics on the international political agenda: climate change and migration. These two issues have divided public and political opinion alike, with a recent swing by some nation-states towards the extreme right, manifested by a rise in populist rhetoric and a move against climate action. This paper links investigates to which extent these political challenges are linked in the public mind via a quantitative investigation of the correlation between attitudes towards migration/refugees and those of environmental concerns (including but not limited to climate change). The findings demonstrate that, even when controlling for safety concerns, economic background (of participants?) and country immigration profile, fears of certain environmental problems (pollution, energy shortages, etc.) are indeed correlated (language) to anti-refugee positions, particularly in urban environments.

Public support of "open-door" migration policy has taken quite a spill recently. The significant loss of optimism across European voters has materialized not just in the vote for Brexit but in the cross-country rise of extremism and xenophobia. This paper addresses the shift in public perceptions towards refugees and migrants by taking into account **economic, security as well as environmental concerns**. The results suggest that anti-immigration attitudes coincide with adverse environmental effects of urbanization and overcapacity. People in urban areas exposed to pollution and other environmental problems are more likely to be in favor of restrictive asylum and immigration policies than those living in green cities. The results hold even when controlling for safety concerns, economic background as well as country immigration profile.

## 1. Introduction

In 2015 an estimated 1,257,000[2] people requested asylum in EU Member States (Eurostat 2018). The number of people who filed first-time applications seeking protection under the 1951 Geneva Convention more than doubled the previous year's total. Across Europe, media outlets and politicians alike cried crisis, urging immediate action and emergency response, although *which* action was called for was more contentious. Since the spike in 2015, numbers of new asylum seekers have dropped significantly. Applications for asylum fell by 44 percent across the EU in 2017 compared to 2016 (EASO). Nevertheless, a state of emergency continues to characterize many EU Member States approaches towards migration as well as public attitudes. A growing divide over migration threatens European unity, or rather exposes the flaws in both European migration policy and the growing distaste for all things Brussels. Amidst growing populism and xenophobia, a landmark push for better management of migration globally resulted in an international UN-led initiative on safe, orderly, and regular

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[2] This statistic reflects first-time applicants. https://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum_statistics. Last accessed 17 December 2018.

migration, commonly called the Global Compact for Migration (GCM) in 2018. Its draft initially met with relatively little blowback from Member States, all of whom approved the Compact in July of 2018. However, the political winds rapidly shifted when one by one, EU countries including Hungary, Austria, Poland, Croatia, Czech Republic, Bulgaria and Slovakia backed out the following autumn. To the shock of many, the Belgian government threatened to fall over the non-binding Compact. These events strongly signaled persistent, even escalating, tensions, fears and misunderstandings surrounding migration as a phenomenon, regardless of the fact that quantitative measures no longer support a 'migration crisis'. Public perception is a key element to understanding this point: in line with global trends, European countries vastly overestimate the size of national immigrant populations with many of the countries who overestimate percentages the most being the same with more negative attitudes towards migrants (IPSOS 2016; IPSOS 2018). At the same time they were among the 'most wrong' about the size of their immigrant populations, sizable numbers of those polled in Italy (66%), Belgium (61%), and France (53%) also thought there were 'too many immigrants in our country' (IPSOS 2017).

Populism has found a fertile ground in the current public and political climate. Across Europe, nationalist and far-right parties have made significant electoral gains, with European Union elections looming. In Germany in 2017, for the first time far-right Alternative for Germany (AfD) entered the federal parliament. While in neighboring Austria, the Freedom Party (FPÖ) saw even greater success. Sweden Democrats (SD) gained 18% of the vote in the 2018 national election, a jump from 12,9% previously. In the spring of 2018, a right-wing, anti-immigration coalition took power in Italy, led by controversial figure Matteo Salvini, while Hungary's Viktor Orbán secured a third term on a platform that was at-once critical of the European Union and immigrants. All of these parties and political figures have claimed success thanks in no small part to the so-called migration crisis, calling for tighter EU border controls and wielding anti-immigrant rhetoric that has proven a powerful political weapon. This migration moment certainly did not create populism nor xenophobia; it was, however, used to play on existing fears and concerns about migration from developing countries to Europe and the perceived threats they represented to European societies. The flows of asylum-seekers spiked at a time when the EU was already facing a set of massive challenges, with the high drama of the Greek crisis set against the backdrop of persistent low economic growth, the rise of right-and left-wing populism within numerous EU member states, and the growing uncertainties concerning the United Kingdom's place in the Union, along with separatist movements in several countries, continuing tension with Russia and the pervasive threat from ISIS (Heisbourg 2015).

