

# Migration

Week 6 of POLS3033 Environment, Human Security and Conflict

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School of Politics & International Relations

Image source: Foreign Affairs (<https://www.foreignaffairs.com/articles/americas/2019-10-15/nowhere-go>)



# I. Migration—trends and types



Image source: Foreign Affairs (<https://www.foreignaffairs.com/articles/americas/2019-10-15/nowhere-go>)

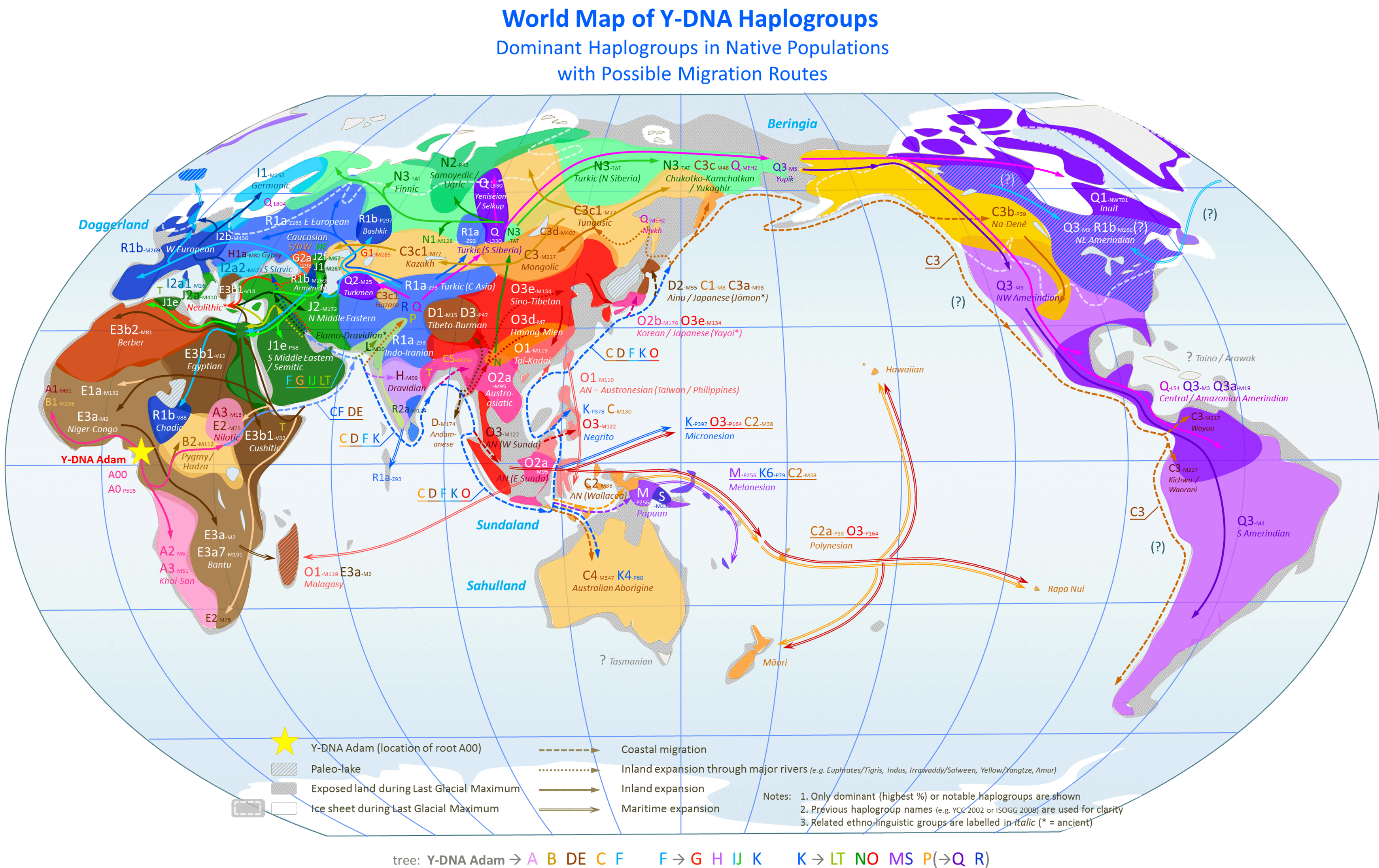


# We are witnessing an unprecedented era of human mobility

- 232 million **international** migrants (IOM 2015: 2)
- 740 million **internal** migrants (IOM 2015: 2)
- **Half** of all migrants are in ten countries.
  - Australia, Canada, USA, France, Germany, Spain, United Kingdom, Russia, Saudi Arabia, & UAE (IOM 2015: 2)
- 3 million people move to **cities** every week. (UN-Habitat 2009)



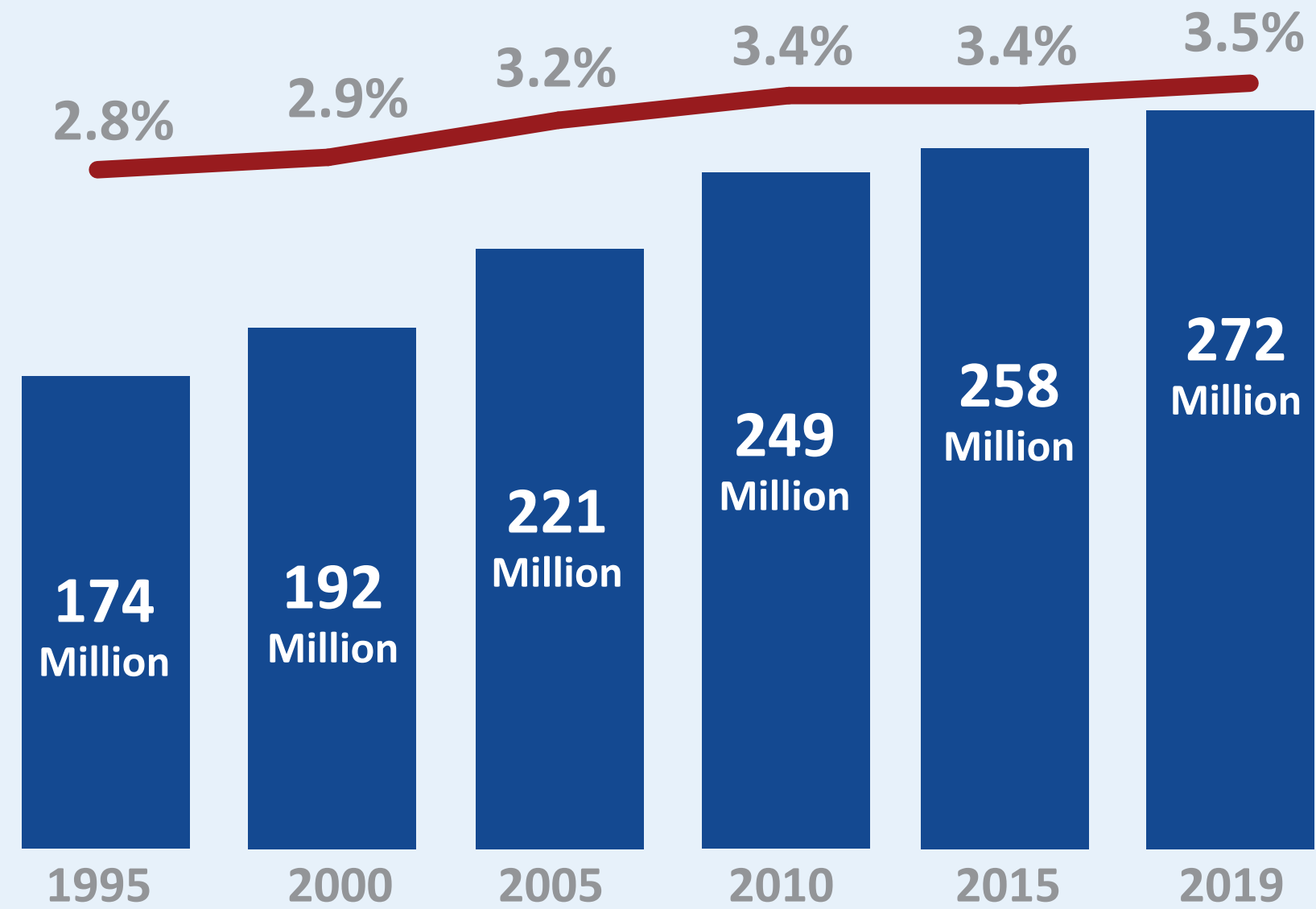
# Human history is a story of migration



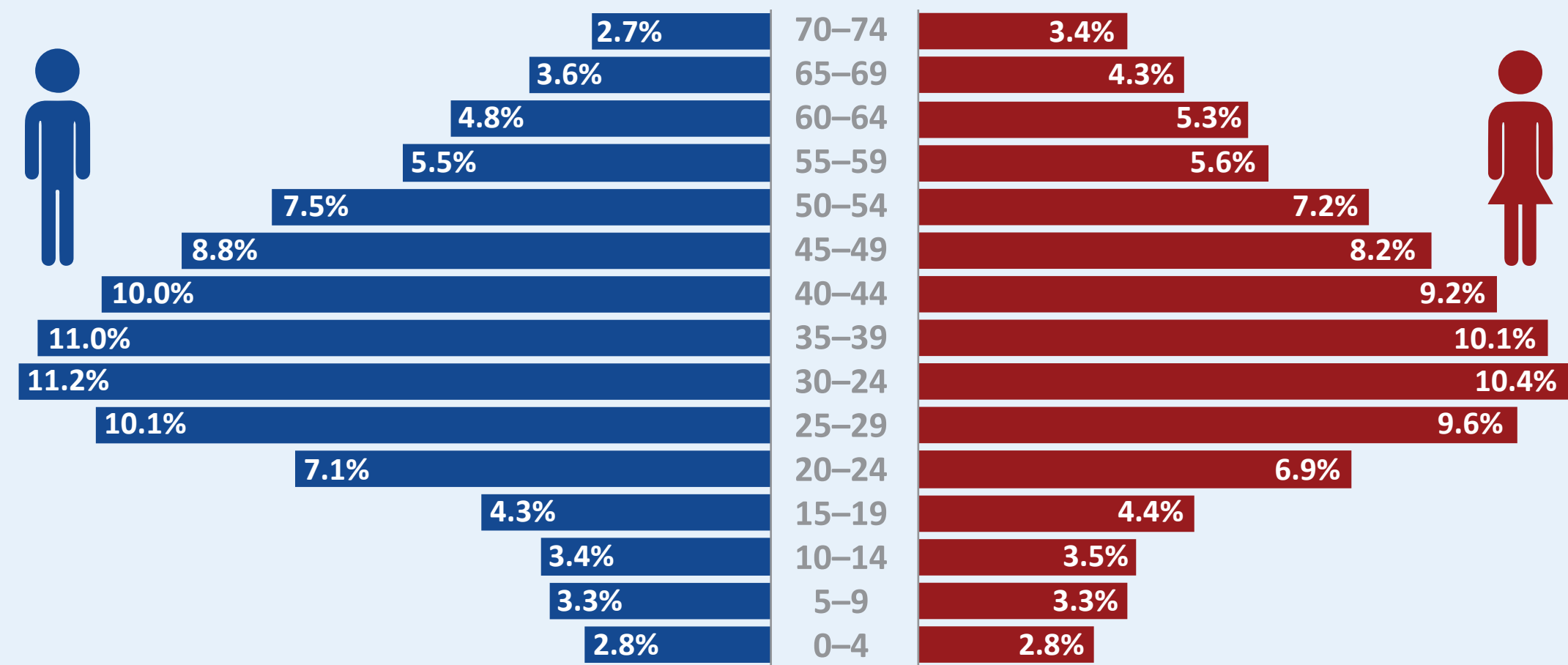


# Snapshot of international migrants

The international migrant population globally has increased in size but remained relatively stable as a proportion of the world's population



52% of international migrants are male, 48% are female

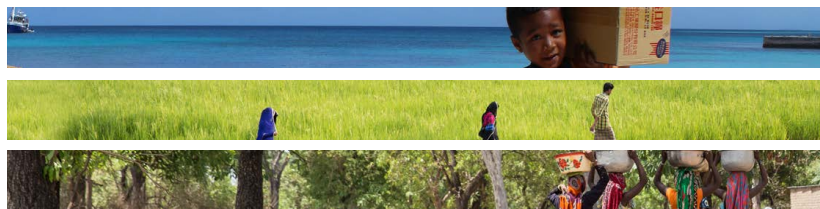


Most international migrants (74%) are of working age (20–64 years)

\*Age groups above 75 years were omitted (male 4%, female 6%).

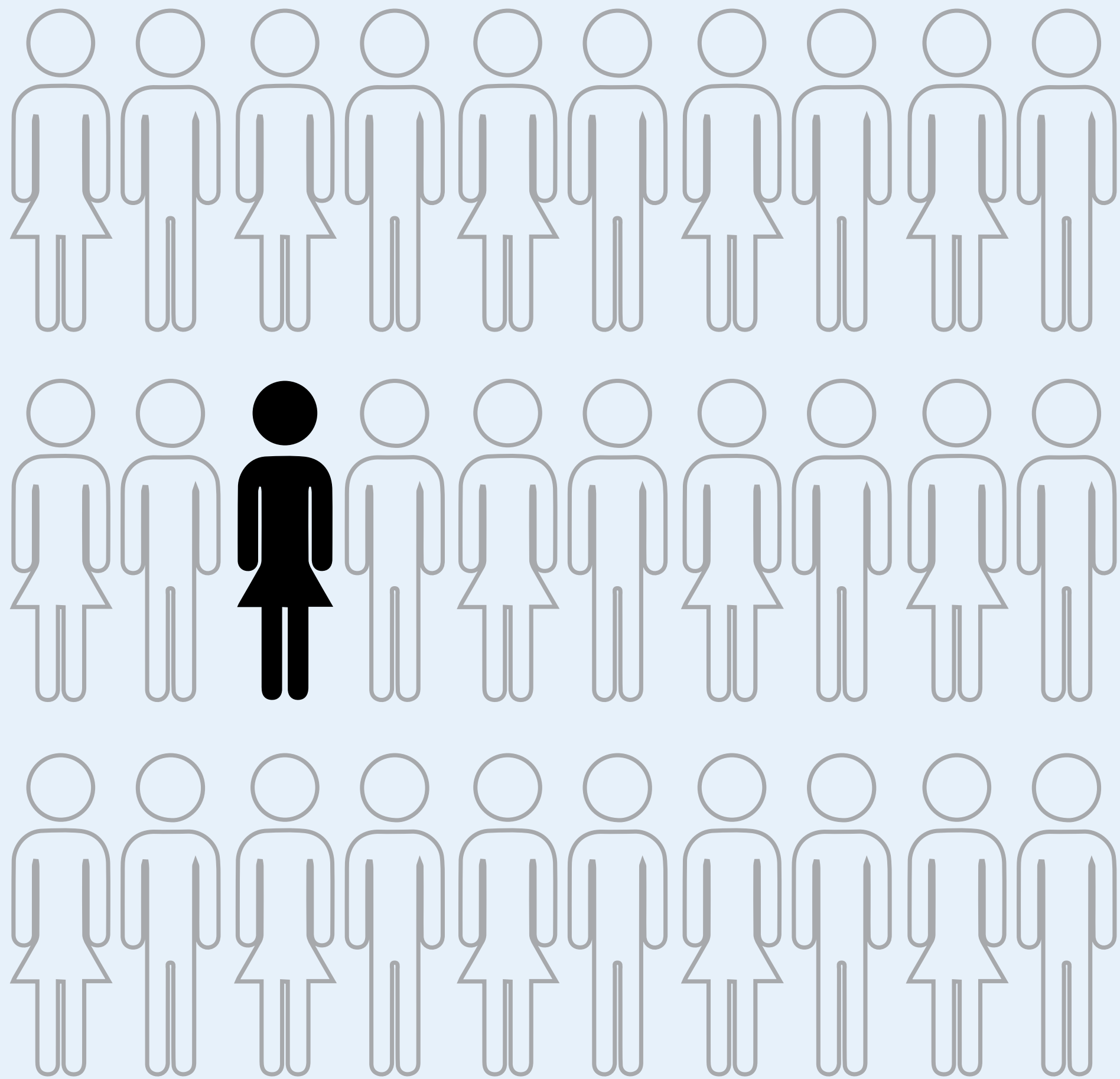


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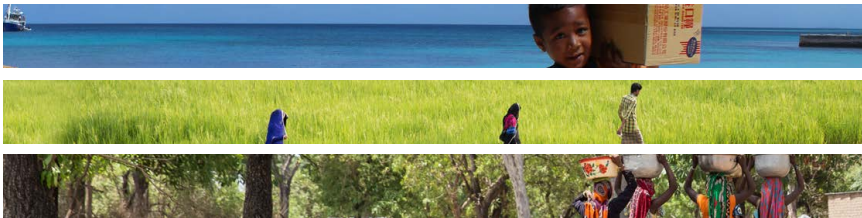
272 million international migrants in 2019 out of a global population of 7.7 billion:  
1 in every 30 people



*Note:* Infographics based on UN DESA, 2019a and UN DESA, 2019c.

