
ENVIRONMENTAL SUSTAINABILITY

- ENVIRONMENTAL AND URBAN SECURITY RISKS:
THE LOOMING SYMBIOTIC CRISES OF THE
MEDITERRANEAN RIM CITIES

James A. Russell

- ENERGY TRANSITION AND URBAN GOVERNANCE IN
THE ARAB WORLD

Eric Verdeil

- HOW CAN REGIONAL COOPERATION IN THE
MEDITERRANEAN SUPPORT CITIES' ENERGY
TRANSITION EFFORTS?

Olgu Okumus

ENVIRONMENTAL AND URBAN SECURITY RISKS: THE LOOMING SYMBIOTIC CRISES OF THE MEDITERRANEAN RIM CITIES

James A. Russell¹

*Department of National Security Affairs,
Naval Postgraduate School in Monterey, CA.*

1. Introduction

This chapter argues that systemic environmental changes in the Mediterranean and the Middle East have the potential to combine with persistent political instability to create challenges for urban environments bordering the Mediterranean over the rest of the 21st century. These combined pressures could manifest themselves as unrest against city and state governance around the rim of the Mediterranean as these cities cope with the strains of population movements that will only gather momentum as the environmental pressures of higher temperatures, sea level rise and fresh water scarcity collide with inadequate urban infrastructures. Another central point of this chapter is that these challenges will fall mainly on city governments and their administrations. Mediterranean cities should neither expect nor count on relief from the states in which they exist.

This chapter argues that environmental refugees driven by climate and environmentally driven factors will inexorably shape the landscapes of urban Mediterranean cities over the rest of the century (Brauch, 2003). These environmental refugees are related to but also distinct from the political refugees now attempting to emigrate to Europe as a result of the collapse of several Middle Eastern states such as Syria, Libya and Iraq. While environmental and political refugees fall into different legal and political categories, both phenomena can occur discretely or in tandem. In other words, environmental stresses can challenge the ability of governments to function effectively, which in turn can encourage migration flows. This chapter argues that these phenomena are linked in the Mediterranean area, since populations seeking to migrate are mostly coming from weak and/or failing states and are simultaneously affected by both political and environmental factors. After detailing some of these macro trends, the chapter will suggest some steps that could help cities successfully prepare for the crisis and reduce the prospects of unrest.

As noted in the title of this chapter, the fates of the cities on the northern and southern rims are linked in the impending crisis. Suggesting such a relationship is nothing new. Mediterranean rim cities

1. The views in this article are those of the author.

As early as 2001, researchers at the Intergovernmental Panel on Climate Change (IPCC) identified the region as particularly susceptible to the effects of climate change due to the concentration of populations in coastal regions, persistent fresh water shortages, and climate-sensitive crop production.

have always existed in a kind of symbiotic relationship. The cities of the southern shores – Oran, Algiers, Tripoli, Benghazi, Tunis, Cairo, Tel Aviv, Alexandria and Beirut – have always been interconnected with the cities of the northern shores – Athens, Venice, Genoa, Naples, Barcelona, Palermo, Nice, Istanbul and Marseille to name but a few. As far back as Roman times, these cities served as vital nodes of the interconnected Mediterranean economic and political world (Rice, 2008).

Today, these cities exist as parts of broader social, political and economic systems that border the Mediterranean and its 46,000 km of shorelines from three continents, 22 states and an estimated 480 million people. Over half of the Mediterranean region's population lives in coastal zones; 65 percent of the population of the southern zone (120 million people) currently lives in coastal zones. The populations along the northern coastline are mostly urbanised, while populations in North Africa are in the process of concentrating in urban areas. While the population in southern Europe is projected to decline into 2050, populations in North Africa are expected to increase from 139 million to 240 million over the same period (European Environment Agency, 2017).

Mirroring global trends, Mediterranean populations are urbanising. Between 1970 and 2010, the populations bordering the Mediterranean increased by 190 million – 163 million of whom live in towns with more than 10,000 inhabitants. Urbanisation of these populations increased from 54%–66% over the same period. The south and east of the Mediterranean are urbanising at a faster pace, moving from 44% urbanised population in 1970 to a projected 66% by 2025.