The success of right-wing parties and anti-migration rhetoric cannot be isolated from prevailing public attitudes: Castelli Gattinera (2017) highlighted that the construction of immigration as a security concern, for example, is the product of the interaction between securitizing moves by political elites and the dispositions of the public. We cannot, therefore, analyze the political anti-immigrant platforms without looking at their public reception. Audiences are not only receivers of political rhetoric, they are also active participants, meaning that "that a 'securitizing move' by political elites will become successful only insofar as the public accepts it" (Buzan et al. 1998:25; Castelli Gattinera 2017).

To that effect, public opinion towards migrants ranges vastly across European member states and across social classes. Nevertheless, immigration represents one of the most important issues for European citizens, and recent research shows that European public attitudes towards migration are hardening, with increasingly negative perceptions of migrant and refugee flows (Harellet al. 2012; Citrin and Sides 2008; Castelli Gattinera 2017). Opinion polls well

before 2015 noted that, overall, the "public perception of migration tends to be increasingly negative throughout Europe" (Beutin et al. 2006: 2) and public surveys found widespread feelings of insecurity associated with migration (European Commission 2010).
This article examines the sources of these negative public attitudes towards immigrants and refugees within EU Member States from a threat perspective, drawing on previous work on group conflict theory (McLaren 2003). While acknowledging the importance of the most common threats associated with migrants, i.e. economic, security and social, we take a less-trodden path into this field. We locate our work at the intersection of two of the greatest political challenges today: migration and the environment. Environment, and particularly climate change, has been perceived to be a massive threat to European countries, yet seldom has research looked into the influence of environmental and resource concerns on contemporary public attitudes towards migration in Europe. Unlike the majority of environment-migration studies that look at how climate change and environmental degradation drive migration, we rather examine to what extent environmental concerns in host societies influence public attitudes towards contemporary migration in Europe. Using a quantitative analysis, this study investigates the relationship between public concerns about migration, climate change and environment asking **how much the attitudes towards refugees change in urban sprawl areas or with fears of energy cuts or with higher landfilling rates. Our model controls for large set of commonly tested variables such as safety concerns, job loss concerns, age, education or gender.** This article thus contributes to a more inclusive understanding of the perceptions of European populations towards migration while also contributing to the environment-migration literature.

## 2. Hardening lines: Public attitudes towards migration in Europe

A number of recent public opinion polls document the negative attitudes and perceptions of refugees in many Western countries. An IPSOS poll conducted in June to July 2016 across 22 countries found that overall, close to 40% of respondents agreed somewhat or very much with the closing of their borders to refugees entirely at that time (IPSOS 2016). In Europe, six in ten or more in Italy, Hungary, France and Belgium said immigration has had a negative impact on their countries (IPSOS 2016).[3] In 2017, among 24 countries surveyed, six out of the top ten countries supporting the closure of their borders to refugees were European (Hungary, Italy, Poland, Belgium, Germany and Sweden) (IPSOS 2017). This growing public hostility towards migration thus indicates a receptive audience for populism and negative media coverage on the 'migration crisis'. These political, mediatic, and public attitudes are notably dominated by problem-orientation with migration (e.g. Gemi, Ulasiuk, and Triantafyllidou 2013; Heller 2014; Lynn and Lea 2003; Greussing & Boomgaarden 2017). Thus, in assessing these negative attitudes, it is important to understand their sources, e.g. which (real or perceived) threats are at the heart of anti-immigration sentiment? While the weight of specific concerns over migration vary widely, scholarship on attitudes in host countries towards migrants discerns three of the most common lines of threat perception: economic, social, and security. Before moving into our specific, lesser studied threat – that of the perceived negative impact of migration on environmental resources in host countries – we briefly survey these three more 'traditional' fields of threat perception.

[3] https://www.ipsos.com/ipsos-mori/en-uk/global-study-shows-many-around-world-uncomfortable-levels-immigration