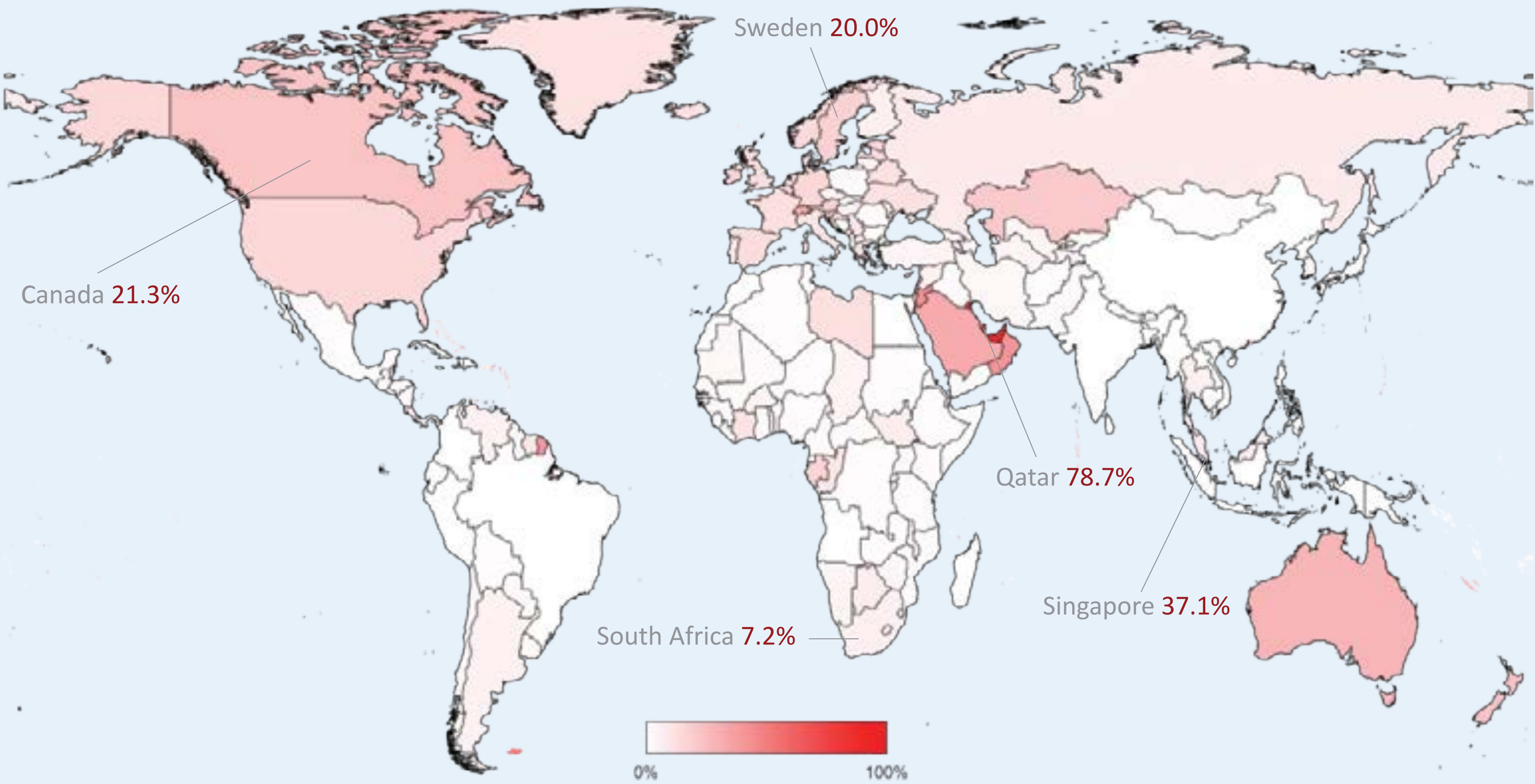


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The proportion of international migrants varies significantly around the world



*Note:* This map is for illustration purposes only. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the International Organization for Migration.



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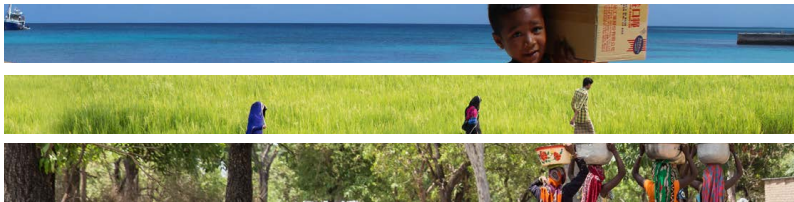
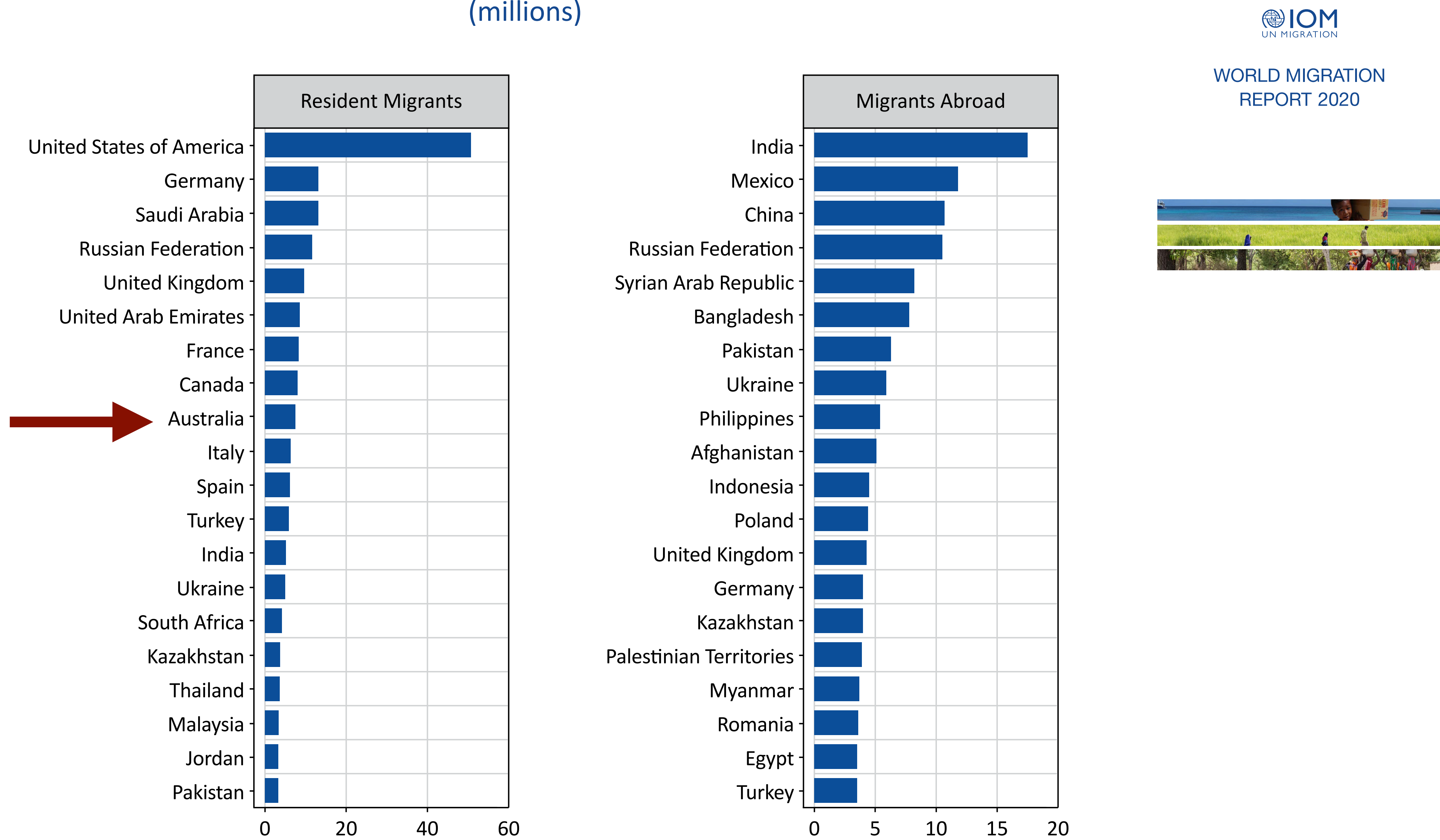




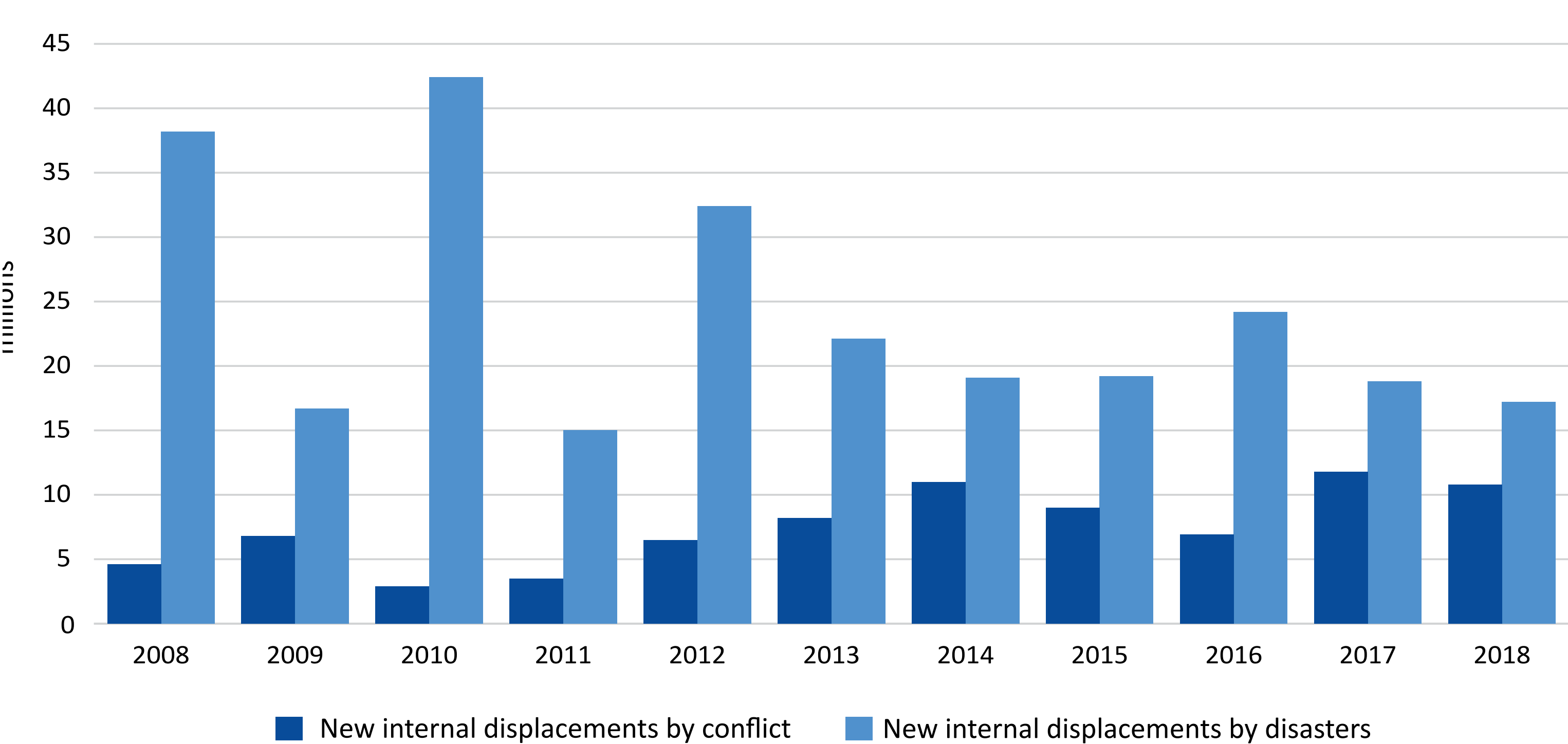
Figure 3. Top 20 destinations (left) and origins (right) of international migrants in 2019 (millions)



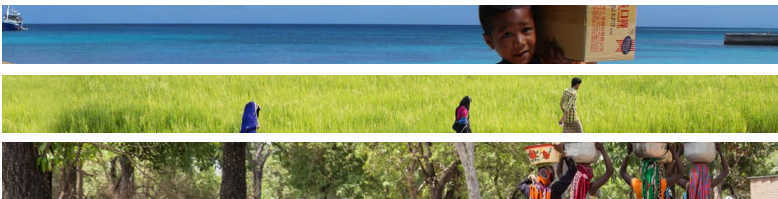
Source: UN DESA, 2019a (accessed 18 September 2019).



Figure 12. New internal displacements by conflict and disasters, 2008–2018 (millions)



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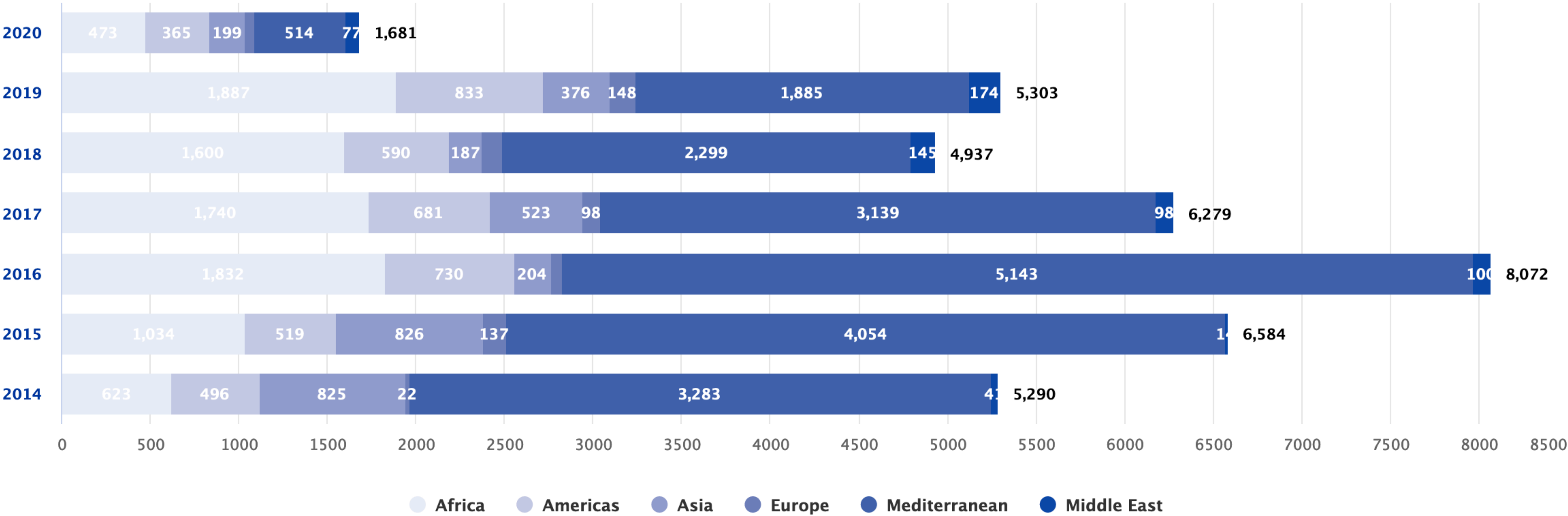


Source: IDMC, n.d. (accessed 4 June 2019).

Notes: The term “new displacements” refers to the number of displacement movements that occurred in a given year, not the total accumulated stock of IDPs resulting from displacement over time. New displacement figures include individuals who have been displaced more than once, and do not correspond to the number of people displaced during a given year.



# Recorded migrant deaths by region

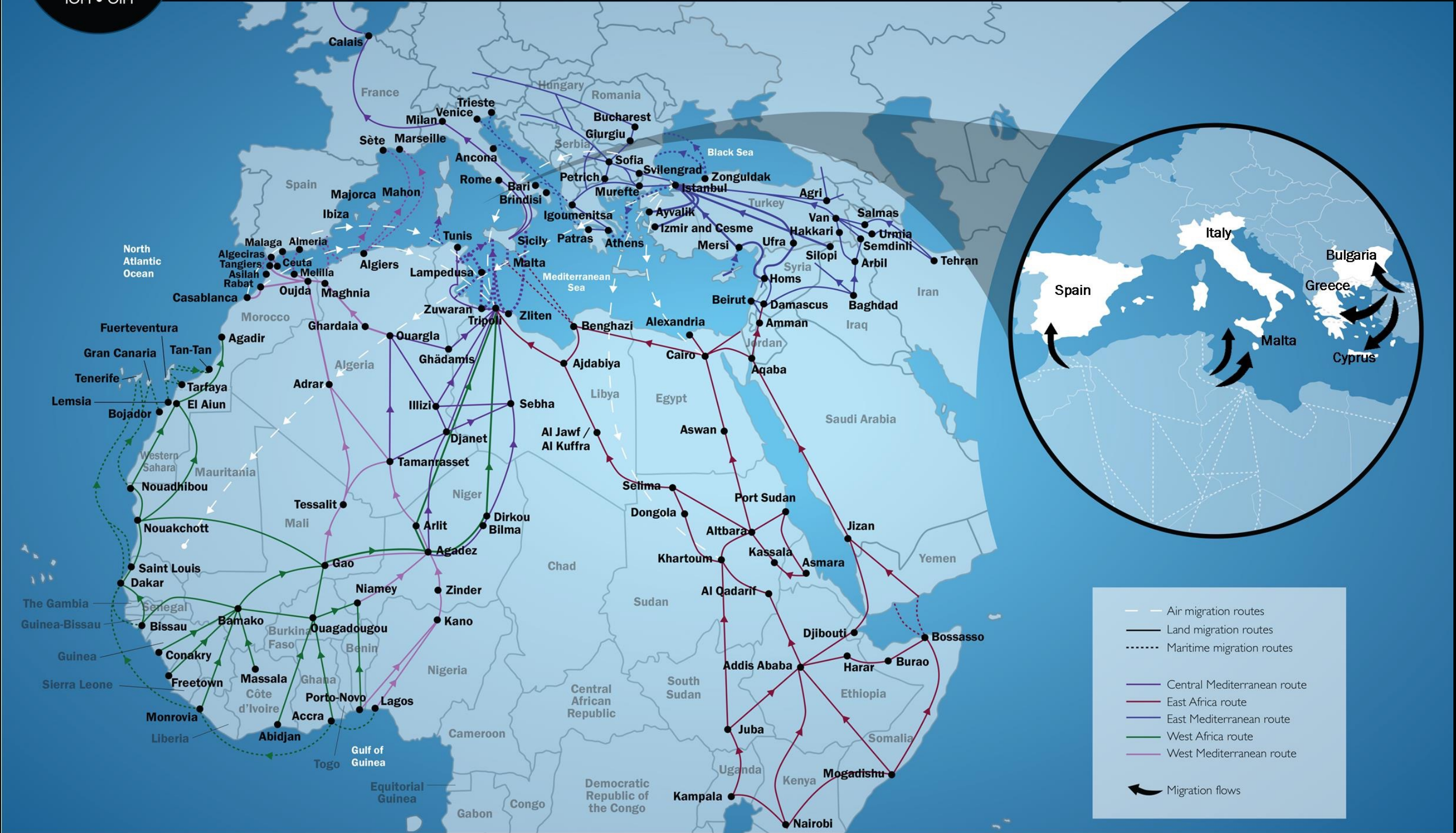


Source: IOM (<https://missingmigrants.iom.int/>)