2. Environmental pressures

Like the rest of the planet, the Mediterranean will see inexorable environmental changes that flow from the increase of greenhouse gases in the earth's atmosphere. As early as 2001, researchers at the Intergovernmental Panel on Climate Change, or IPCC, identified the region as particularly susceptible to the effects of climate change due to the concentration of populations in coastal regions, persistent fresh water shortages, and climate-sensitive crop production. Regrettably, the world keeps breaking records for carbon in the atmosphere. For the first time in recorded history, carbon levels reached 410 parts per million in 2017. Reflecting these persistent increases, the world keeps setting records for the hottest year on record: 2017 was the second hottest year on record, trailing only 2016 for this dubious distinction.

If states keep pumping carbon into the atmosphere at current rates, by the middle of the century, some researchers suggest that the atmosphere will come to resemble one that existed 50 million years ago when the temperature was 10 degrees Celsius higher than it is today – a world with no polar ice caps. Other researchers are somewhat more conservative. The IPCC predicts temperatures will increase by between 2°C and 3°C in the Mediterranean region by 2050, and by between 3°C to 5°C by 2100. Predictably, the southern region will see even higher temperatures. The 2007 IPCC projections for the ENPSouth region (which includes ten non-EU Mediterranean countries) predict an increase in temperature of up to 2°C in the next

15 to 20 years and of 4°C to 6.5°C by the end of the 21st century. This increase in temperature is likely to be accompanied by a further decrease in the level of precipitation. In the IPCC 2013 projections, summer rainfalls could decrease by the end of the century by 35% on the southern rim, and by 25% on the northern rim. Other impacts of climate change include sea level rise (SLR). Drawing upon IPCC projections, researchers predict that the Mediterranean Sea could rise by as much as two feet by the end of the century. If the polar ice caps continue melting at current rates, sea level rises will be much more dramatic than the IPCC forecasts (IPCC, 2014).

3. Regional migration trends

These environmental and climate trends are an additional pressure on population migrations – migrations that, to be sure, are nothing new in the Mediterranean (Dragastovina, 2015). Between 2001 and 2010, Spain, Italy and France were the largest recipients of Arab emigration in the OECD countries, numbering 5 million people into all of Europe (Fargues and Fandrich, 2012). Indeed there has been an inexorable trend of population migrations from the southern states to the northern European-based states. Europe's aging population has created opportunities for the more youthful populations of the southern states. Over the last five years that population shift has been fuelled by the political instability of the Middle East due to the wars in Syria, Iraq, Libya and Yemen. The Middle East is today home to approximately 12 million displaced people and another 6 million refugees, with millions stuffed into overcrowded, underfunded refugee camps in Turkey, Lebanon and Jordan. There are now 1.2 million outstanding applications for political asylum in Europe. These civil wars show no sign of abating in part due to the involvement of outside powers that are attempting to manipulate the armed struggle for political power in each of the wars.

While the displaced and refugee populations of the Middle East provide a built-in migration demand push, it is important to note that they constitute only one source of migrants. The pressures for additional migration continue to build. For example, Libya alone is estimated to harbour as many as 1 million refugees from sub-Saharan Africa and South Asia trying to get across the Mediterranean to Europe. Statistics compiled by the UN Migration Agency document the sustained flow of tens of thousands of refugees crossing the Mediterranean annually from countries such as Syria, Iraq, Afghanistan, Nigeria, Eritrea, Guinea, Ivory Coast and other states in Sub-Saharan Africa.

Today, there is no question that the overwhelming number of refugees in the Middle East and Africa are related to political violence. In 2016, Sub-Saharan Africa and the Sahel overtook the Middle East as the region of the world most affected by displaced populations due to political violence. In 2016 alone, nearly 1,000,000 residents of the Democratic Republic of Congo were displaced due to political violence in that country (Norwegian Refugee Council, 2017). The trends for displaced populations in the Middle East and Africa are an opposite mirror image of those figures in Asia – where climate and environmental factors figure much more prominently in causing displaced populations.

The populations of the Sahel and Sub-Saharan Africa will be under increasing migration pressures as temperatures get hotter and the environment drier.