The first, not unique to Europe and by no means a new discourse, is the perception that migrants and refugees present an economic threat. Migrants and refugees are frequently accused of taking native jobs and draining public and welfare resources that would otherwise be granted to 'deserving' native members of the host society (Hier and Greenberg 2002; Madra and Adaman 2014; Quinsaat 2014; Greussing & Boomgaarden 2017). Studies found that public hostility toward migrants exacerbates in times of macroeconomic decline and increasing unemployment rates, since citizens tend to be more hostile when the economy is doing poorly and the size of the immigrant community is on the rise, or when migrants are viewed as potential fiscal burdens (Semyonov et al. 2008; Castelli Gattinara 2017). There is an underlying notion behind this assumption that economies have absolute parameters, that destination economies (labor markets, social security systems) can only support a limited number of people (and workers) before unemployment and recession take hold. The trope 'immigrants are taking our jobs' fits squarely in this logic. A 2016 Pew Research study across ten European countries found a median of 50% believe that refugees are a burden on the country because they take jobs and social benefits, with it being the top concern amongst participants in Hungary (82%), Poland (75%), Greece (72%) and Italy (65%) (Wike, Stokes and Simmons 2016).[5] While this is among the longest-running myths about immigration, it holds little evidentiary support. In almost all OECD countries, migrants contribute more than they take in social benefits. Challenging this prevailing assumption, OECD Secretary-General Angel Gurría pointed out, "[Migrants] are productive members of society who work, set up businesses and have innovative ideas. Migrants boost the working age population: over the past 10 years, they accounted for 47% of the increase in the US workforce and 70% in Europe. They also fill jobs in both fast-growing as well as declining sectors of the economy, including the care of the elderly and health care in general.[6]" Indeed, recent studies such as Kemeny and Cooke (2017)[7] find rather positive effects from diversity conditional on integration of refugees in the US. The US market is however quite different from the EU market hit by the refugee crisis of the recent years. Recent papers move closer to theorized mechanisms, by exploring how diversity relates differently for workers engaged in activities differentiated by their task or skill content. Results from these efforts support hypothesized mechanisms: rewards from diversity are strongest among workers engaged in complex problem solving (Cooke and Kemeny, 2017), with spillovers flowing disproportionately from high-skill and high-wage workers (Suedekum et al., 2014; Kemeny and Cooke, 2017a). Although none of these approaches generates truly definitive answers on causality, together they offer a wealth of supportive evidence for an independent influence of diversity on productivity. Turning to the European context, amidst the crisis, economies in 2015 actually registered upward swing, also undermining claims about any negative correlation between economies and the arrival of migrants.

The second major perceived threat, as articulated in recent years in European Member States but by no means exclusive to the European context, is the threat to national identities, cultures, and social fabric. In Europe, these threats stem from a number of underlying claims, but are most clearly linked to the perception of cultural and religious differences with major non-EU

[5] http://www.pewglobal.org/2016/07/11/europeans-fear-wave-of-refugees-will-mean-more-terrorism-fewer-jobs/
[6] „The Integration of Migrants and Refugees: Challenges and Opportunities", Keynote lecture by Angel Gurría at Georgetown University, 7 October 2016. Full speech can be found at http://www.oecd.org/migration/integration-of-migrants-and-refugees-challenges-and-opportunities.htm
[7] Kemeny, T., Cooke, A. (2017). Spillovers from immigrant diversity in cities. Journal of Economic Geography 18(1). DOI: 10.1093/jeg/lbx012

sending countries, e.g. sub-Saharan African countries and Muslim-majority countries (Harell et al. 2012). Historically (Estevens, 2018), most nation-states define themselves in ethnic rather than civic terms, allowing little room for incoming ethnic and cultural diversity (Lazaridis 2015). Estevens (2018) points out that identities may not correspond to the borders of national sovereignty, which can trigger a reconceptualization of the traditional national identity associated with nationality. As European MS have varying degrees of historical migration, some countries are only now taking on this challenge, perceiving it as a threat to relative perceived ethnic-religious homogeneity. The same 2016 IPSOS poll found that European countries were particularly less confident about the integration potential of incoming refugees compared to other regions, finding mixed views regarding the overall value of cultural diversity. Another study found generally negative attitudes towards diversity in European countries: when asked whether having an increasing number of people of many different races, ethnic groups and nationalities in their country makes their society a better place to live, a worse place or does not make much difference either way, over half of Greeks and Italians and about four-in-ten Hungarians and Poles say growing diversity makes things worse (Wikes et al. 2016). Integration concerns were particularly high when speaking of incoming Muslim populations,[8] where for some Europeans, negative attitudes toward Muslims are tied to a belief that Muslims do not wish to participate in the broader society. In every country polled, the dominant view was that Muslims want to be distinct from the rest of society rather than adopt the nation's customs and way of life. Six-in-ten or more held this view in Greece, Hungary, Spain, Italy and Germany (Wike, Stokes and Simmons 2016).

This last point on European integration and socio-cultural concerns about Muslim refugees and migrants is linked to the third domain of threat perception: security. In the post-9/11 context, the relatively newer major frame through which negative perceptions towards migration are articulated is that of a security threat, with key problem associations made with illegality, crime and terrorism (Bennett et al. 2013; El Refaie 2001; Goodman and Speer 2007; Ibrahim 2005). Since 2015's spike in flows from the Middle East, for example, Syrian male refugees and other middle-eastern males have been widely portrayed as actual or potential terrorists in social media (Walker Rettberg and Gajjala 2016). Public perceptions of a security threat vary, as do Member State's political responses. While the EU-level has considered the humanitarian dimension of the migration crisis, MS focus largely on security dimensions (Estevens 2018). Thus, when it comes to migration-security nexus, the institutional and public debate has been ruled by a national security lens, many times ignoring human insecurity of the people facing persecution in the country of origin or discrimination in their new country or even dying in transit (Estevens 2018). Two main assumptions drive public perceptions of a terrorist threat presented by the migration crisis: that refugees are vulnerable to recruitment and radicalization and that refugee flows provide a 'backdoor' to terrorists (Crone, Falkentoft and Tammikko 2017). Half of respondents in one study agreed somewhat or very much that terrorists are pretending to be refugees and are trying to enter their country to cause violence and destruction (61%) (IPSOS 2016). Another found a median of 59% across ten European countries thought that "refugees will increase the likelihood of terrorism in our country" (Wikes et al. 2016).