# Migrant Routes: Mediterranean 2016



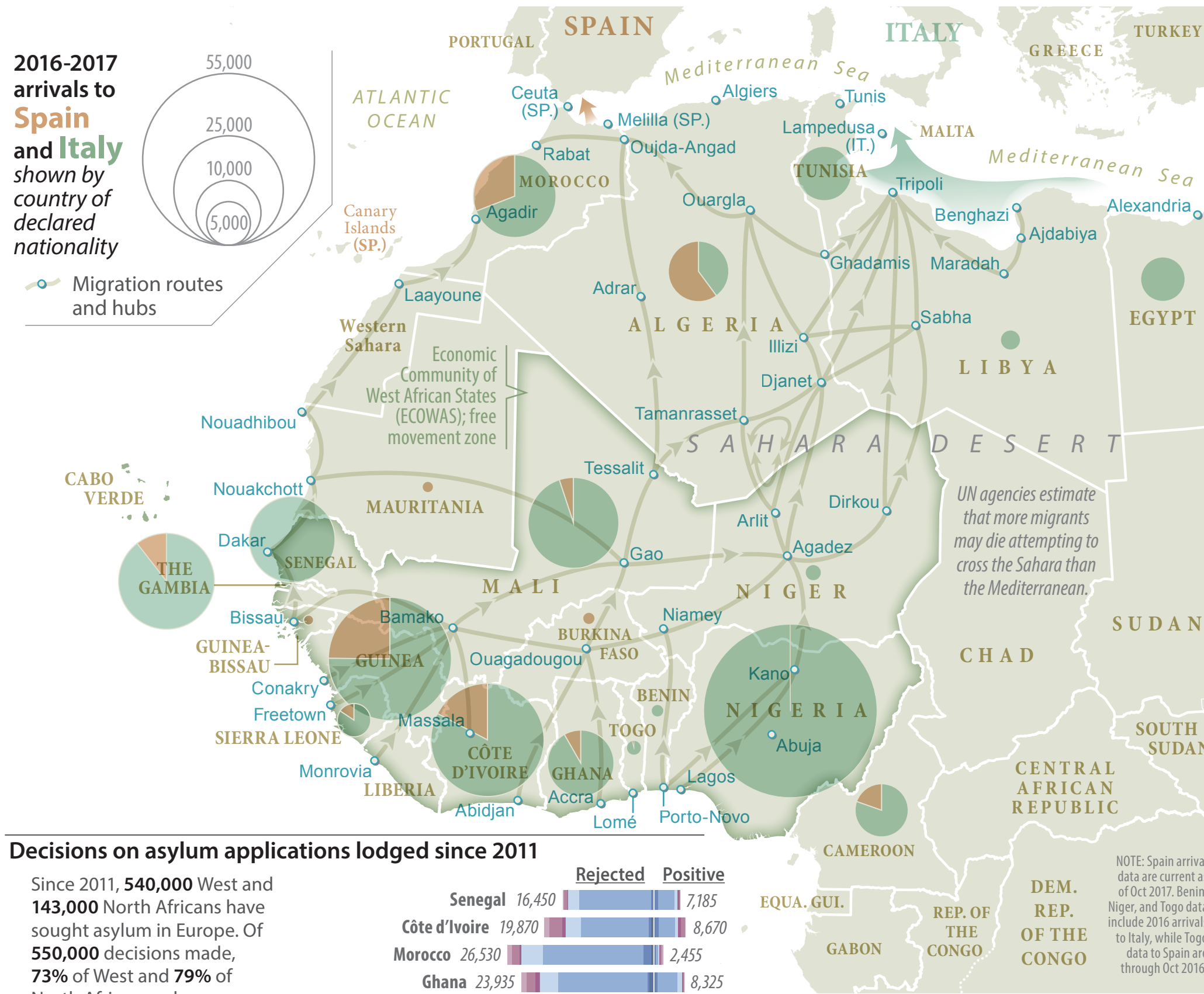
International Organization for Migration (IOM) - Preparedness and Response Division (PRD) and Media and Communications Division (MCD)  
Names and boundaries indicated on map do not imply official endorsement or acceptance by IOM. 27/4/16

Migration.iom.int

Source: International Organization for Migration  
(<http://missingmigrants.iom.int/migrant-routes-mediterranean-27-april-2016>)

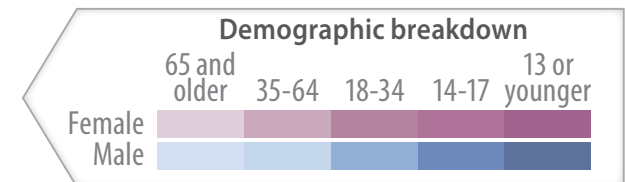


indefinite detention. The UN's voluntary humanitarian return program assisted over 19,000 migrants to return to their home countries from Libya in 2017, up from around 3,000 assisted migrant returns from Libya in 2016. An estimated 400,000–700,000 migrants live in detention in Libya.



	Rejected	Positive
Senegal	16,450	7,185
Côte d'Ivoire	19,870	8,670
Morocco	26,530	2,455
Ghana	23,935	8,325
The Gambia	29,125	11,360
Mali	27,240	15,485
Guinea	32,455	13,895
<b>Total</b>	<b>167,605</b>	<b>67,130</b>

NOTE: Spain arrival data are current as of Oct 2017. Benin, Niger, and Togo data include 2016 arrivals to Italy, while Togo data to Spain are through Oct 2016.



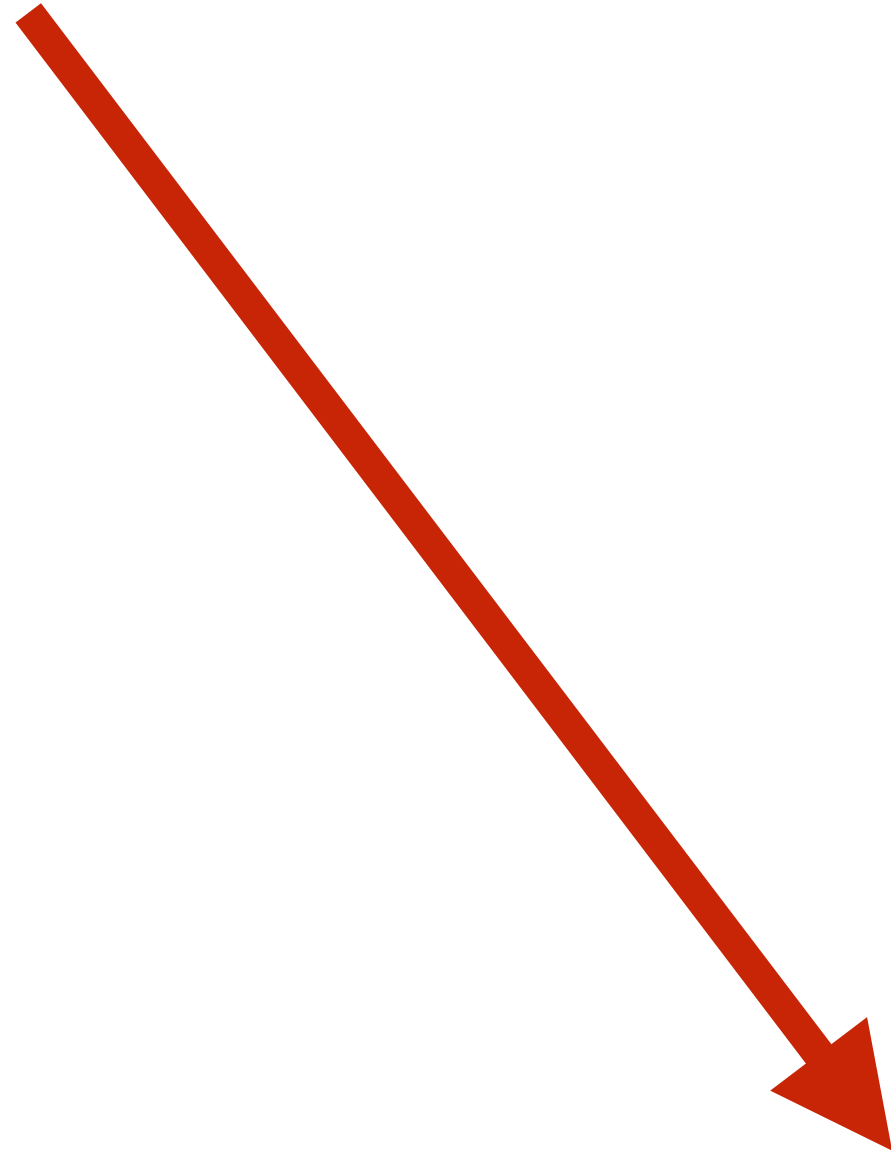


# Migration—types

- Voluntary **economic** migration
- Involuntary **refugees** from conflict zones or repressive governments
- **Environmental** migrants



# Economic migrant

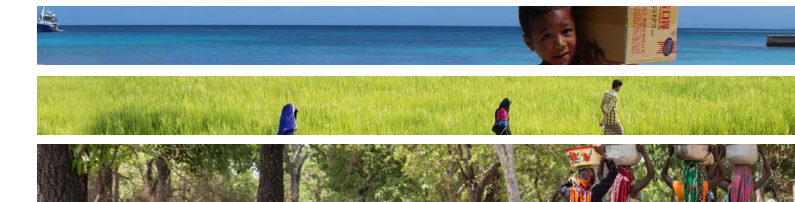
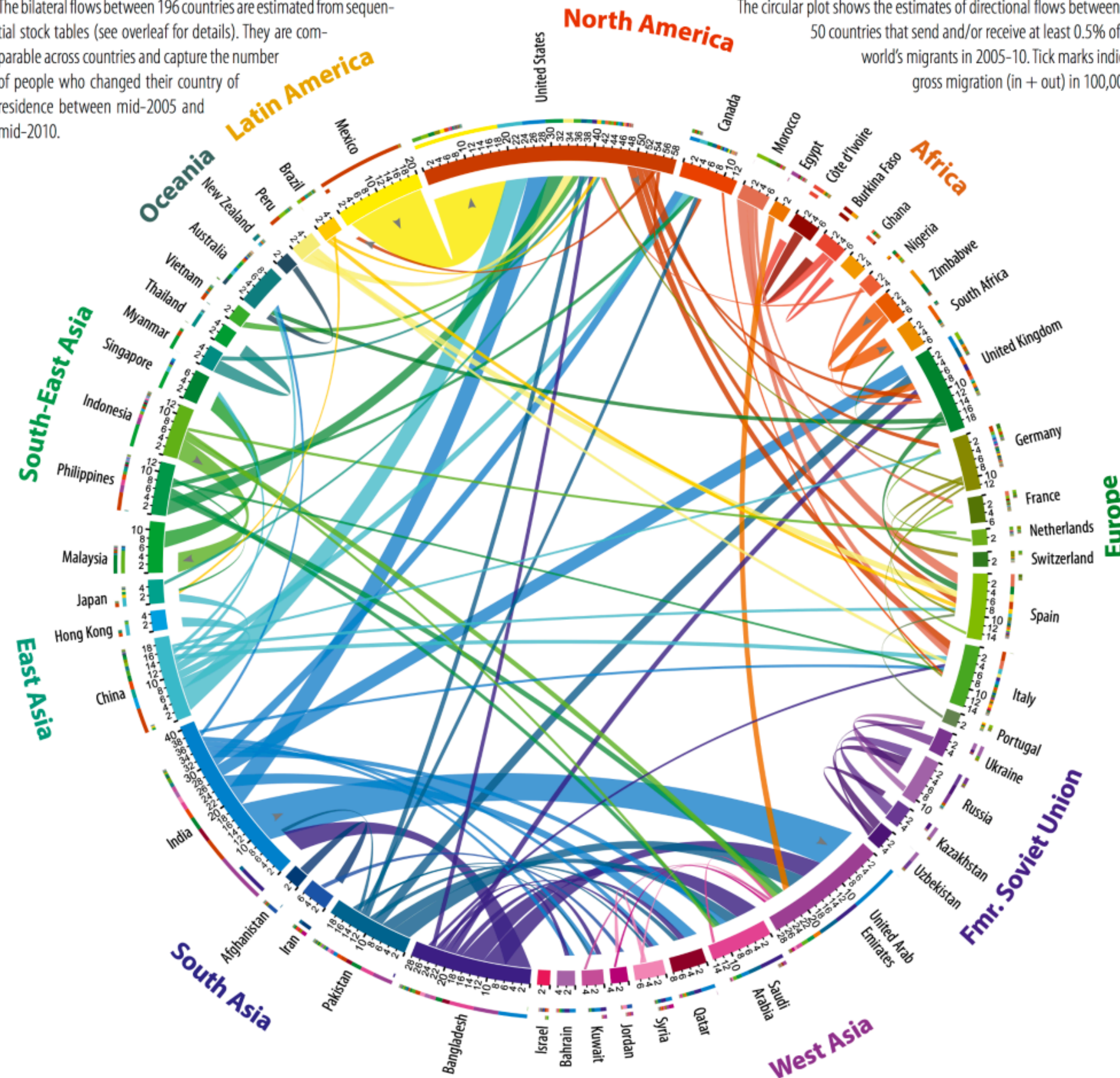




# Economic migration

The bilateral flows between 196 countries are estimated from sequential stock tables (see overleaf for details). They are comparable across countries and capture the number of people who changed their country of residence between mid-2005 and mid-2010.

The circular plot shows the estimates of directional flows between the 50 countries that send and/or receive at least 0.5% of the world's migrants in 2005-10. Tick marks indicate gross migration (in + out) in 100,000's.





## Remittances to Developing Countries Versus Other External Financing Flows.

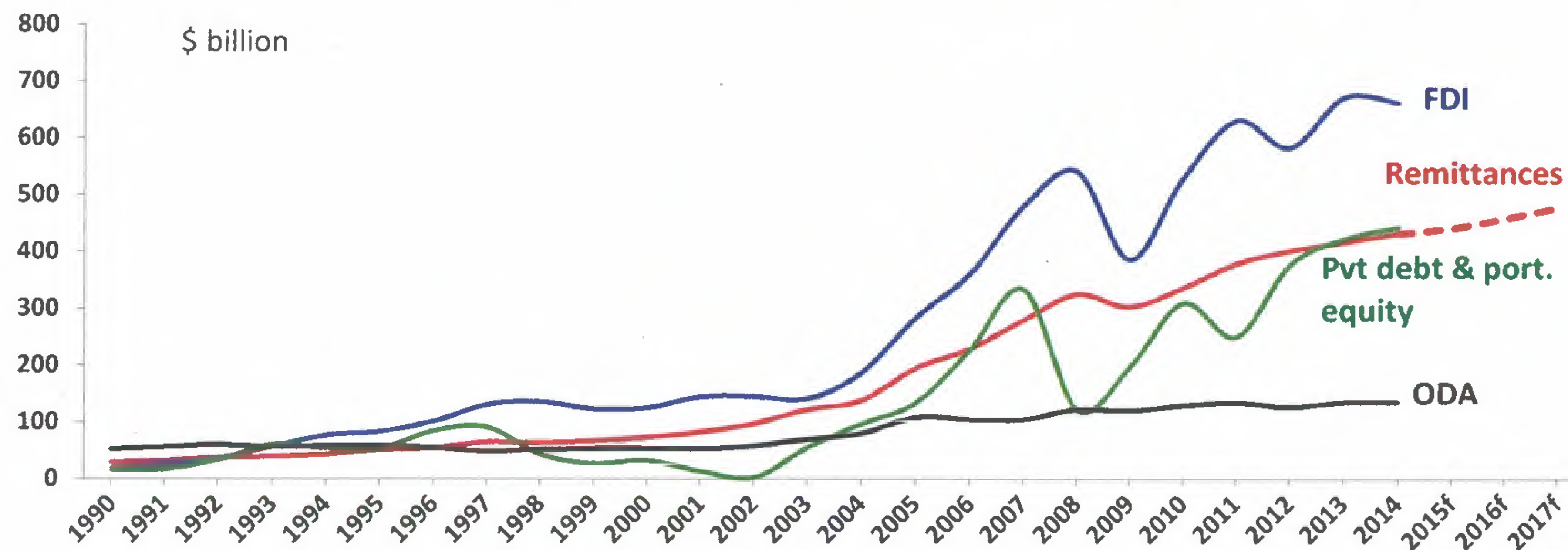


Table 1. Resource flows to developing countries

US\$ billionss

	1990	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015f
Remittances	29	73	194	229	280	325	303	336	378	401	416	431	441
FDI	19	125	284	361	480	541	385	529	630	583	671	662	-
ODA†	53	54	108	105	105	123	121	129	135	127	135	135	-
Private debt and portfolio equity	16	32	134	228	334	122	197	309	250	376	422	443*	-

† OECD Development Assistance Committee (DAC) online database (<http://www.oecd.org/dac>).

\* Estimated flow



Top countries sending remittances							
2005		2010		2015		2017 <sup>a</sup>	
United States	47.25	United States	50.78	United States	61.86	United States	67.96
Saudi Arabia	14.30	Saudi Arabia	27.07	United Arab Emirates	40.33	United Arab Emirates	44.37
Germany	12.71	Russian Federation	21.45	Saudi Arabia	38.79	Saudi Arabia	36.12
Switzerland	10.52	Switzerland	17.76	Switzerland	25.40	Switzerland	26.60
United Kingdom	9.64	Germany	14.68	China	20.42	Germany	22.09
France	9.48	Italy	12.89	Russian Federation	19.69	Russian Federation	20.61
Republic of Korea	6.9	France	12.03	Germany	18.03	China	16.18
Russian Federation	6.83	Kuwait	11.86	Kuwait	15.20	Kuwait	13.76
Luxembourg	6.70	Luxembourg	10.65	France	12.79	France	13.50
Malaysia	5.68	United Arab Emirates	10.57	Qatar	12.19	Republic of Korea	12.89

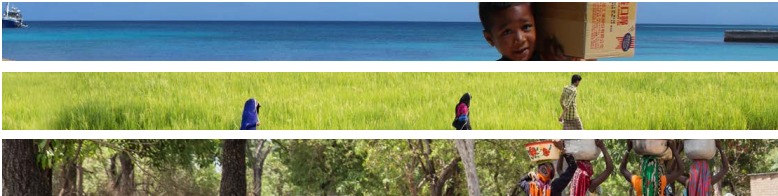


Table 3. Top countries receiving/sending remittances (2005–2018) (current USD billions)

Top countries receiving remittances					
2005		2010		2015	
China	23.63	India	53.48	India	68.91
Mexico	22.74	China	52.46	China	63.94
India	22.13	Mexico	22.08	Philippines	29.80
Nigeria	14.64	Philippines	21.56	Mexico	26.23
France	14.21	France	19.90	France	24.06
Philippines	13.73	Nigeria	19.75	Nigeria	21.16
Belgium	6.89	Germany	12.79	Pakistan	19.31
Germany	6.87	Egypt	12.45	Egypt	18.33
Spain	6.66	Bangladesh	10.85	Germany	15.81
Poland	6.47	Belgium	10.35	Bangladesh	15.30
				Viet Nam	15.93



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From  Australia you can also send money to

Transfer money ☒ from ☐ to

## Sending money from AUSTRALIA to CHINA

**Data collected on: May 11, 2020**





























































Collection period for **Second Quarter 2020** ▼

AUD | USD

Alert me when new data published here	Email address	<b>Subscribe/Unsubscribe</b>
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200.00 AUD

500.00 AUD

Firm	Payment instrument	Access point	Sending network coverage	Transfer speed	Receiving method	Disbursing network coverage	Fee	Exchange rate margin (%)	Total cost (%)	Total cost (AUD)
Citibank 		Internet	High			High	0.00	1.27 	1.27	2.54
Western Union 		Internet	High			High	3.00	0.67 	2.17	4.34
Western Union 		Agent	High			High	2.99	0.72 	2.22	4.44
Transferwise 		Internet	High			High	6.75	0.02 	3.40	6.80
Western Union 		Internet	High			High	7.00	0.67 	4.17	8.34
MoneyGram 		Agent	High			High	8.00	0.31 	4.31	8.62
Western Union 		Agent	High			High	10.00	0.67 	5.67	11.34
Money Chain Foreign Exchange 		Agent, Call Center	High			High	18.00	-1.50 	7.50	15.00
SUPAY 		Agent, Call Center	High			High	18.00	0.73 	9.73	19.46
Ceylon Exchange 		Agent	High			High	15.00	2.74 	10.24	20.48
Ria 		Agent	High			High	18.00	6.40 	15.40	30.80
Bank of China 		Internet	High			High	28.00	3.91 	17.91	35.82
Total Average Second Quarter 7.00		Total Average First Quarter 7.08		Total Average			11.23	1.38	7.00	14.00



# Upside of economic/environmental migration?

## John Schreiner on wine

Writer and wine columnist John Schreiner is Canada's most prolific author of books on wine.