The argument in this chapter is that the asymmetry between climate and politically driven refugees will even out between Asia and the Middle East/Africa. Stated differently, quite simply, the populations of the Sahel and Sub-Saharan Africa will be under increasing migration pressures as temperatures get hotter and the environment drier, with accompanying weather-related unpredictability. There can be no question that the states of the Middle East and Africa face a dangerous combination of climate and society fragility risk factors that could drive new waves of climate refugees (G7, 2015). Moreover, the states of the Sahel and Sub-Saharan Africa lack the climate adaptive capacities of richer, developed states. Their infrastructures are already having trouble coping with existing population pressures (Bello-Schünemann et al., 2011). Head of the American Security Project, Retired Marine Corps General Stephen A Cheney, characterised the problem to researchers at the Environmental Justice Foundation as follows: "...wait 20 years and see what happens when climate change drives people out of Africa, the Sahel especially, and we are talking now not just one or two million but 10 to 20 [million], and they are not going to South Africa, they are crossing the Mediterranean."²

4. Mediterranean cities and refugee populations

This chapter argues that deteriorating environmental conditions due to climate change combined with political instability threaten to turn this population movement from south to north into a veritable tsunami that will increase in force over the century as it impacts Mediterranean rim cities. Migrants will first swell the cities on the southern shores, stressing already overburdened infrastructures for housing, education, law enforcement, fresh water, sanitation and sewage, electricity generation, and garbage disposal. In short, they will make an already bad situation much worse. Many of these states: Morocco, Libya, Algeria and Tunisia already lack the capacity to deal with the migrant burdens now imposed upon them. Many of the new migrants will seek to join others crossing the Mediterranean by sea into the cities of the northern shore, creating a symbiotic mirror of the problems in the south that will be transported to the north.

How are these cities to address these multiple and interconnected crises? As a first step, city planners in the affected cities should avoid warehousing these populations in tent cities – as currently practiced by the UN. There is a growing awareness that there are useful lessons that can be learned from the world's experiences in accommodating refugee and displaced populations. As noted by Kilian Kleinschmidt, former official with the UN High Commission on Refugees: "I think we have reached the dead end almost where the humanitarian agencies cannot cope with the crisis. We're doing humanitarian aid as we did 70 years ago after the second world war. Nothing has changed."³ People spend an average of 17 years in camps and, once constructed, these camps become permanent fixtures.

Lessons from the UN's experiences can be usefully combined with the principles of "Smart Cities" to develop templates that cities can use to adapt to the requirements of integrating climate refugees

2. Quoted in *Beyond Borders: Our Changing Climate – its role in displacement and conflict*, Environmental Justice Foundation, London, 2017: 4.

3. Talia Radford, "Refugee Camps are Cities of Tomorrow", *de Zeen*, November 23, 2015; online at <https://www.dezeen.com/2015/11/23/refugee-camps-cities-of-tomorrow-killian-kleinschmidt-interview-humanitarian-aid-expert/>

into expanding existing communities and build new ones (Robinson, 2017). These principles, among other things, suggest a fundamental rethinking of how planners design urban spaces and the technological platforms that can assist in integrating these spaces into vibrant, productive urban environments. Other research proposes that new urban areas focus upon creating sustainable economic opportunity and development zones to economically empower the migrant populations and make the urban areas economically sustainable (Refugee Cities, 2016).

Another avenue of adaptation for cities is to examine the experiences of planners at the annual Burning Man festival that establishes a community of 50,000+ people at Blackrock in the Nevada desert. For example, the festival launched a competition in 2016 called the *Big Book of Ideas* that resulted in over 100 plans designed by experts in 30 different countries. Such outreach could be used by Mediterranean cities to generate ideas and thinking as they contemplate the looming wave of environmental refugees.

Considering the prospect of adding to existing and/or creating new urban areas represents an opportunity for Mediterranean cities to take advantage of the theories suggesting a shift from cities designed based on the principles of centralised authority, hierarchy and institutionalism. Instead, planners can view these urban areas in holistic terms as complex social, physical and cultural ecosystems – principles around which to design new spaces and adapt old ones. This can lead planners into thinking about how to design urban spaces in ways that promote cultural assimilation, self-governance and relative economic independence (Williams, 2017).

Considering the prospect of adding to existing and/or creating new urban areas represents an opportunity for Mediterranean cities to take advantage of the theories suggesting a shift from cities designed based on the principles of centralised authority, hierarchy and institutionalism.

5. Implications for violence and unrest

Despite regrettable popular perceptions to the contrary, violent extremism and terrorism do not necessarily go hand in hand with migration. Political violence that manifests itself as terrorism is a complex phenomenon, and there is no consensus on the causes of radicalisation that results in attacks. Research points to myriad factors: structural factors in society that cause political alienation; a personal grievance that stems from some sort of act by a political actor; or charismatic leadership of a group that attracts followers, for example (McCormick, 2003). Suffice to say, however, migrants have been involved in a number of recent terrorist attacks in Europe, including Paris (March 2015, 137 killed and 413 injured), Brussels (March 2016, 35 killed and 340 injured) and Manchester (May 2017, 23 killed and 512 injured). As many as 5,000 Europeans have gone to the battlefields in the Middle East to fight in support of Islamic extremism. An estimated 1,500 have returned home to be reintegrated into their respective societies, with thousands more in refugee camps in Turkey and elsewhere awaiting repatriation (Schmitt, 2017).