Research has shown that these kinds of frames shift the focus of public attention towards the (il)legitimacy of asylum seekers' claims and towards the question of whether they actually deserve sympathy and support (Greussing and Boomgaarden 2017; Lynn and Lea 2003). A 2017 DIIS report points out that the perceived link between terrorism and the migration crisis

[8] Although those polled had even more negative attitudes towards Roma.

is attributable to the fact nearly half a million of the asylum applications in 2015 came from Syrian citizens and the other half from citizens from Iraq, Afghanistan, Nigeria and Pakistan and in the same year almost three-quarters of all deaths from terrorism globally took place in these countries of origin. However, the great majority of individuals involved in terror attacks were EU citizens and those who became foreign fighters before returning to Europe. While between January 2016 and April 2017, four asylum-seekers were involved in terrorist incidents, no actual refugees were involved. Moreover, refugees and asylum-seekers are often fleeing the very areas where terrorist groups operate (Crone, Falkentoft and Tammikko 2017). Thus, much like the other threats discussed, reality does not match public perceptions when it comes to links between terrorism and refugees.

There is a clear disjuncture between perceived and real circumstances when it comes to the 'threat' of migration in Europe. These economic, social and security links with the migration crisis have been either refuted or found to be inconclusive, but the veracity of concerns is of lesser importance here than their manifestation in hostile attitudes (Castelli Gattinara 2017). Real or imagined, these threats are driving opposition to migration amongst the European public.

## 3. Linking crises: literature and narratives on environment, climate change, and migration

Although security, economic, and social threats have been by-and-large the most discussed and studied when it comes to public perceptions around migration in Europe, we now turn to the links between public attitudes towards migration and another major global political challenge of the 21st century: that of environmental degradation and resource scarcity. Undoubtedly the most hotly debated and pressing challenges is that of climate change, which the United Nations called the "defining issue of our time".[9] With current or impending impacts of climate change including increasing frequency and intensity of natural hazards, including drought, sea-level rise and coastal erosion, growing food insecurity, etc., gloom-and-doom narratives abound. One of the most called-upon human impacts of these changes is the impact on global migration trends in terms of volume and dynamics (Gemenne 2011). Principally, the links made between environmental disruption and migration 'threats' have to-date been articulated in two ways: a) climatic and environmental changes as a cause of migration, exemplified by the narrative of 'climate refugees', and; b) the (potentially) adverse effects of refugee camps and population movements more generally on the natural environment.

The former narrative typically (but not exclusively) depicts the migrant as the human face of climate change, victim to the harmful effects of global warming forced to flee her/his home due to drought or rising seas (Gemenne 2011). At the same time that the climate refugee becomes a humanitarian cause, others focus on the climate refugee as s/he presents a threat to security and social and economic stability in Europe, harking back to the existing concerns outlined above. While recently scholars and international organisations have pushed for a more positive reading of migration as adaptation to climate change, rather than the failure to adapt, negative links continue to be made as a means of calling for climate action. Bolstered by predictions of hundreds of millions of people displaced by climate change by 2050, some advocates for

[9] http://www.un.org/en/sections/issues-depth/climate-change/. Accessed 14 December 2018.

climate action using negative connotations of migration amongst the public intentionally or unintentionally play into xenophobic, populist discourses on migration. Here the traditional divide between the green liberal left and the populist right becomes blurred in that fears of migration linked to climate change seemingly bridge partisan divides. Migration is to be feared and avoided whenever, wherever, and however possible, in this case, by lowering greenhouse gas emissions (climate mitigation). These positions are often linked to future waves of migrants, but the migration crisis is seen to be a harbinger of things to come in a world plagued by rising temperatures, sea-level rise, drought and more frequent and intense extreme events. In relation to the current situation in Europe, some studies suggest that asylum applications have increased partially due to climatic changes. **Missirian and Schlenker 2017**[10] **suggest that the current refugees to Europe are already the victims of climate change** given that weather-induced conflicts in developing countries such as the one in Syria spill over to developed countries through asylum applications. On a sample of weather variations in 103 source countries throughout 2000–2014 they convincingly show how they translated into averaged 351,000 per year asylum applications to the European Union. They find that temperatures that deviated from the moderate optimum (~20°C) increased asylum applications in a nonlinear fashion, which implies an accelerated increase under continued future warming. Holding everything else constant, asylum applications by the end of the century are predicted to increase, on average, by 28% (98,000 additional asylum applications per year) under representative concentration pathway (RCP) scenario 4.5 and by 188% (660,000 additional applications per year) under RCP 8.5 for the 21 climate models in the NASA Earth Exchange Global Daily Downscaled Projections (NEX-GDDP). However, these findings remain hotly contested in academic circles (Frohlich et al XX).