SUNDAY, MARCH 29, 2009

### ➔ Winemaker Pascal Madevon becomes a Canadian

Photo of Pascal Madevon courtesy of Vincor



Chalk up another win for the Okanagan wine region: Pascal Madevon, the winemaker for Osoyoos Larose, is about to become a Canadian citizen.

Born in Paris in 1963, Pascal arrived in the Okanagan just days before the 2001 vintage, the first at the Osoyoos Larose vintage. Astonished at the quality of the grapes, hardly something he expected, he soon decided he was not going back to Bordeaux to make wine. He moved his family here in the summer of 2002.

It is a profound validation of the Okanagan when an experienced French winemaker prefers to make his career in the Okanagan.

It is even more telling how many other top winemakers have settled in the Okanagan and not in the regions where they started. For example: Tom DiBello, CedarCreek's California-trained winemaker, says there is no other place in the world where he would rather make wine.

Pascal had an urban upbringing and studied mathematics in high school before enrolling in winemaking studies at the University of Bordeaux. At the time, he had never even been on a tractor.

### About Me



Name:  
[JohnSchreiner at Goodgrog](#)  
Location:  
North Vancouver,  
British Columbia,  
Canada

John Schreiner is Canada's most prolific writer of books on wine. Since his first book in 1984, *The World of Canadian Wine*, he has written 15, including multiple editions of *The Wineries of British Columbia*, *British Columbia Wine Country* and *John Schreiner's Okanagan Wine Tour Guide*.

➔ [View my complete profile](#)

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- ➔ [Ravine Vineyards: where wine mixes with history](#)
- ➔ [New releases, new strategy from CedarCreek](#)
- ➔ [Le Clos Jordanne motors on without Frank Gehry](#)
- ➔ [Quails' Gate releases the 2007 reserve wines](#)
- ➔ [Laughing Stock pegs wine offering to stock markets...](#)
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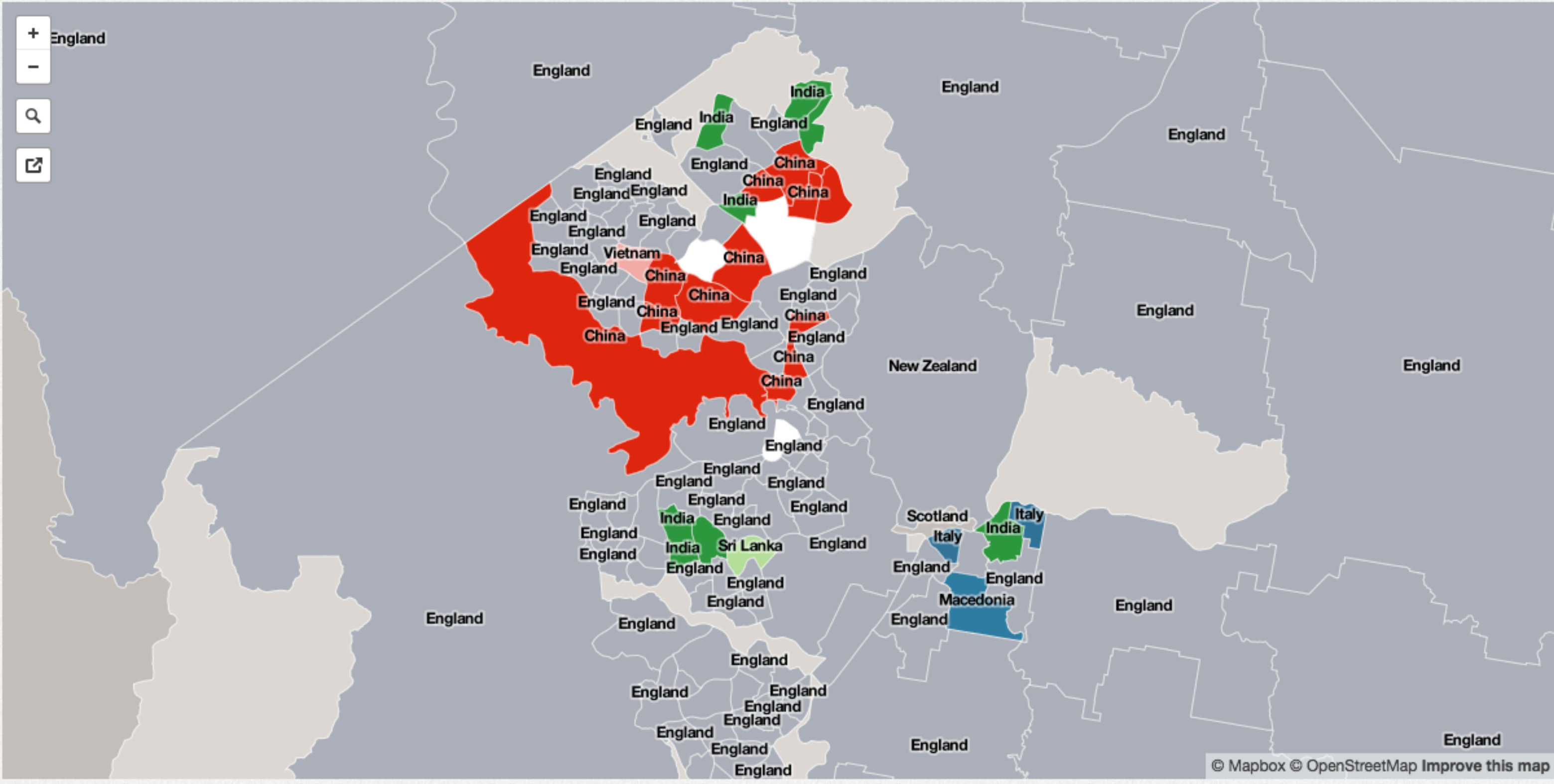


# Where Australia's immigrants were born: Canberra

This map reveals the top three birthplaces for immigrants in suburbs and towns across Australia. You can also access a map revealing birthplaces excluding English and New Zealand immigrants.

Rollover suburbs with your mouse for detailed info. Zoom and drag for a view of other cities and the nation as a whole, or click on the following links:

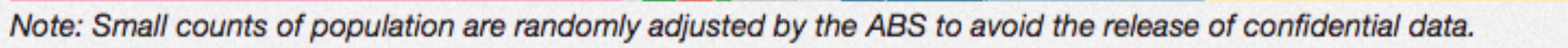
[Australia](#) | [Sydney](#) | [Melbourne](#) | [Brisbane](#) | [Adelaide](#) | [Perth](#) | [Hobart](#) | [Darwin](#)



Source: SBS (<http://www.sbs.com.au/news/map/where-australias-immigrants-were-born-canberra>)



England and NZ)



Source: <http://www.sbs.com.au/news/map/where-australias-immigrants-were-born-canberra>

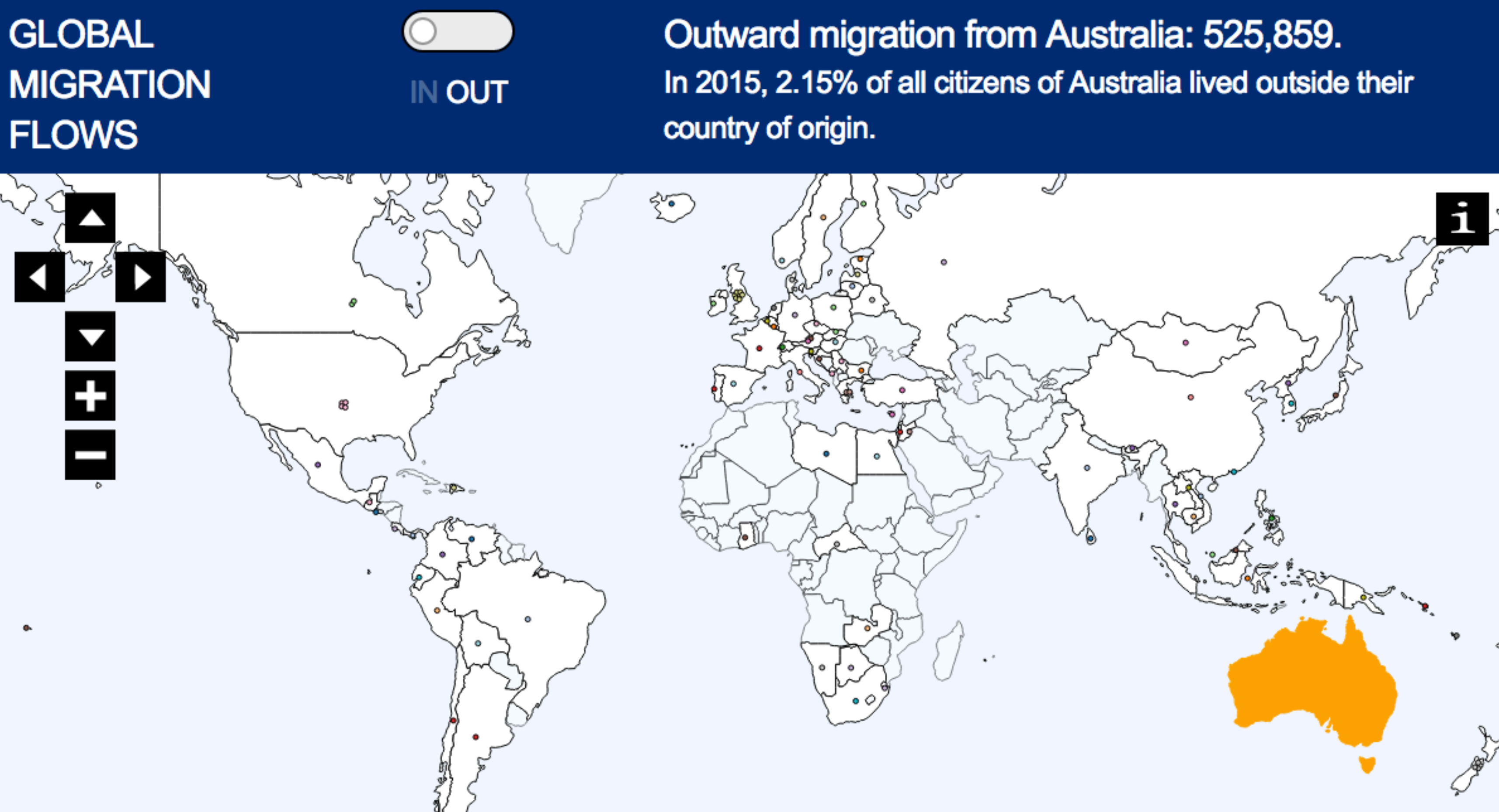


# Top 10 countries of birth for overseas-born population

1901 Census			2006 Census		
Birthplace	No.	%	Birthplace	No.	%
1. United Kingdom (b)	495 074	57.7	1. United Kingdom (b)	1 038 162	23.5
2. Ireland (b)	184 085	21.5	2. New Zealand	389 467	8.8
3. Germany	38 352	4.5	3. China	206 593	4.7
4. China	29 907	3.5	4. Italy	199 124	4.5
5. New Zealand	25 788	3.0	5. Viet Nam	159 848	3.6
6. Sweden & Norway	9 863	1.2	6. India	147 111	3.3
7. India	7 637	0.9	7. Philippines	120 534	2.7
8. USA	7 448	0.9	8. Greece	109 989	2.5
9. Denmark	6 281	0.7	9. Germany	106 528	2.4
10. Italy	5 678	0.7	10. South Africa	104 132	2.4
Top ten total	810 113	94.5	Top ten total	2 581 488	58.5
Other	47 463	5.5	Other	1 834 548	41.5
Total overseas born	857 576	100	Total overseas born	4 416 036	100.0
Total population (a)	3 788 123		Total population (b) (c)	19 855 288	
% of Australian born overseas		22.6	% of Australian born overseas		22.2

Source: Phillips et al. 2010. Migration to Australia since federation: A guide to the statistics





Source: International Organisation for Migration (<http://www.iom.int/world-migration>)



# Lecture question #1

Do you have any links (direct or indirect) to any of these three forms of international migration?

If so, any information you care to share?

If not, can you think of ways migration may still affect you?



## II. Forced migration—refugees & IDPs



Image source: Voice of America  
(<https://www.voanews.com/covid-19-pandemic/lack-virus-testing-stokes-fears-worlds-refugee-camps#&gid=1&pid=1>)



# Who is a refugee?

The *1951 United Nations Convention Relating to the Status of Refugees* **defines** a refugee as a person who, “owing to a **well-founded fear of being persecuted** for reasons of **race, religion, nationality, membership of a particular social group or political opinion**, is **outside the country** of his [or her] nationality.”



# Durable solutions for refugees

1. Voluntary repatriation
2. Local integration
3. Third-country resettlement



# *The jus cogens Nature of* non-refoulement

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JEAN ALLAIN\*

## Abstract

In this article, the author notes that the principle of *non-refoulement* has acquired the status of *jus cogens*, that is, a peremptory norm of international law from which no derogation is permitted. The article briefly examines the origins of the concept and then considers the views expressed by States, particularly in the UNHCR Executive Committee. The author emphasises that the *jus cogens* nature of *non-refoulement* is of critical importance today, especially now that the Security Council has begun to adopt resolutions which may have a direct impact on the right of people to leave in search of asylum and not to be sent back to where their lives or freedom may be in danger. The author examines SC Resolution 1373, and considers how the measures required by the Security Council may lead to the return of refugees unless the *jus cogens* nature of *non-refoulement* is maintained. The author also examines various measures taken within the European Union, and argues similarly that restrictive policies are likely to be best countered by arguments founded on the peremptory norm of *non-refoulement*.

## 1. Introduction

It has been said that, ‘refugee law remains the unwanted child of States’.<sup>1</sup> States, while giving lip service to the obligations enshrined in the 1951 Convention, have thus sought to limit the possibility of individuals to benefit from the rights to which they had agreed some 50 years ago. Half a century on, the cornerstone of the 1951 Convention remains intact, but under attack. The provisions of Article 33, the *non-refoulement* provisions which preclude States from returning individuals to countries where they might face persecution, must act as the final bulwark of international protection. States may, individually or collectively, attempt to introduce policies which have the effect of violating the provisions of Article 33, yet if it can be demonstrated that the notion of *non-refoulement* has attained the normative value of *jus cogens*, then States are precluded from

\* Assistant Professor of Public International Law, Department of Political Science, American University in Cairo, Egypt.

<sup>1</sup> Rosemary Byrne and Andrew Shacknove, ‘The Safe Country Notion in European Asylum Law’, 9 *Harv. Hum. Rights J.* 187 (1996).





Australia

# Dozens of refugees flown from Australia and PNG to US despite coronavirus travel bans



Refugee Imad exploring his new home town Chicago. Source: Supplied

Australians in the US have been fundraising to support the refugees' resettlement which has been complicated by the coronavirus pandemic.