The European Union and its host governments have created new data bases and greatly increased intelligence sharing with each other and their law enforcement agencies to gather and collate information on returning militants. This information sharing from such agencies

Cooperatively planning now for the migrant flows that will materialise from climate change represents an opportunity for the cities to restructure themselves in ways that reflect the advances in city planning and urban design offered by Smart and Wise City design principles.

as Europol is wending its way into the police departments of many European cities. This information will help but will not eliminate the threat of future attacks – which are sure to occur.

It remains unclear how long the Middle East will remain unstable – with the havens this instability provides for violent extremists. Despite the taking of Raqqa and Mosul from ISIS in 2017, there has been an undeniable migration of ISIS fighters not killed or rounded up there to Libya, the Sahel in Sub-Saharan Africa, and elsewhere (UN, 2017). As a phenomenon, ISIS needs to be seen more as symptom than as an actual problem. Regional instability stems from unsettled political and religious arguments that show no signs of being settled. The region's authoritarian regimes show no interest in creating viable political processes under which the grievances can be settled peacefully. Further complicating the environment is that groups like ISIS are committed revolutionaries that are so far uninterested in accommodation – meaning there can be no negotiated settlement even if a political process existed to address grievances. Lastly, the instability is also fed by regional rivals in Riyadh, Tehran and Tel Aviv, and Moscow and Washington – ensuring that the wars in places like Syria, Yemen and Libya will continue longer than they otherwise would.

The argument of this chapter is that migrant flows from persistent instability are becoming joined with and will almost certainly be subsumed by migrant flows created by environmental and climate pressures. Environmental refugees are a different kind of displaced and refugee population. It is not axiomatic that the Mediterranean cities of the northern and southern rims will see unrest and instability as the migrant flows build over the rest of the century – although some violence and instability is inevitable. While much is made of the prospect of violent extremists infiltrating societies as part of the refugee/displaced person flows, much more serious is what happens to these populations once they arrive and the degree of integration and assimilation into new societies with differing cultures. It is imperative that the rim cities begin collaborating now to deal with these issues.

6. Conclusion

The chapter argues that the pressures of environmental refugees will gather inexorable momentum over the rest of the century and beyond as the earth's environment continues to deteriorate – with catastrophic consequences for humanity. For the Mediterranean region, however, all is not lost. As noted at the outset of the chapter, the cities bordering this great body of water have had a long, symbiotic relationship with one another. Cooperatively planning now for the migrant flows that will materialise from climate change represents an opportunity for the cities to restructure themselves in ways that reflect the advances in city planning and urban design offered by Smart and Wise City design principles. This could allow the cities to turn these populations into positive, environmentally sustainable forces with economic, political, social, technological and cultural vitality.

Increased migrant flows will invariably stress the already-strained urban infrastructures of the rim cities. They will also create challenges for stability and security. Environmental refugees and their political brethren from the Middle East's broken societies are sure to arrive with political, cultural and religious expectations – not all of which will be successfully met no matter how smart and wise their host cities may be.

Perhaps the biggest challenge facing the rim cities and the host states will be the politics that accompany embracing and accepting migrant populations. Recent developments both in Europe and the United States show the dangerous mismatch between the strategic realities of climate change and the associated political reaction that feeds xenophobic and reactionary policies. Given their long history that goes back to Roman times, however, perhaps the rim cities of the Mediterranean can avoid this outcome and embrace the opportunities and challenges represented by the coming wave of environmental refugees.

References

Bello-Schünemann, Julia; Cilliers, Jakkie; Donnenfeld, Zachery; Aucoin, Ciara, and Porter, Alex. *African Futures: Key Trends*. Institute for Security Studies (May 2017) (online) [Accessed April 10, 2018] <https://issafrica.org/research/policy-brief/african-futures-key-trends-to-2035> .

The Big Book of Ideas: Black Rock City – 2016 Plan Design Competition (online). [Accessed February 6, 2017] <https://drive.google.com/file/d/0B9AoDedk-B3XOTdvazZYSVJBuzQ/view>

Brauch, Hans Gunter Brauch, *et al.* (eds.) *Security and Environment in the Mediterranean*. Heidelberg and Berlin: Springer-Verlag, 2003.