In the following analysis, we focus on the latter, lesser-known, connection between environment and migration: the impact of migrants and refugees on the natural environment. The focus is not primarily on climate change as a driver of migration so much as how migration affects the environment in host countries and communities. Here, we can speak of the notion of 'carrying capacity': that a given place can only physically support a certain number of people in terms of water, food, shelter, energy, etc. Population growth, here caused by immigration rather than natural increase, is thus a threat to finite resources in ever-more crowded cities and urban spaces. Regardless of urban or rural contexts, the link between sudden influx of people and the environmental depletion has been recognized for quite some time.[11] In 2001, the Office of the United Nations High Commissioner for Refugees (UNHCR) released a statement that the displacement of large numbers of people causes significant negative impact on the environment, stating, "what is bad for the environment is ultimately bad for human welfare" (UNHCR 2001). Citing deforestation, soil erosion, and depletion and pollution of water resources, the influx of mass groups of refugees places additional strains on limited resources. These negative impacts raise concerns over the environmental sustainability of refugee camps as well as the consequent effects on the social and economic welfare of host communities (UNHCR 2001). In the case of unique sites, such as the Virunga National Park, Zaire, the environmental impact of refugees may be irreversible.[12] Competition for natural resources such as fuelwood, building materials, fresh water and wild foods are of course immediate concerns and long-term environmental degradation and resulting or perceived resource scarcity and competition must be considered in refugee settlement planning, but, on a global scale, the impacts of refugee settlements on the

[10] Missirian, A., Schlenker, W. 2017. Asylum applications respond to temperature fluctuations. Science 22 (2017), Vol. 358, Issue 6370, pp. 1610-1614.
[11] Some citations might be extracted from: https://gelr.org/2016/03/27/environmental-impacts-of-the-refugee-crisis/
[12] https://odihpn.org/magazine/the-impact-of-refugees-on-the-environment-and-appropriate-responses/

environment is not significant when seen alongside the impacts of other human activities (UNHCR 2001). Indeed, one environmental impact assessment found that woodland cover was reduced by 58% in Zimbabwe after the return of Mozambican refuges, while 167 square kilometers were severely deforested out of a total of 570 kilometers affected during the refugee crisis in Tanzania from 1994 to 1996 (UNHCR 2001). Put in perspective however, UNHCR pointed out that African countries like Côte d'Ivoire and the Democratic Republic of the Congo experience greater annual habitat loss through uncontrolled logging and clearance of land for agriculture - 2,900 and 1,800 square kilometres of forest per year, respectively. Nonetheless, deforestation, ecosystem and habitat degradation may have serious effects on local quality of life as well as the reception and threat perception of refugees by host communities and therefore limiting adverse effects to the environment remains a concern for international organizations and governments.

Despite the few studies conducted on this topic in Africa, primarily in the 1990s, little has been done by way of environmental impacts assessments of large refugee settlements across Europe historically or contemporaneously. Dhasi, Isakjee and Davies (2018)[13] report the results of the first environmental health assessment in the Europe's former largest informal refugee camp in Calais, located in northern France. The study details the lack of facilities for sanitation, safe provision of food, water and shelter, demonstrating how conditions fall short of agreed international standards for formal refugee camps. The camp was the oldest one in France operating from the 1970s and it happened only after the escalation of refugee crisis in the EU that the host communities won the battle to clear it in 2016. Locals argued that the camp contributed to pollution and degradation of soil as well as safety.

There remains contrary or at least inconclusive evidence on the relative significance of the environmental damage caused by refugee settlements (formal and informal), but many countries in the Global North continue to fear migration and environmental change, both as separate and conjoined issues. What matters here for our current discussion is, again, not necessarily the veracity of these links but rather how the public has perceived them and how these issues translate to political agendas and electoral gains. Recent studies (Puskarova a Dancakova, 2018)[14] show that residents across the European Union fear migrants at the same time that they fear natural resource depletion. Yet, the question remains how and to which extent these issues are linked in the public minds. Which concerns shape fears or negative attitudes towards migration – is safety the primary concern? (criminality, fear to walk after dark)? Or do economic fears take precedence (job loss or rising native unemployment)? Lastly, and most importantly for the following analysis, is: to what extent can environmental concerns (e.g. loss of resources, waste, noise pollution, water scarcity) be linked to negative attitudes towards migration across EU Member States?