UPDATED 21/05/2020

BY STEFAN ARMBRUSTER

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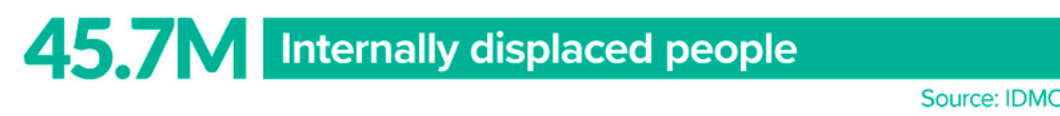
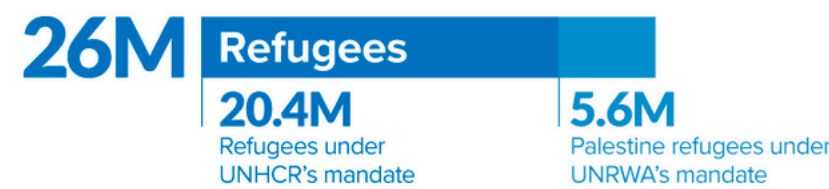
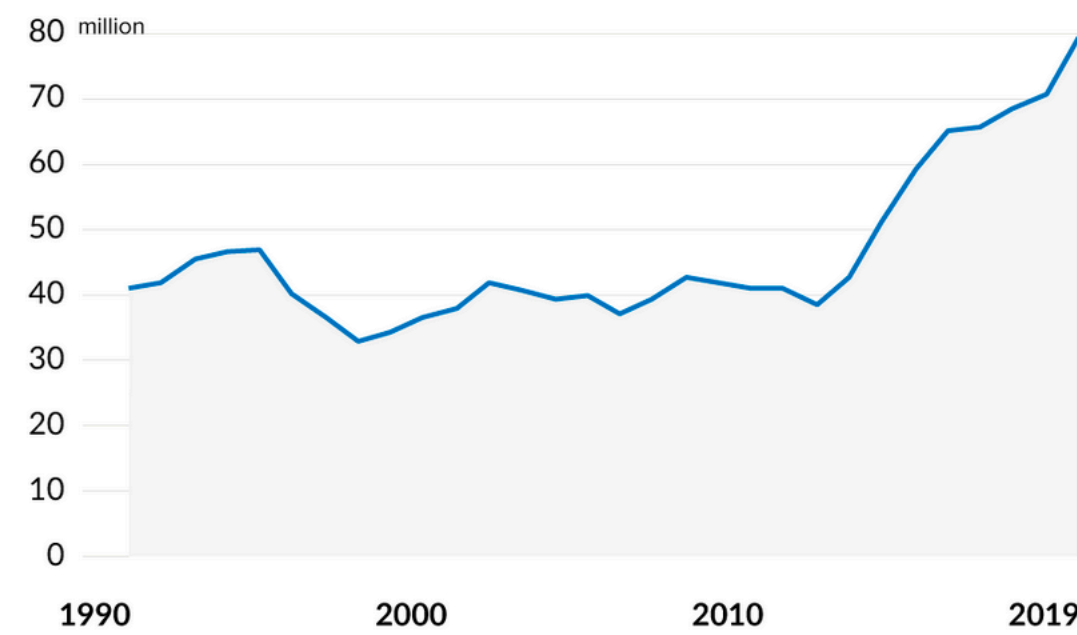




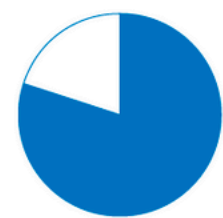
# Figures at a Glance

79.5 MILLION forcibly displaced people worldwide at the end of 2019

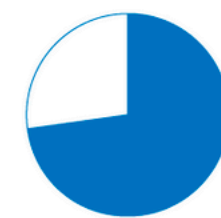
Source: UNHCR / 18 June 2020



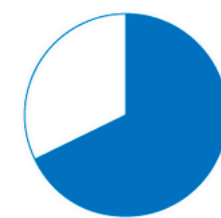
1% of the world's population is displaced



80% of the world's displaced people are in countries or territories affected by acute food insecurity and malnutrition



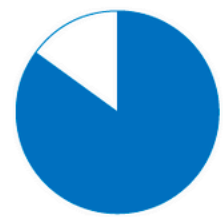
73% Hosted in neighbouring countries \*



68% Came from just 5 countries \*

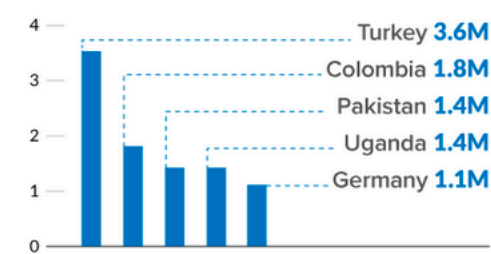


40% of the world's displaced people are children



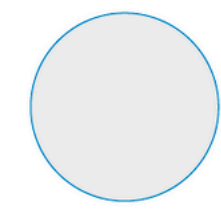
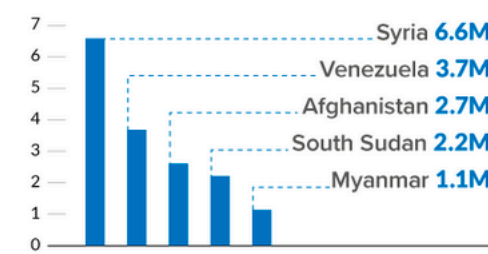
85% Hosted in developing countries \*

## TOP HOSTING COUNTRIES

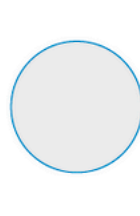


\* Data includes UNHCR refugees and Venezuelans displaced abroad

## TOP SOURCE COUNTRIES



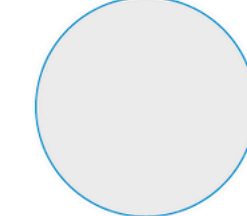
4.2M Stateless people



2M Asylum applications (in 2019)



107,800 Resettled to 26 countries (in 2019)



5.6M Returnees (in 2019)



# Top refugee hosts (2020)

Developing countries host **12.4 million** refugees (2015)

Least-developed countries (LDCs) host **3.6 million** (25% in 2015)

Country	Number of refugees hosted (2020)
Turkey	3.6 million
Colombia	1.8 million
Pakistan	1.4 million
Uganda	1.4 million
Germany	1.1 million



# Top origin states

In 2015 **more than half** of all refugees come from just **three countries**.

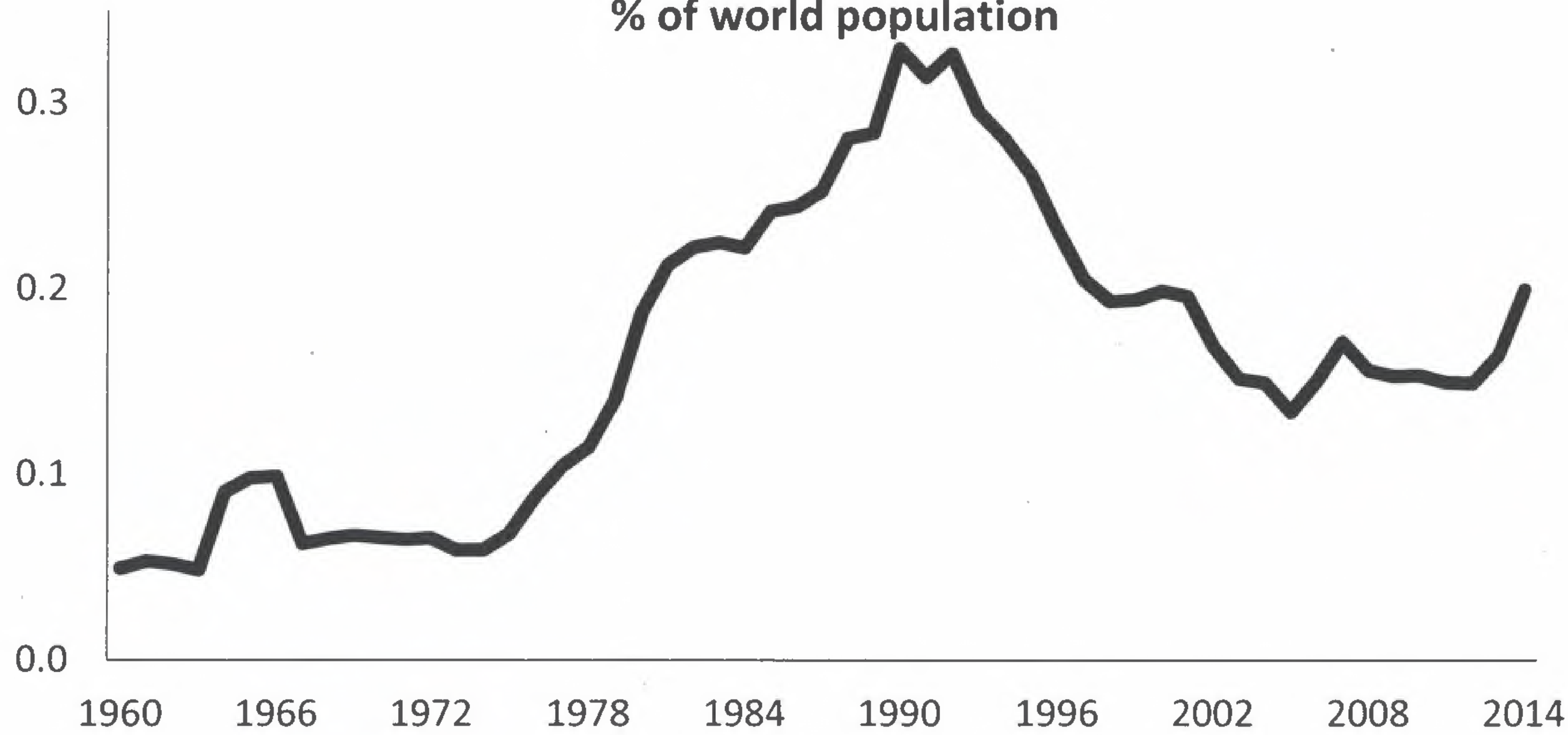
Country	Number of refugees
Syria	6.6 million
Venezuela	3.7 million
Afghanistan	2.59 million
S. Sudan	2.2 million
Myanmar	1.11 million

Source: UNHCR



Refugees as a Share of World Population

% of world population

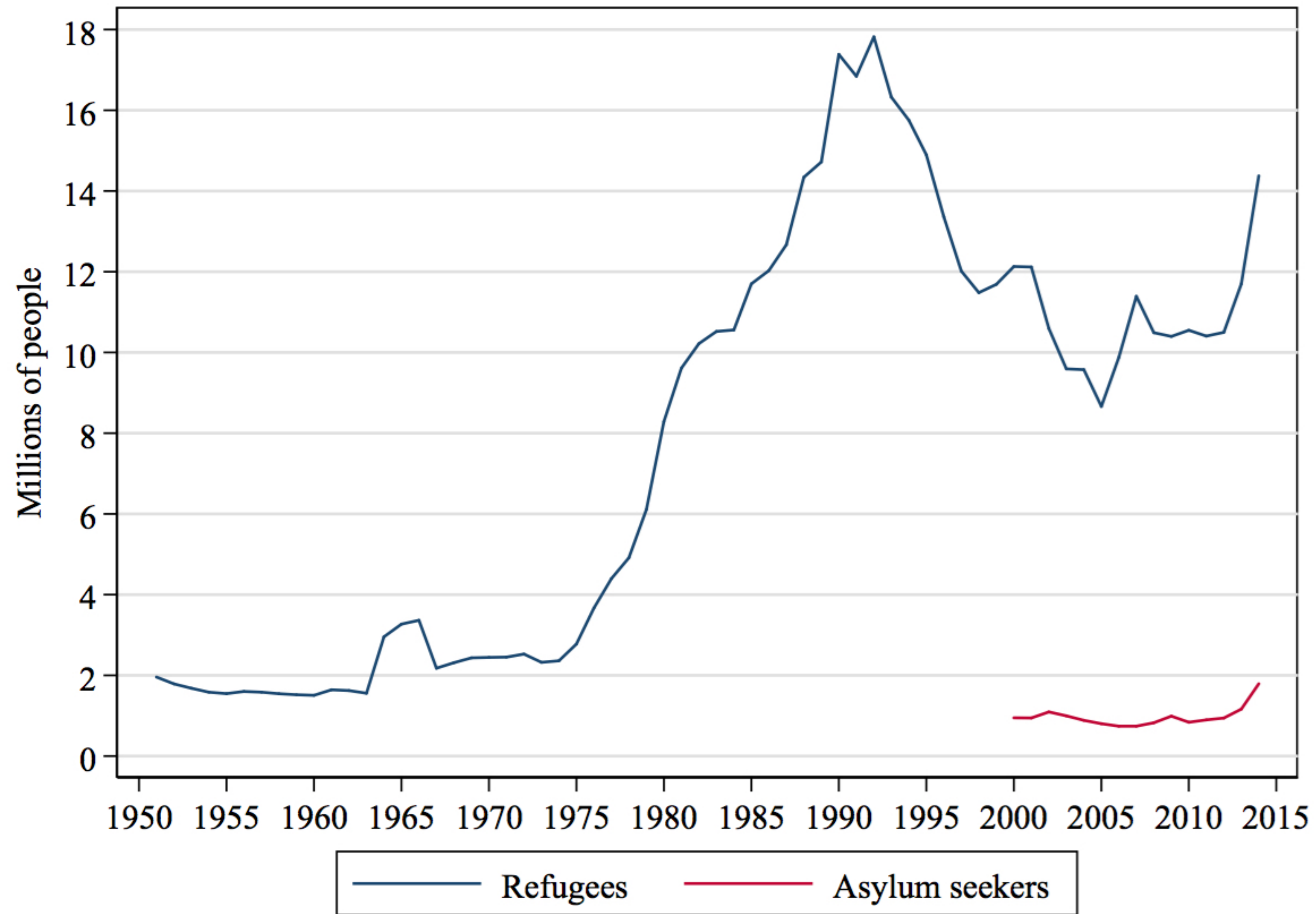


Source: UNHCR. Data on asylum seekers are available since the year 2000; chart does not include the 5.1 million Palestinian refugees (2014) UNRWA provides with assistance and protection.

Source: World Bank. 2016. Migration and Remittances Facebook 2016. Third Edition. Washington DC: World Bank.



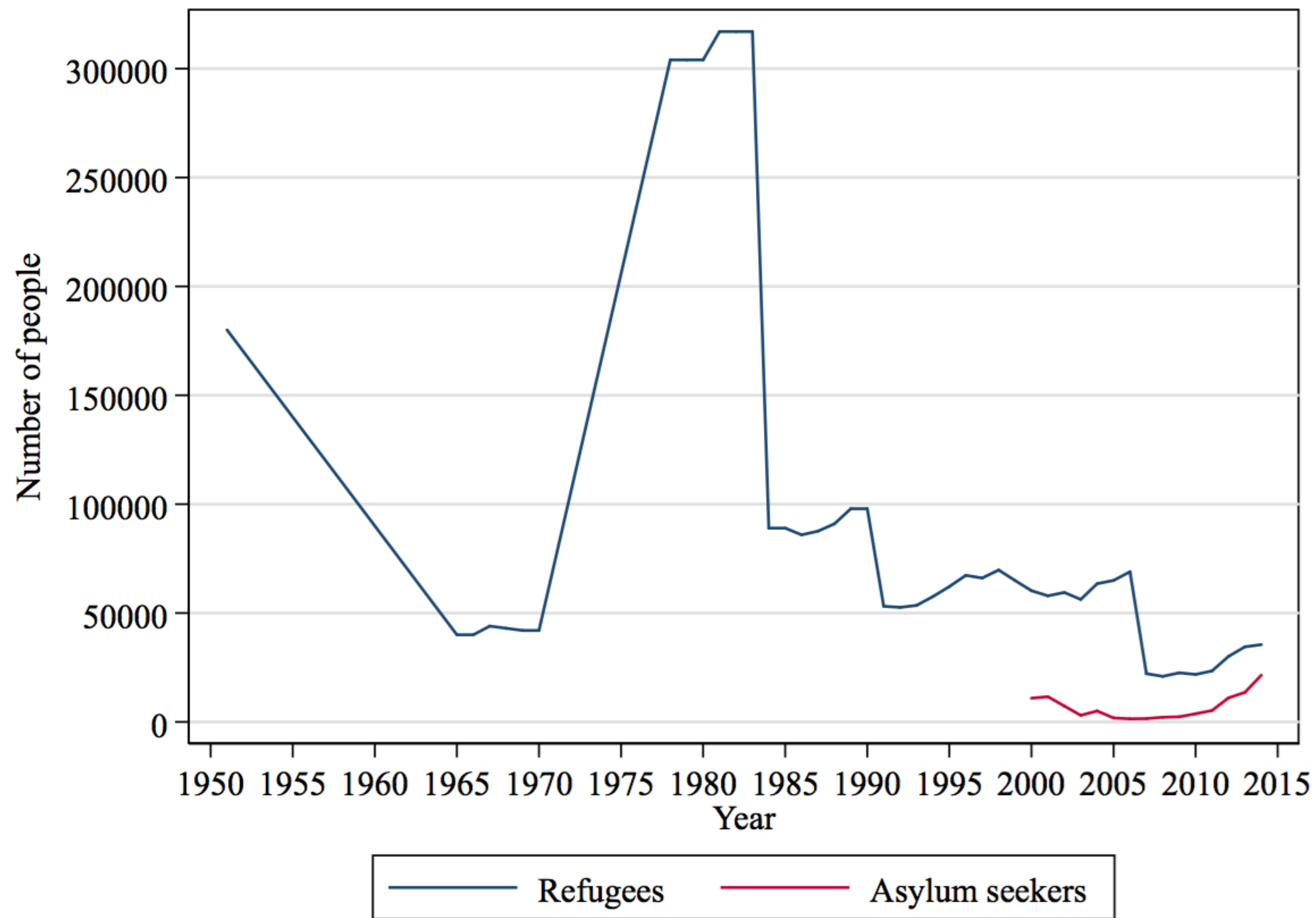
# Worldwide refugee flows



Data source: UNHCR Statistics ([http://popstats.unhcr.org/en/time\\_series](http://popstats.unhcr.org/en/time_series))



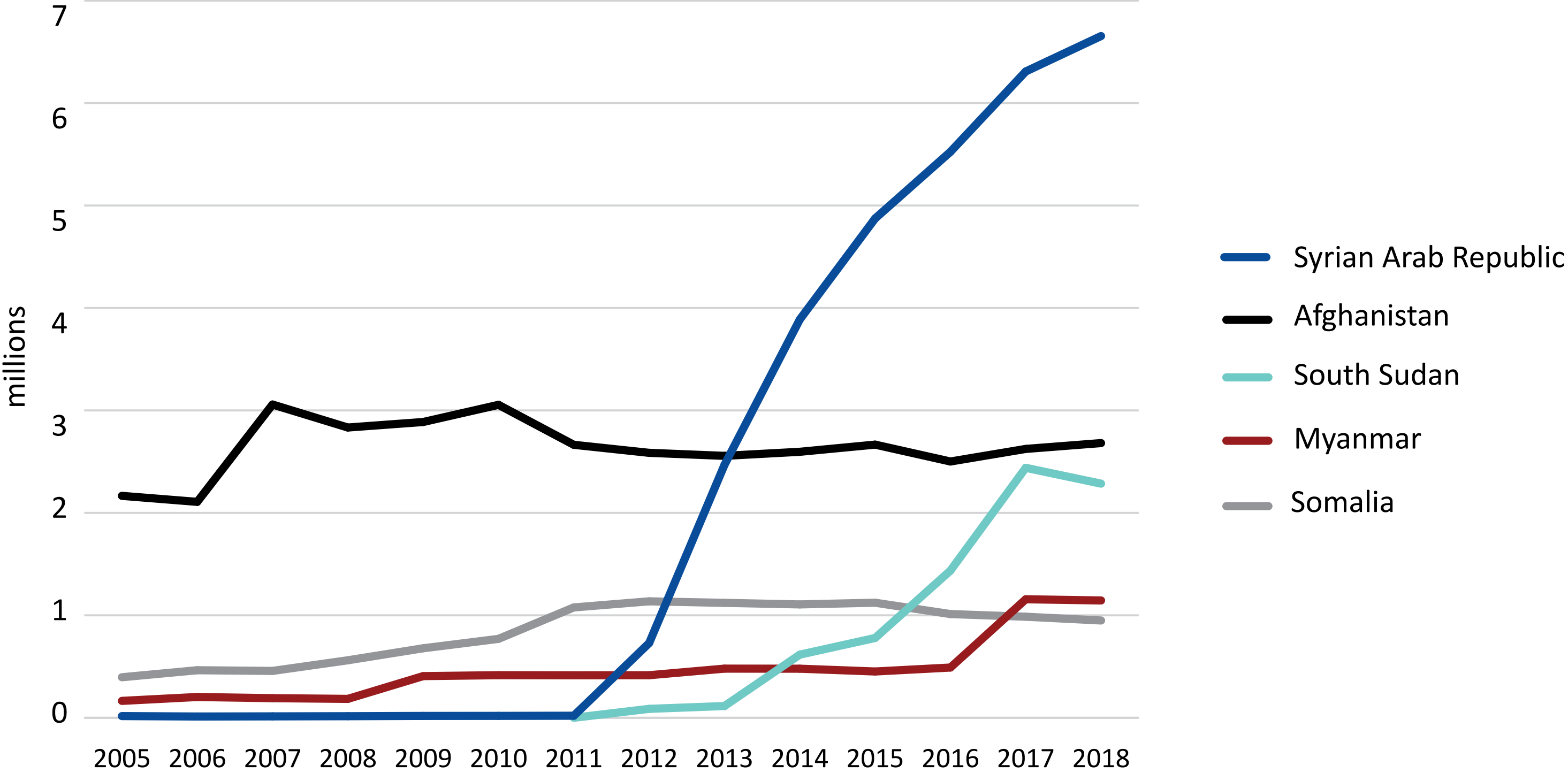
# Refugees in Australia



Data source: UNHCR Statistics ([http://popstats.unhcr.org/en/time\\_series](http://popstats.unhcr.org/en/time_series))