Dragastovina, Theodora. "Refugees or Immigrants? The Migration Crisis in Europe in Historical Perspective". *Origins* 9, no. 4 (January 2016) (online) [Accessed April 23, 2018] <http://origins.osu.edu/article/refugees-or-immigrants-migration-crisis-europe-historical-perspective>

European Environment Agency. "Mediterranean Sea Briefing – The European Environment – state and outlook 2015" (online). [Accessed February 5, 2018] <https://www.eea.europa.eu/soer-2015/countries/mediterranean>

Fargues, Phillip and Frandrich, Christine. "Migration After the Arab Spring". *Migration Policy Centre, Research Report* (2012/09) (online) [Accessed January 23, 2018] <http://www.migrationpolicycentre.eu/docs/MPC%202012%20EN%2009.pdf>

Foster, Gavin *et al.* "Future Climate Forcing Potentially Without Precedent in the Last 420 Million Years". *Nature Communications* (April 4, 2017) (online) [Accessed February 1, 2018] <http://www.nature.com/articles/ncomms14845>

Fountain, Henry *et al.* "2017 Was One of the Hottest Years on Record". *The New York Times* (January 18, 2018).

G7. "A New Climate for Peace: Taking Action on Climate and Fragility Risks" (2015) (online). [Accessed February 12, 2018] <https://www.newclimateforpeace.org>

IPCC. *IPCC Climate Change 2014: Synthesis Report* (2014) (online) [Accessed January 20, 2018] http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf

Karasapan, Omer. "The Internally Displaced in the Middle East and North Africa: Harbingers of Future Conflict?" *Future Development Blog* (July 5, 2017). Brookings Institution (online) [Accessed February 1, 2018] <https://www.brookings.edu/blog/future-development/2017/07/05/the-internally-displaced-in-the-middle-east-and-north-africa-harbingers-of-future-conflict/>

Khan, Brian. "We just breached the 410 parts per million threshold". Climate Central (April 20, 2017) (online). [Accessed January 25, 2018] <http://www.climatecentral.org/news/we-just-breached-the-410-parts-per-million-threshold-21372>.

McCormick, Gordon. "Terrorist Decision Making". *Annual Review of Political Science*, vol. 6 (June 2003), pp. 473–507.

Norwegian Refugee Council. "On the Grid and, Part 2, Off the Grid" (May 2017) (online). [Accessed February 1, 2018] <http://www.internal-displacement.org/global-report/grid2017/>

Radford, Talia. "Refugee Camps are Cities of Tomorrow", *de Zeen* (November 23, 2015) (online) <https://www.dezeen.com/2015/11/23/refugee-camps-cities-of-tomorrow-killian-kleinschmidt-interview-humanitarian-aid-expert/>

Refugee Cities. "Refugee Cities: Expanding Options for Displaced People Through Special Economic Zones" (November 2016) (online) [Accessed February 7, 2018] <https://refugeecities.files.wordpress.com/2016/11/refugee-cities-concept-paper-november-2016.pdf>

Rice, Candace. "Southern Mediterranean Port Cities as Microcosms of Interconnectivity". Presented at XVII International Congress of Classical Archaeology, September 22–26, 2008. (online) [Accessed February 2, 2018] http://www.bollettinodiarcheologiaonline.beniculturali.it/documenti/generale/1_RICE.pdf

Robinson, Rick. "Smart City Design Principles". The Urban Technologist. (online) [Accessed February 6, 2018] <https://theurbantechnologist.com/smarter-city-design-principles/>

Schmitt, Eric. "ISIS Fighters are Not Flooding Back Home to Wreak Havoc as Feared". *The New York Times* (October 22, 2017).

Science Daily. "Mediterranean Sea Levels Could Rise by Over Two Feet, Global Models Predict" (March 4, 2009) (online) [Accessed February 5, 2018] <https://www.sciencedaily.com/releases/2009/03/090303084057.htm>

United Nations. *Twentieth Report of the Analytical Support and Sanctions Monitoring Team* submitted pursuant to resolution 2253 (2015) concerning ISIL (Da'esh), Al Qaeda and associated individuals and entities, S/2017/573 (August 7, 2017).

Williams, Phoebe. "From Smart to Wise: Cities of the Future". *RSA* (November 17, 2017) (online) [Accessed February 2, 2018] <https://www.thersa.org/discover/publications-and-articles/rsa-blogs/2017/11/from-smart-to-wise-cities-of-the-future>