## 4. Methods

While much of the research on immigration in Western Europe has focused on government policy making and migration trends (but see Hoskin 1991; Quillian 1995; Pettigrew 1998), the

[13] Dhasi, S., Isakjee, A., Davies, T. (2018). Public health in the Calais refugee camp: environment, health and exclusion. Critical Public Health, vol. 28, iss. 2, pp. 140-152.
[14] Puskarova, P., Dancakova, I. (2018). Malthus is still breathing: environmental concerns and attitudes towards immigration in Europe. *Mondes en Developpment*, 4/2018.

focus here is primarily on individual citizens' perceptions of immigrants, with an emphasis on the factors that are likely to produce variation in individual-level attitudes toward how immigrants should be treated.

As prior research on Europe points, threat perception goes hand in hand with intolerance (McLaren, 2003). Thus, we also dissociate potential types of threats associated with out-groups in a host country by distinguishing between sociotropic and personal threat.

The latest edition of the European Social Survey (ESS) appears to be particularly relevant for our research question. The survey runs once every two years, and gathers responses on attitudes, values, beliefs and behavior patterns across different facets of life in the course of up to 40 000 face-to-face interviews involving strict random probability sampling, a minimum target response rate of 70% and rigorous translation protocols. The questionnaires include core questions monitoring the same socio-cultural variables over time, and a rotating module or modules – questions that are asked only in that special round. In May 2018, the ESS published the updated version of the data for Round 8 that involved **interviews conducted in 2015, aka at the peak of the refugee crisis**. The survey includes responses from 18 countries and contains two rotating modules covering an earlier rotating module of Round 4 (2008) on Welfare Attitudes in a Changing Europe, plus a new rotating module on Public Attitudes to Climate Change, Energy, Security and Energy Preferences.

Using the ESS notations, our baseline quantitative model defined for an individual i∈{1, 2, … N} reads as:

$$\begin{aligned} gvrfgap_i = {} & wrpwrct_i + energcons'15_i + urbanENV'15_i + landfillSHARE_i \\ & + impenv_i + ccrdprs_i + domicil_i + cntry_i + regunit_i + blgetmg_i \\ & + gndr_i + eisced_i + ppltrst_i + polintr_i + wrkac6m_i + gincdif_i \\ & + aesfdrk_i + simgrn28_i + chldhm_i + lknemny_i + \varepsilon_i \end{aligned}$$

where *gvrfgap* stands for an individual's recorded response to the question "*Government should be generous judging applications for refugee status*".

In line with some earlier works, we link these responses to some personal characteristics such as urban residence dummy (*domicil*), highest level of education attained (*eisced*), religion (*blgetmg*), gender (*gndr*), if the respondent lived abroad – in the migrant shoes – recently (*wrkac6m*), number of children (*chldhm*), and *polintr* (how often the respondent follows politics), as well as sociotropic fears such as

1) perceived **economic threat** – *lknemny* (How much fear to be unemployed in the next years), *imbgeco* (Immigrants good or bad for the economy);
2) perceived **social threat** – *ppltrst* (how much the respondent trusts the others), *gincdif* (how much income redistribution the respondent would welcome), *imueclt* (Immigrants undermine or enrich cultural life);
3) perceived **security threat** – *aesfdrk* (how much the respondent fears to go out after dark), *imwbcnt* (immigrants make place worse or better to live in)

We bring into the model also a country dummy (*cntry*) and the country's share of immigration (*simgrn28*), as well as *regunit* capturing the scale effects of the refugee hostility. We are led by the assumption that scale might matter in shaping migrant attitudes and that the hostile attitudes for migrants are localized – clustered. Proving this hypothesis would lend strong support for

more place-based policies of refugee attitudes and would comply with the recent evidence on rising populism in places that are economically little viable (Rodriguez-Pose, 2018).

As a novel element in our study, we introduce sociotropic fears of migrants as a carrying capacity threat. First, the *wrpwrct* variable denotes how worried the individual is about energy cuts. Second, we introduce also *impenv* (measuring "How important it is to care for climate change and environment") and *ccrdprs* (denoting how personally responsible for climate change the respondent feels). Third, we introduce EU-SILC nationwide measure of pollution, grime and other environmental problems by degree of urbanization – *urbanENV'15*, and EU-SILC final petroleum-based energy consumption – *energcons'15.* Fourth, we bring NUTS-2-wide shares of landfilling (*landfillSHARE*) as a key measure of population exposure to pollution feeding into their fears of migrants as carrying capacity threats. We do so to counterfact that carrying capacity is contested the most in urban settings where most asylum seekers and refugees settle. The dataset was cleared of missing and ambivalent values. All the variables selected are listed in Table 1 with standard descriptive statistics.