Figure 8. Number of refugees by top 5 countries of origin as of 2018 (millions)

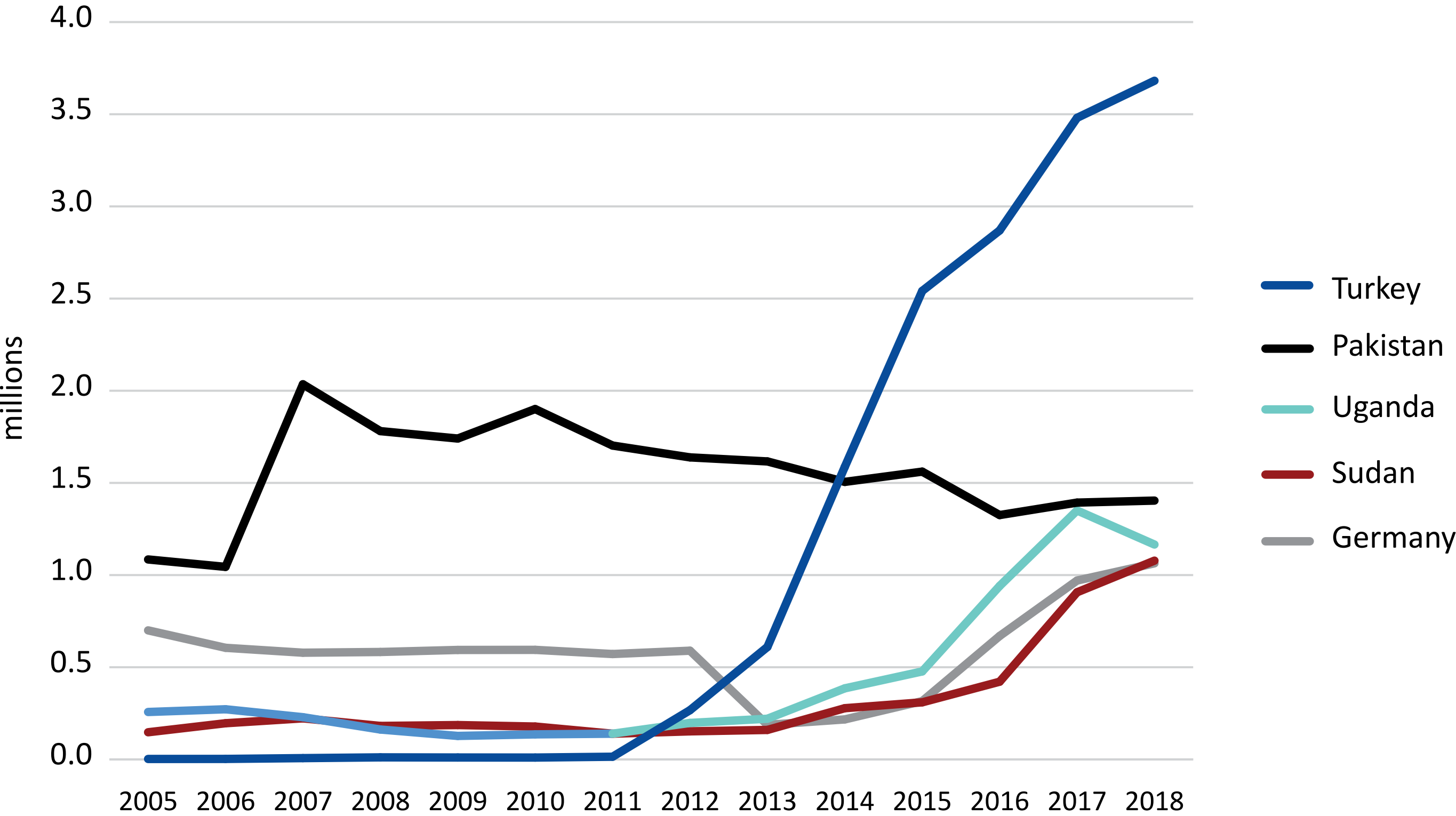


Source: UNHCR, n.d.a. (accessed on 9 July 2019).

Note: South Sudan became a country in 2011.



Figure 9. Number of refugees by top 5 host countries as of 2018 (millions)

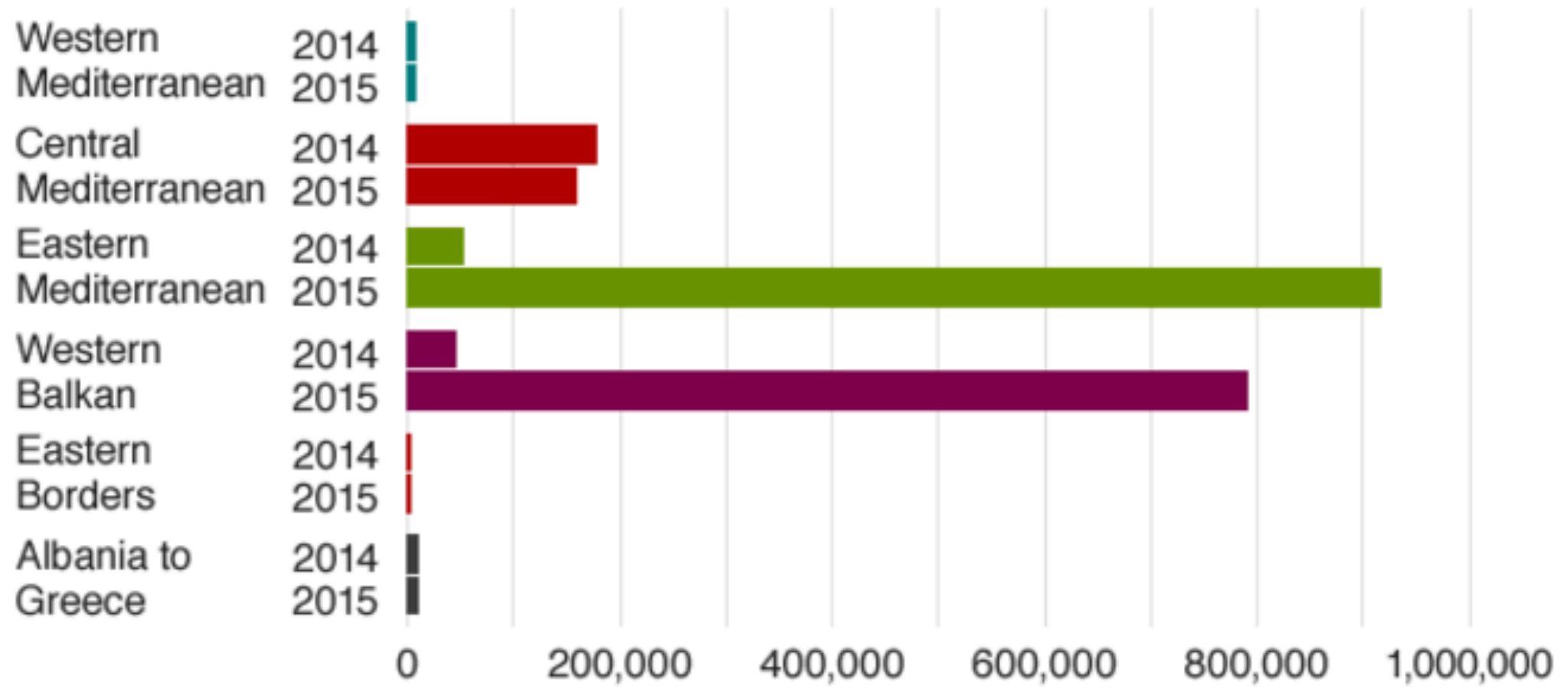
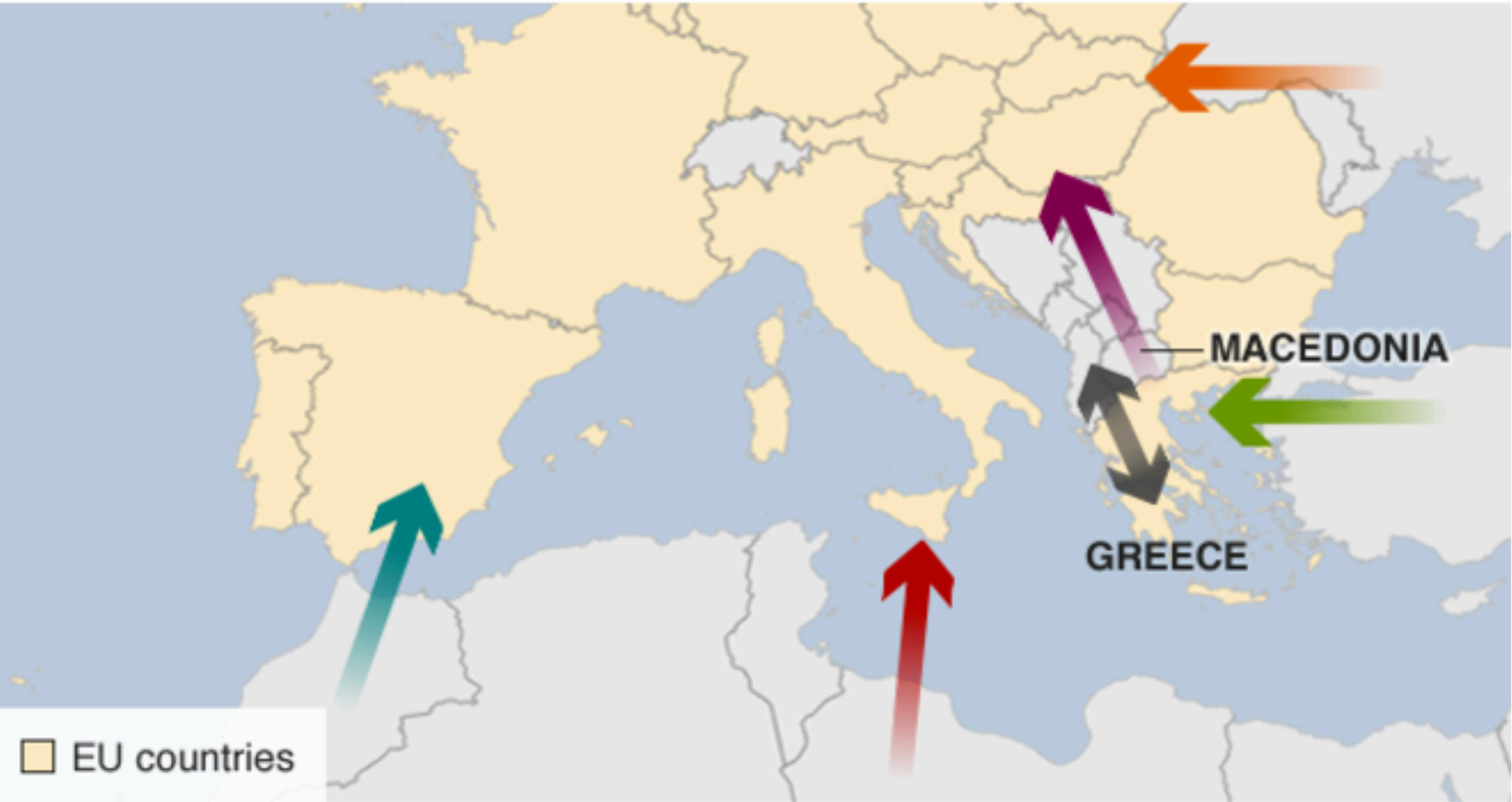


Source: UNHCR, n.d.a. (accessed on 25 June 2019).



In 2015, 1,046,599 people traveled to Europe through various transit routes across Africa, Asia or the Middle East.

Migrants detected entering the EU illegally, 2014-2015



Source: Frontex

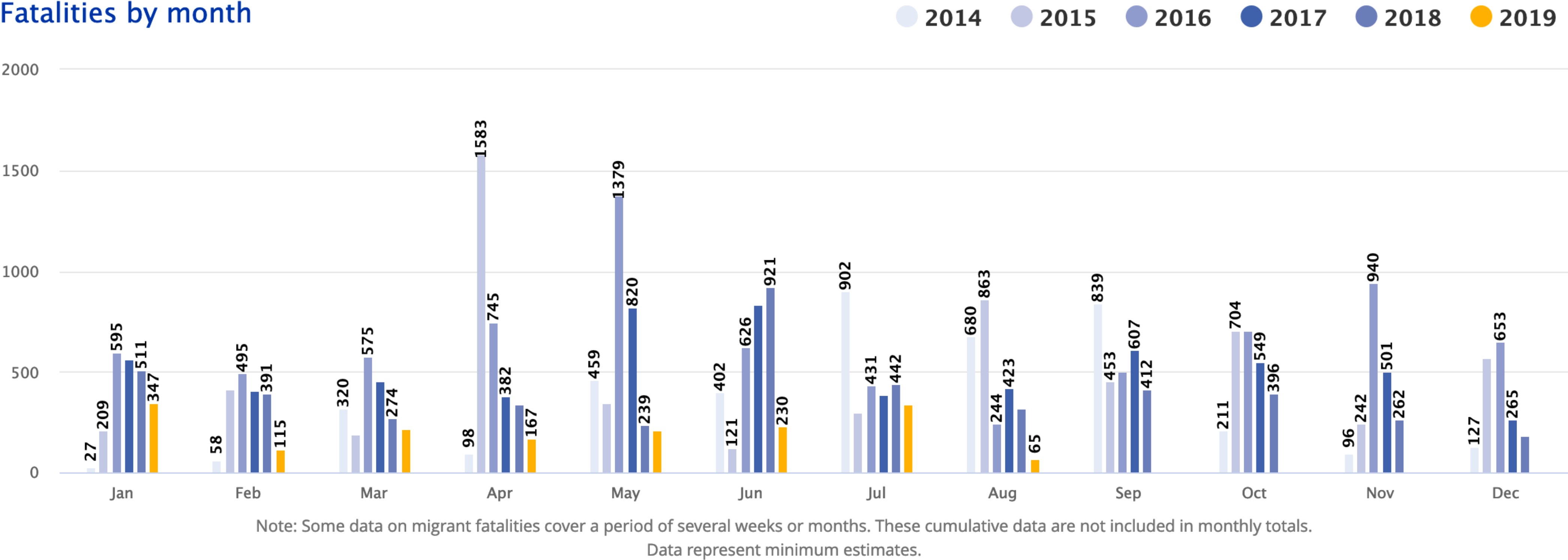
BBC

Source: UNHCR



# Recorded deaths by month, 2014-2019

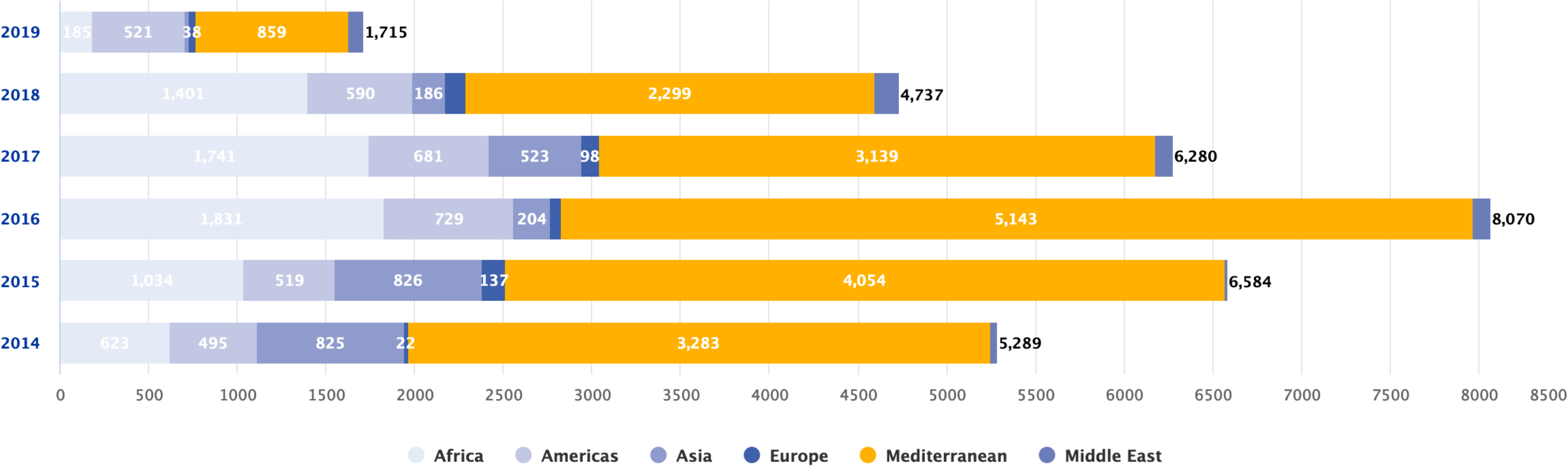
Fatalities by month



Source:International Organization for Migration (<http://missingmigrants.iom.int/>)