**Table 1. Descriptive and summary statistics, ESS Round 8, 2016**

| | *VAR NAME* | *VARIABLE LABEL* | *MEAN* | *ST DEV* | *MIN* | *MAX* |
|---|---|---|---|---|---|---|
| **Y** | **gvrfgap** | **Government should be generous judging applications for refugee status** | **3.2358** | **1.3610** | **1=strongly agree** | **5=strongly disagree** |
| **X** | **wrpwrct** | **How worried, power cuts** | **2.2200** | **1.0822** | **1=not at all worried** | **5=extremely worried** |
| **X** | **energcons'15 -ENV** | **Final energy consumption in households, % petroleum products** | **10.3208** | **9.94607** | **0.4** | **33** |
| **X** | **urbanENV'15** | **[ilc_mddw05]Pollution, grime or other environmental problems in % all cities** | **15.8854** | **7.52722** | **6.8** | **33.2** |
| **X** | **landfillSHARE** | **Landfilling rate, % waste generation** | | | | |
| **X** | **impenv** | **Important to care for climate change and environment** | **2.2640** | **1.2272** | **1=strongly agree** | **6=strongly disagree** |
| **X** | **ccrdprs** | **How personally responsible for climate change the respondent feels** | | | | |
| **GEO** | cntry | Country | | | | |
| **GEO** | regunit | Regional unit, NUTS-1 through NUTS-3 | | | | |
| **IND** | chldhm | Number of children | | | | |
| **IND** | eisced | Highest level of education, ES-ISCED | 4.4462 | 5.0274 | 1=primary | 7=higher tertiary |
| **IND.** | domicil | Domicile, respondent's description | 2.9059 | 1.2366 | 1=big city | 5=country-side |
| **IND.** | wrkac6m | Paid work in another country, more than 6 months in last 10 years | 2.2172 | 1.0549 | 1=yes | 2=no |
| **IND.** | blgetmg | Belong to minority ethnic group in country | 1.9682 | .54673 | 1=yes | 2=no |
| **IND.** | gndr | Gender | 1.5218 | .51382 | 1=male | 2=female |
| **SOC.** | polintr | Interested in politics | 2.5133 | .92923 | 1=very | 2=not at all |
| **SOC.** | ppltrst | Most people can be trusted or you can't be too careful | 5.6200 | 4.6716 | 1=can't be too careful | 10=can be trusted |
| **SOC.** | gincdif | Government should reduce differences in income levels | 2.2963 | 1.2172 | 1=strongly agree | 5=strongly disagree |
| **SOC.** | aesfdrk | Feeling of safety of walking alone in local area after dark | 1.9131 | .89975 | 1=very safe | 5=very unsafe |
| **SOC.** | simgrn28 | Country's share of immigration, % total | | | | |
| **SOC.** | lknemny | How much fear to be unemployed in the next years | | | | |

Notes: IND. denotes individual variables, SOC. denote sociotropic variables
Source: ESS round 8, available at: www.europeansocialsurvey.org

**Table 2. Ordered logistic regression, dependent variable: *gvrfgap***

| *Variable* | *model* | *model-2* | *model-3* | *model-4* | *model-5* | *model-6* | *model-7* |
|---|---|---|---|---|---|---|---|
| ***wrpwrct*** | .06494605*** | .07295863*** | .06823304*** | .0397244** | .04148848** | .05146832*** | .02420845 |
| ***energcons2015*** | -.06272243*** | -.06304799*** | -.06339019*** | -.05944399*** | -.06066389*** | -.05719425*** | -.05741178*** |
| ***urbanENV2015*** | .09753076*** | .0991703*** | .09965851*** | .08408318*** | .07724617*** | .0730275*** | .07051145*** |
| ***landfillSHARE*** | | | | .4101798*** | .52336611*** | .31337204*** | -.15847361 |
| ***impenv*** | | .14986697*** | .143259*** | .15332523*** | .15305892*** | .11056361*** | .84256737*** |
| ccrdprs | | | | | | -.07554008*** | .10019355*** |
| domicil | .14478639*** | .14562741*** | .13794096*** | .12964795*** | .12443677*** | .12247088*** | -.0263781*** |
| cntry_num | -.05838026*** | -.05803744*** | -.06244792*** | -.05463251*** | -.05260976*** | -.04973196*** | .07383759*** |
| regunit | | | | | -.42950357*** | -.4033212*** | -.03277445*** |
| blgetmg | .59279219*** | .60006106*** | .5531255*** | .59834443*** | .60231241*** | .62738284*** | -.46220915*** |
| gndr | -.34177438*** | -.31976272*** | -.28873805*** | -.27572163*** | -.27840781*** | -.25740416*** | .52066736*** |
| eisced | | | -.02657534*** | -.02462539*** | -.02189864** | -.01349027 | -.19772697*** |
| ppltrst | -.10572341*** | -.10317459*** | -.10408343*** | -.10038358*** | -.10364927*** | -.09714311*** | .05684942*** |
| polintr | .17176943*** | .14986212*** | .12423684*** | .1121302*** | .12144803*** | .10537113*** | -.0225277*** |
| wrkac6m | .160644*** | .1510688*** | .12944955** | .1149089* | .10579423* | .09145162 | .03173517* |
| gincdif | .22063054*** | .20747506*** | .21155515*** | .2001295*** | .1940819*** | .18743802*** | .04432274 |
| aesfdrk | .25662688*** | .25052296*** | .23115553*** | .24647637*** | .23989405*** | .23291936*** | .20078967*** |
| simgrn28 | .0865285*** | .08707288*** | .08839004*** | .10309651*** | .09108037*** | .08591867*** | .11298575*** |
| chldhm | -.18693619*** | -.17796102*** | -.20271226*** | -.2260898*** | -.21147947*** | -.23110044*** | .06547662*** |
| *lknemny* | | | -.02425784 | -.0232966 | -.01424275 | -.01395111 | -.01395111 |
| *imwbcnt* | | | | | | | -.21286406*** |
| *imbgeco* | | | | | | | -.1177744*** |
| *imueclt* | | | | | | | -.11253722*** |
| *dweight* | -.17494586*** | -.17743729*** | -.19391576*** | -.17139601*** | -.149311*** | -.12545373** | -.05986474 |
| *pweight* | -.45853646*** | -.46768014*** | -.47871228*** | -.4880538*** | -.77237218*** | -.7068762*** | -.63438908*** |
| $\chi^2$ | 4010.9434 | 4098.0178 | 3863.6376 | 3352.1076 | 3364.376 | 1779.7461 | 5460.9617 |
| *N* | 18909 | 18909 | 17658 | 15633 | 15633 | 15633 | 16884 |

Notes: *, **, and *** indicate parameters that are significant at 5%, 1% and 0.1% level respectively; all estimated models use robust standard errors, *ENV* denote environmental determinants, baseline model 2 and 3 denote robust checks

Our results suggest that both individual and sociotropic concerns are relevant for shaping the attitudes towards migrants. Table 2 highlights however that some of those might be more than the others.

First, as already many studies before did, our analysis shows striking and robust impact of safety concerns for the immigration attitudes what is represented by the impact of aesfdrk throughout the estimations. Equally important is the level of social capital represented by gincdif and ppltrst that show how much the locals care for equal treatments and redistribution of incomes in favor of vulnerable people. As mentioned earlier, the level of social capital is only little elastic to time (reflects longterm coined preferences for level of social protection and thus appears to be persistent over time).

The impact of economic concerns appears to be dismissed. The *lknemny* variables appears little insignificant and when warm attitudes towards migrants appear to be correlated more with the opinion if refugees are in general good or bad for the country (*imwbcnt*) than just for the economy (*imbgeco*).

The new aspect of our study – the relevance of environmental impact of immigration on the rise for anti-immigration attitudes appears to be particularly relevant. Those who fear migration appear to live in places struggling with grime and pollution, marked by higher energy consumption and landfilling rates. The respondents more concerned about immigration appear to be also less caring for the environment. It looks like a vicious cycle – people living in polluted areas pollute even more and fear migrants because then they might have someone to blame for the pollution.

## Concluding remarks

Our study lends support to some striking evidence that people fearing refugees and asylum seekers and nurture anti-asylum attitudes across Europe might be those who live indeed more exposed to grime, pollution, landfilling, and resource shortages. These results appear to lend support to a hypothesis that the way voters perceive the quality of their natural environments is linked with the way they perceive asylum seekers and refugees. The link appears to have something to do with urban growth. The negative externalities of concentration in urban areas where most of refugees and asylum seekers find their settlement appear to shape the responses of local communities.

Our results shall by no means be interpreted as legitimate causal perceptions that refugees and asylum seekers are responsible for environmental degradation and resource shortages. The study solely illuminates the pathways between environmental degradation as perceived by European citizens and their support for restrictive asylum policies.

Moreover, our paper challenges common narrative of European media and policies that treat perceptions towards asylum seekers and refugees as results of economic and safety concerns. Rather than that, our study breaks away from this traditional standpoint and opens up new avenues to understand how climate degradation and migration crisis might be interlinked. Future research should further investigate these links and should be complemented by proper fieldwork and more data collection.