# Recorded migrant deaths by region

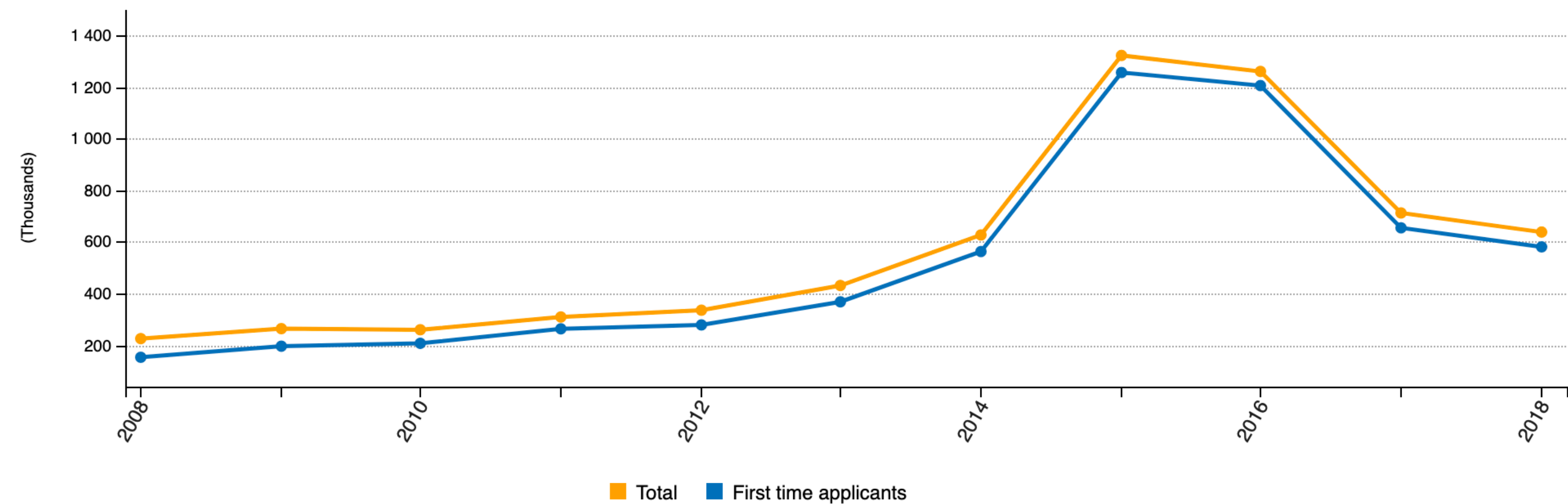


Source:International Organization for Migration (<http://missingmigrants.iom.int/>)



# First-time EU asylum applicants, 2008-18

*Asylum applications (non-EU) in the EU-28 Member States, 2008–2018*



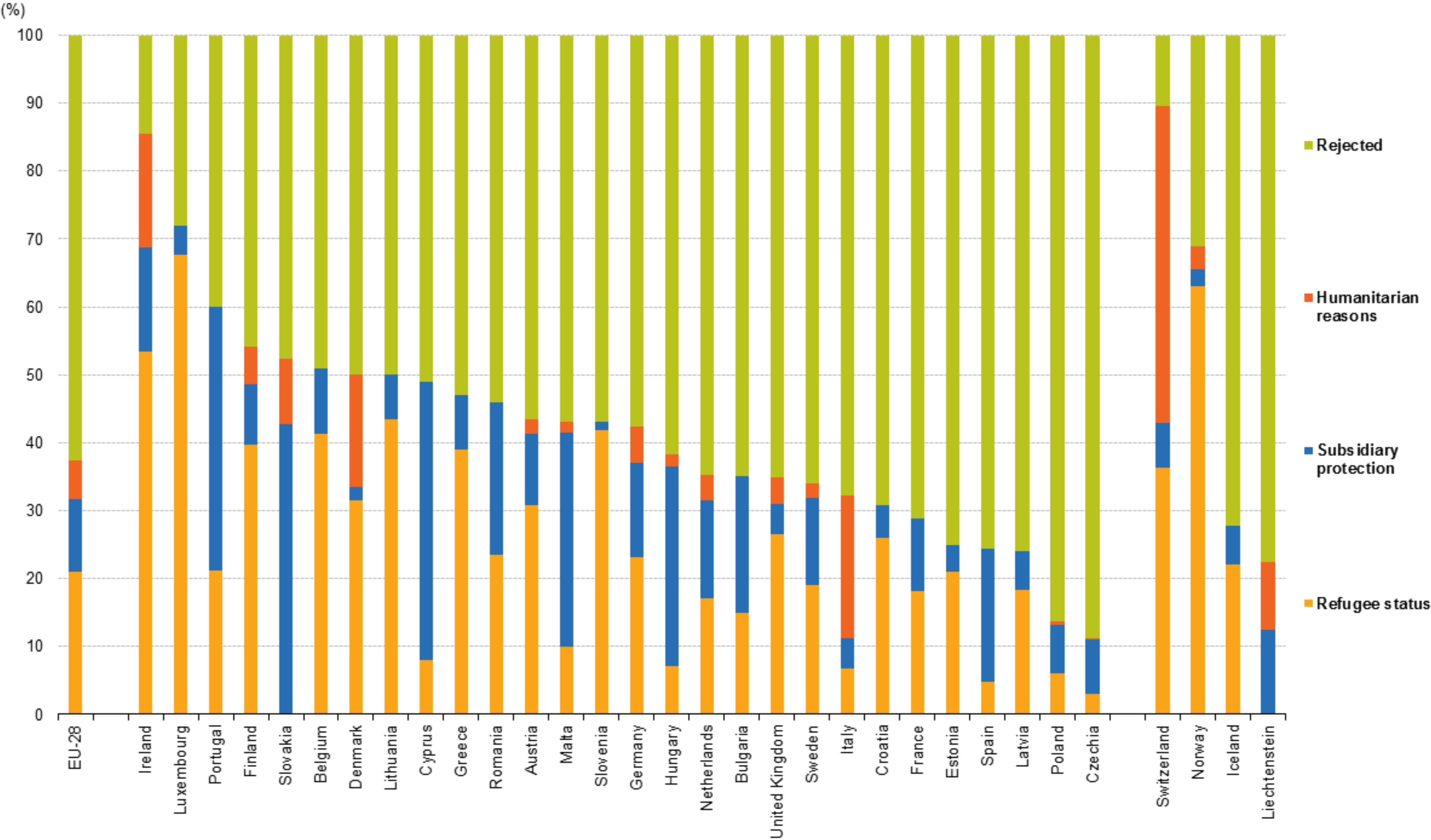
*Total: 2008 - 2014: Croatia not available.*  
*First-time applicants: 2008: Bulgaria, Greece, Spain, France, Croatia, Lithuania, Luxembourg, Hungary, Austria, Romania, Slovakia and Finland not available. 2009: Bulgaria, Greece, Spain, Croatia, Luxembourg, Hungary, Austria, Romania, Slovakia and Finland not available. 2010: Bulgaria, Greece, Croatia, Luxembourg, Hungary, Austria, Romania and Finland not available. 2011: Croatia, Hungary, Austria and Finland not available. 2012: Croatia, Hungary and Austria not available. 2013: Austria not available.*



Source: Eurostat  
([http://ec.europa.eu/eurostat/statistics-explained/index.php/File:First\\_time\\_asylum\\_applicants,\\_EU-28,\\_January\\_2016\\_%E2%80%93\\_June\\_2017.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:First_time_asylum_applicants,_EU-28,_January_2016_%E2%80%93_June_2017.png))



Distribution of first instance decisions on (non-EU) asylum applications, 2018





In 2014 Bulgaria built a 30km border fence along its Greek and Turkish borders









# Who is an internally displaced person (IDP)?

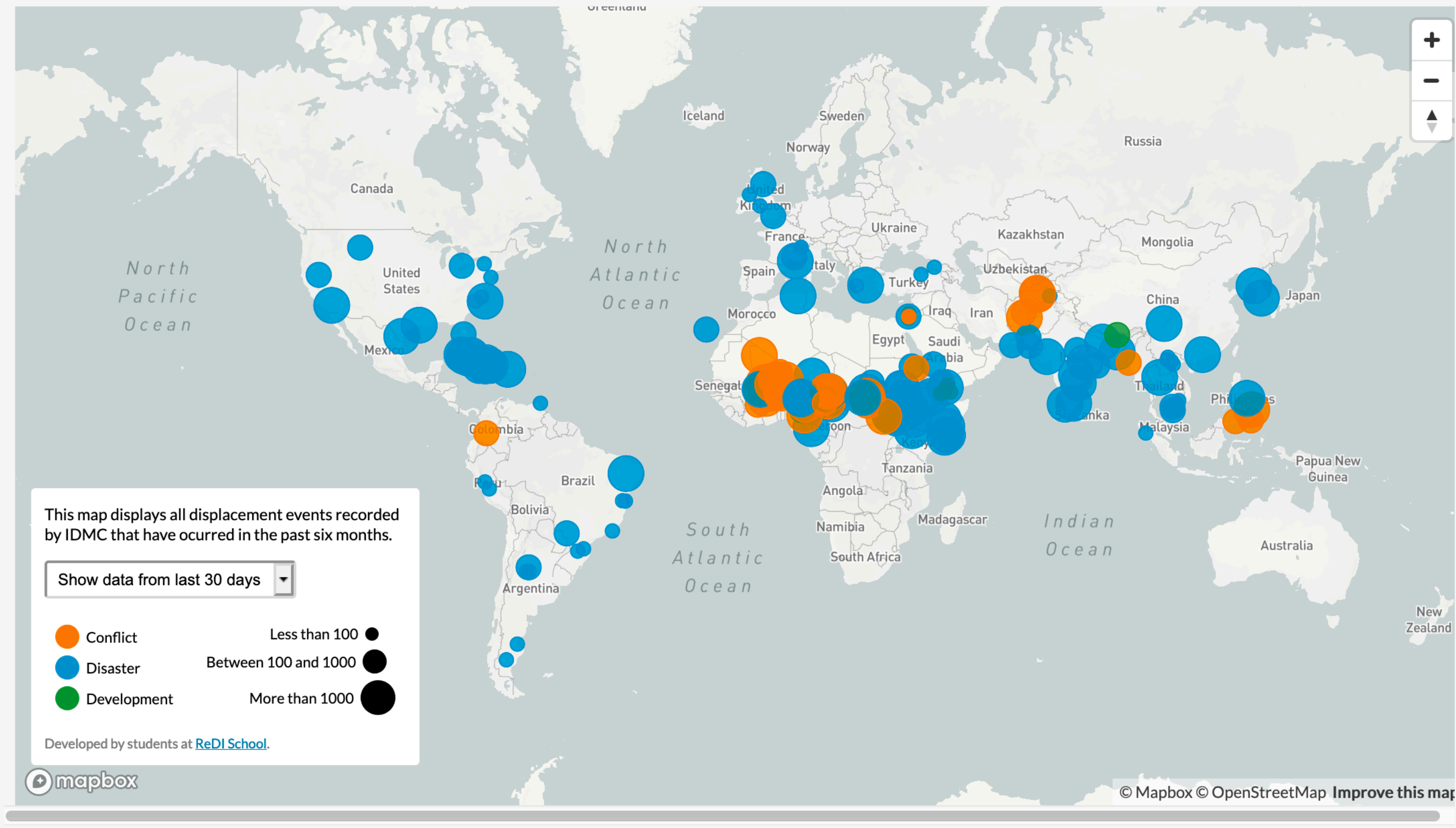
“IDPs stay **within their own country** and remain under the **protection of its government**, even if that government is the reason for their displacement. They often move to areas where it is difficult for us to deliver humanitarian assistance and as a result, these people are among the **most vulnerable in the world.**”

Source: UNHCR (<https://www.unhcr.org/internally-displaced-people.html>)



This map displays all displacement events recorded by IDMC that have occurred in the past six months.

Internal Displacement Updates



Source: Internal Displacement Monitoring Centre



“At the end of 2019, some 45.7 million people were internally displaced due to armed conflict, generalized violence or human rights violations.”

Source: UNHCR (<https://www.unhcr.org/internally-displaced-people.html>)



Country		Total number of IDPs (Conflict and violence) <small>(as of 31 December 2019)</small>	Total number of IDPs (Disasters) <small>(as of 31 December 2019)</small>	New displacements (Conflict and violence) <small>(1 January - 31 December 2019) ▼</small>	New displacements (Disasters) <small>(1 January - 31 December 2019)</small>
1	Syrian Arab Republic	6,495,000	2,900	1,847,000	17,000
2	Congo, Dem. Rep.	5,512,000	168,000	1,672,000	233,000
3	Ethiopia	1,414,000	390,000	1,052,000	504,000
4	Burkina Faso	560,000		513,000	
5	Afghanistan	2,993,000	1,198,000	461,000	117,000
6	El Salvador			454,000	1,900
7	Yemen, Rep.	3,635,000	400	398,000	31,000
8	Mali	208,000	6,300	284,000	6,600
9	South Sudan	1,352,000	246,000	259,000	294,000
10	Nigeria	2,583,000	143,000	248,000	157,000
11	Libya	451,000		215,000	4,600
12	Somalia	2,648,000	600	188,000	479,000
13	Philippines	182,000	364,000	183,000	4,094,000
14	Colombia	5,576,000	1,600	139,000	35,000
15	Iraq	1,555,000	300	104,000	37,000

Source: Internal Displacement Monitoring Centre (<https://www.internal-displacement.org/database/displacement-data>)



# Disaster-related new displacements by event in 2019

Source: IDMC

	Country	Event Name	Start Date	Hazard Category	Hazard Type	New displacements <small>(1 January - 31 December 2019)</small> ▼
1	India	India: Southwest monsoon - June 2019	Jun 08, 2019	Weather related	Flood	2,623,000
2	Bangladesh	India; Bangladesh: Severe cyclonic storm Bulbul - 05/11/2019	Nov 05, 2019	Weather related	Storm	2,107,000
3	China	China; Japan; South Korea; Philippines; Taiwan: Typhoon Lekima (Hanna) - 2/8/2019	Aug 02, 2019	Weather related	Storm	2,097,000
4	India	India; Bangladesh: Cyclone Fani - 02/05/2019	May 02, 2019	Weather related	Storm	1,821,000
5	Bangladesh	India; Bangladesh: Cyclone Fani - 02/05/2019	May 02, 2019	Weather related	Storm	1,666,000
6	Philippines	Guam (USA); Philippines: Typhoon Kammuri (locally named TISOY) - 26/11/2019	Nov 24, 2019	Weather related	Storm	1,424,000
7	China	China: Flood Season - June 2019 (Up to 11/7/2019)	Jun 01, 2019	Weather related	Flood	1,298,000
8	Philippines	Philippines: Flooding/Landslides - Davao (Region XI) - 26/1/2019	Jan 26, 2019	Weather related	Flood	580,000
9	Philippines	Philippines: Typhoon Phanfone (Ursula) - 6 regions - 19/12/2019	Dec 19, 2019	Weather related	Storm	567,000
10	Philippines	Philippines: Tropical Depression Usman - CALABARZON, MIMAROPA, REGION V, REGION VIII - 28/12/2018	Dec 28, 2018	Weather related	Storm	552,000

Source: Internal Displacement Monitoring Centre (<https://www.internal-displacement.org/database/displacement-data>)



## II. Forced migration—refugees & IDPs



Image source: Voice of America  
(<https://www.voanews.com/covid-19-pandemic/lack-virus-testing-stokes-fears-worlds-refugee-camps#&gid=1&pid=1>)



### III. Forced migration: Environmental refugees





# Environmental refugees definition

“[T]hose people who have been forced to leave their traditional habitat, temporarily or permanently, because of a **marked environmental disruption** (natural and/or triggered by people) that jeopardised their existence and/or seriously affected their quality of life.” (El-Hinnawi 1985 quoted in Swain 1996: 964-5)



1951 Refugee Convention does not recognize environmental factors when defining a refugee.





# Ways people can cope with a challenge

(Hirshman 1970)

- **Do nothing** and accept costs (**Loyalty**)
- **Stay** and mitigate changes (**Voice**)
- **Leave** (**Exit**)





Image source: <https://suggestedreads.com/best-choose-your-own-adventure-books/>





# Do nothing and accept costs



# Stay and mitigate changes

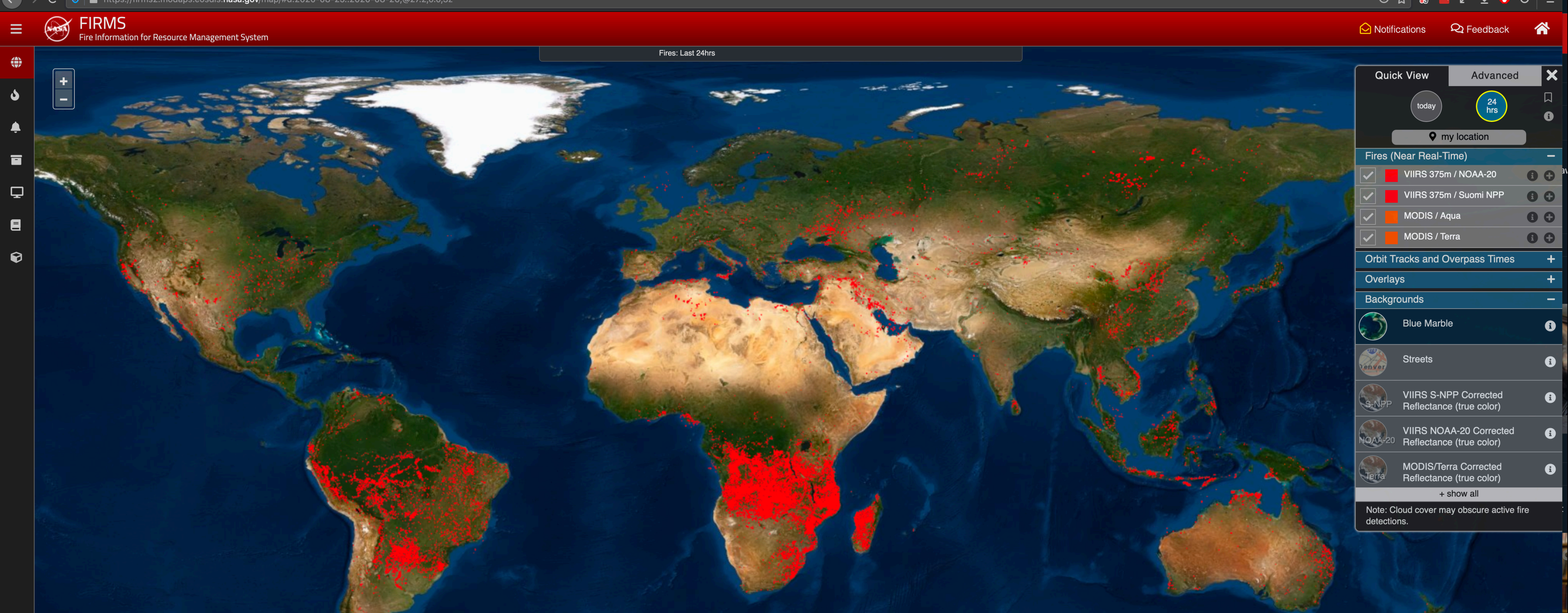




# Lower Ninth Ward, New Orleans

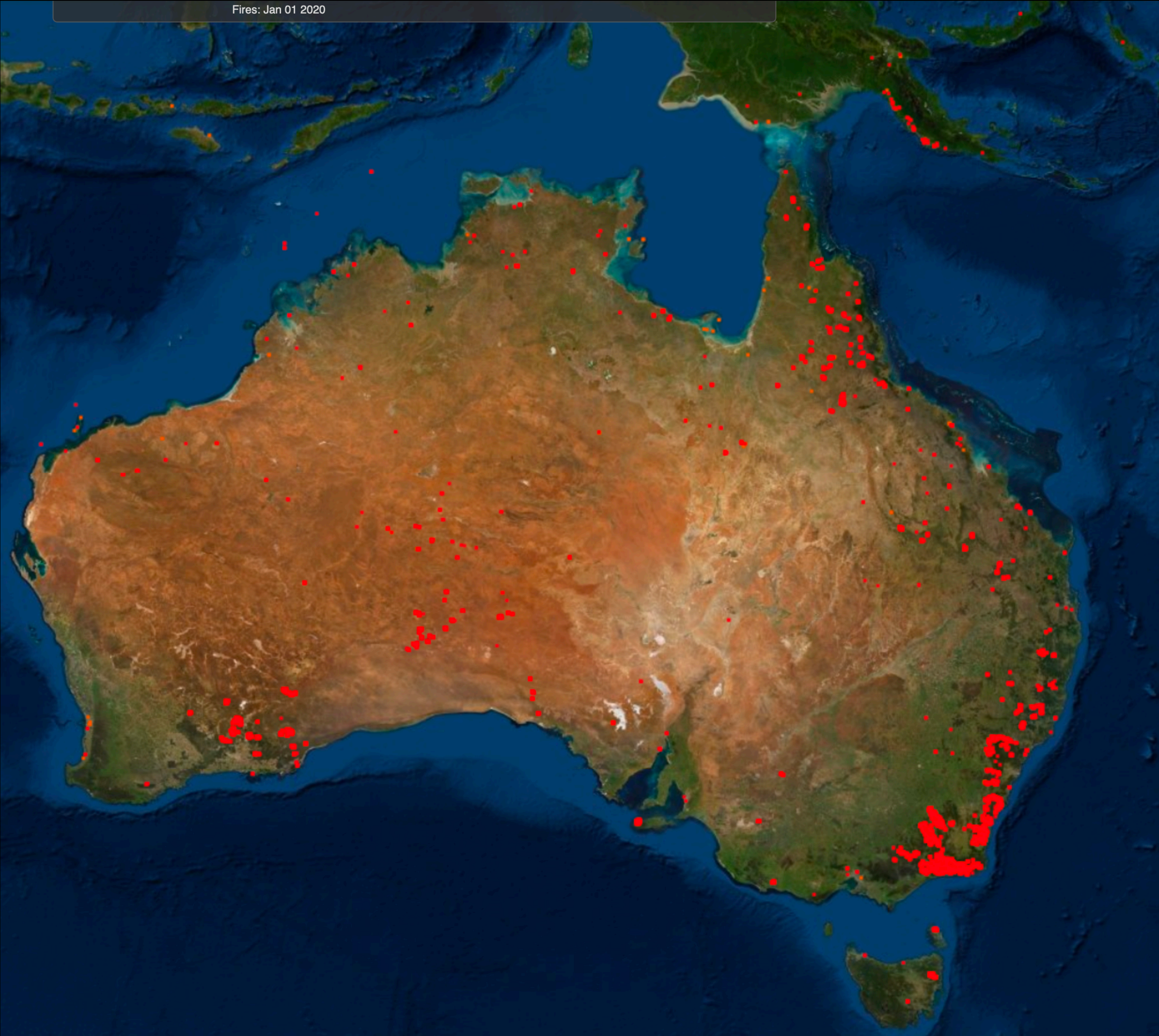




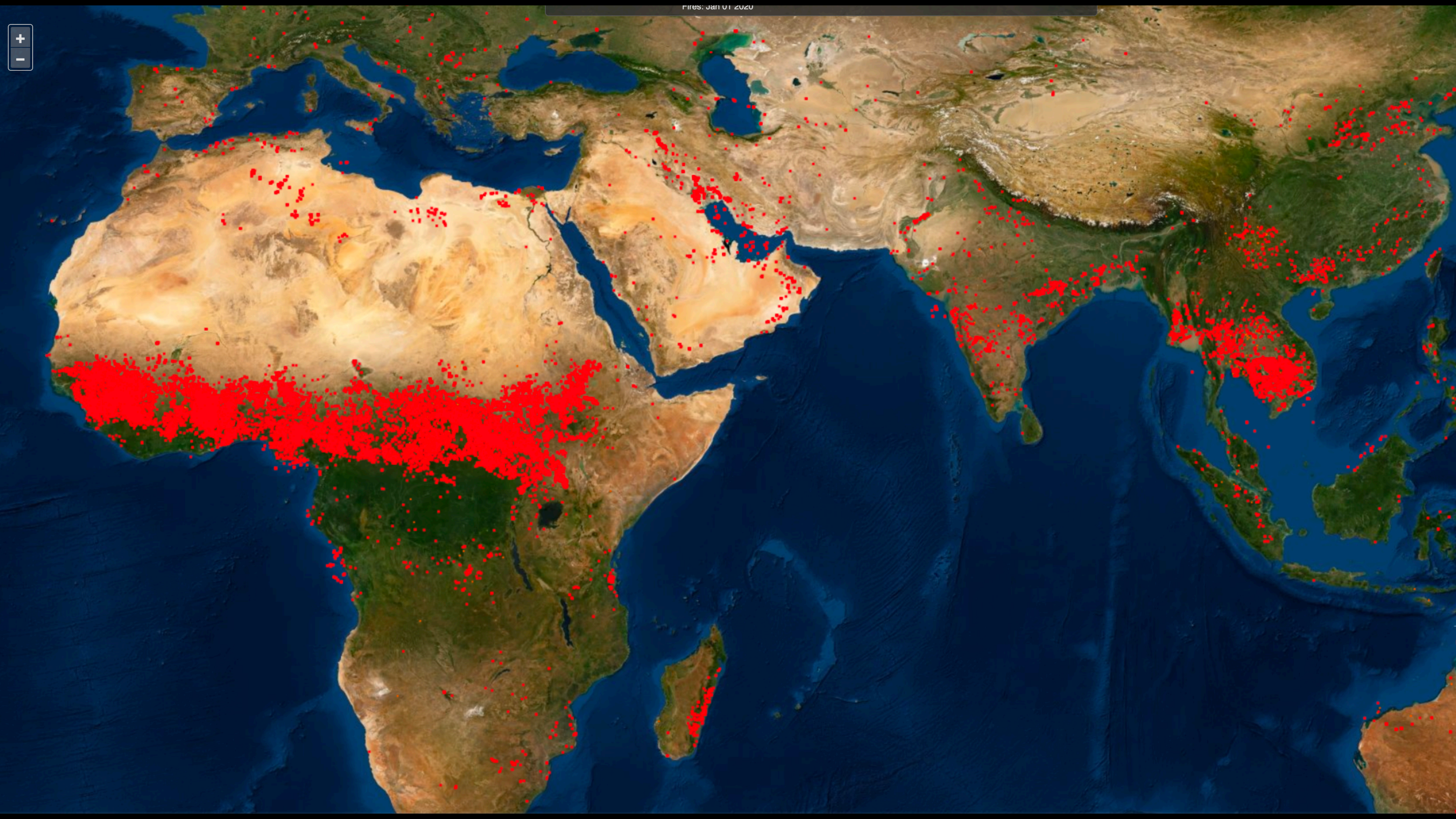
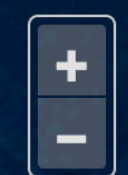


Source: <https://firms2.modaps.eosdis.nasa.gov/map/#d:2020-08-25..2020-08-26;@27.2,0.0,3z>











Leave







# Migrant Routes: Mediterranean 2016



International Organization for Migration (IOM) - Preparedness and Response Division (PRD) and Media and Communications Division (MCD)

Names and boundaries indicated on map do not imply official endorsement or acceptance by IOM. 27/4/16

Source: International Organization for Migration (<http://missingmigrants.iom.int/migrant-routes-mediterranean-27-april-2016>)

Migration.iom.int



### III. Forced migration: Environmental refugees





## IV. Causal processes behind migration



Image source: Library of Congress (<https://www.irishtimes.com/blogs/generationemigration/2011/11/02/traditions-of-emigration-the-irish-habit-of-going-away/>)

New York, Ellis Island. neg. No. 3163E



# Push factors

- Limited **job opportunities** reduce opportunity costs and up expected utility for moving
- **Colonialism** and **slavery**
- Lack of **safety** or **services**
- Political **repression** or limited **voice**
- **Environmental** uncertainty/damage
- Swain (1996) argues that push factors dominate environmental migrants' decision to leave.



# Aleksandr Solzhenitsyn (1918-2008)





# Pull factors

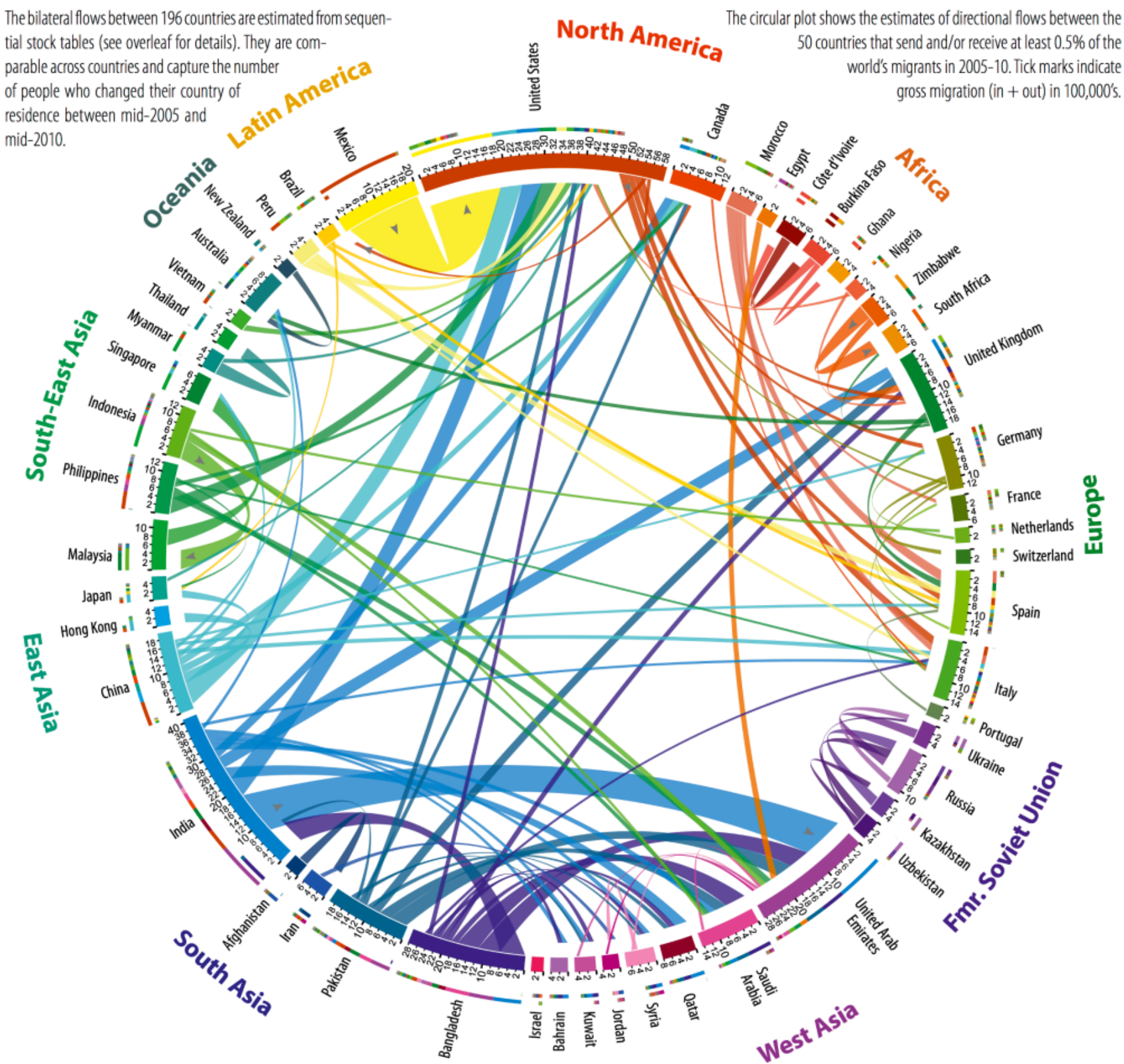
- Economic **opportunity** including employment
- Political **openness** and **stability**
- Better **services** and **security**
- Less environmental **instability**



# Network effects

Cultural, linguistic, or legal ties due to historical movements as a result of path dependency or policy.

The bilateral flows between 196 countries are estimated from sequential stock tables (see overleaf for details). They are comparable across countries and capture the number of people who changed their country of residence between mid-2005 and mid-2010.





# Examples of network effects


- **Armenian-Americans** ~483,366 people in 2010
  - 166,498 in Los Angeles area
  - Crucial in US Congress fight to recognise Armenian genocide
- **Tamil-Canadians** ~145,000 up from 2,000 in 1983
  - Focused in Toronto area
  - Crucial in funding long-running civil conflict










Lewiston

Maine  
USA

 Clear · 9°C  
6:13 AM

-   
Directions
-   
Save
-   
Nearby
-   
Send to your phone
-   
Share

Photos



Quick facts

Lewiston is the second largest city in Maine and the most central city in Androscoggin County. The city lies halfway between Augusta, the state's capital, and Portland, the state's





U.S.

LEWISTON, MAINE, REVIVED BY SOMALI IMMIGRANTS

BY JESSE ELLISON ON 1/16/09 AT 7:00 PM EST



U.S.

Barely a decade ago, Lewiston, Maine, was dying. The once bustling mill town's population had been shrinking since the 1970s; most jobs had vanished long before, and residents (those who hadn't already fled) called the decaying center of town "the combat zone." That was before a family of Somali refugees discovered Lewiston in 2001 and began spreading the word to immigrant friends and relatives that housing was cheap and it looked like a good place to build new lives and raise children in peace. Since then, the place has been transformed. Per capita income has soared, and crime rates have dropped. In 2004, Inc. magazine named Lewiston one of the best places to do business in America, and in 2007, it was named an "All-America City" by the National Civic League, the first time any town in Maine had received that honor in roughly 40 years. "No one could have dreamed this," says Chip Morrison, the local Chamber of Commerce president. "Not even me, and I'm an optimist."

Immigrants from Somalia may sound like improbable rescuers for a place like Lewiston. Maine is one of the whitest states in the country, second only to Vermont, and its old families have a reputation for distinct chilliness toward "outsiders." And many of the immigrants spoke no English at all when they arrived. But even beyond the obvious racial, cultural and religious differences between the Muslim newcomers and the locals, the town's image had become so negative that it was hard to imagine people choosing to move there. "Nothing could have rightfully prepared them," says Paul Badeau of the Lewiston-Auburn Economic Growth Council. "And nothing could have rightfully prepared us, either." It wasn't easy at first. Townspeople feared for the few jobs that remained in the area, and they warned that the strangers would overload local social services. In 2002, the then Mayor Laurier Raymond wrote an open letter to the Somali

OPINION



Today's Polls Are Meaningless. Biden Will Implode Come November

BY NEWT GINGRICH



Why Americans Don't Know About Their Right to Paid Sick Leave

BY CHRIS LU, M. PATRICIA SMITH AND DAVID WEIL



On the Street: Unemployment, Warren Buffett...and Jane Bryant Quinn

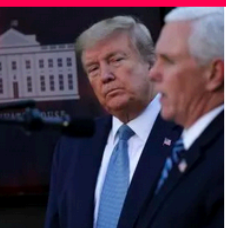
BY HANK GILMAN



Justin Amash Is No Anti-Trump Hero

BY ABDUL EL-SAYED

THE DEBATE



Trump's Right. The WHO Is Not Fit for Purpose

BY NIGEL FARAGE

VS

Donald Trump

Defunding the WHO Mid-Pandemic Is Lunacy

BY JAMIE METZL



SIGN UP FOR OUR NEWSLETTER

SIGN UP



About these ads

# In one town, how Mainers and new immigrants learned to coexist – until Trump

Somalis in Lewiston, Maine say tensions have reemerged thanks to Trump. But that's eased in part by years of developing local ties – and helping to win the soccer state championship.



Story Hinckley/Staff



Jimmy Simone is the third-generation owner of Simone's Hot Dog Stand, which is a hotbed of political discussion in town. In a nod to the city's



# Lecture question #2

Is there a topic you would want me to make a brief video about? If so, what would it be?



## IV. Causal processes behind migration



Image source: Library of Congress (<https://www.irishtimes.com/blogs/generationemigration/2011/11/02/traditions-of-emigration-the-irish-habit-of-going-away/>)

New York, Ellis Island. neg. No. 3163E



# V. Environmental migration and conflict





# Environmental stress, migration, and conflict

## Direct Effect

Environmental stress → Migration from region A → Conflict in region B

## Indirect Effect

Environmental stress → Conflict in region A → Migration from region A → Conflict in region B

Figure 2. Environmental Stress, Migration, and Conflict: Direct and Indirect Pathways

Source: Gleditsch et al. (2007: 4)



# State vs. state conflicts

- **El Salvador —> Honduras** (1969 Football War/ Soccer War, 100 Hour war )
- 300,000 Salvadorian migrants living in Honduras in 1969
- 1962-1967 Honduras passed land reform law including redistributing land lived on by Salvadorian migrants
- 8 June—26 June, three World Cup qualifier matches led to growing violence between fans
- 14 July—El Salvador launched offensive
- 20 July—Ceasefire began, brokered by the OAS





# State vs. group conflict

- Rwandan refugees in DRC
- Liberian refugees in Sierra Leone
- Kosovar refugees in Macedonia
- PLO in Jordan and Lebanon



# Group vs. group conflict

- Often native vs. migrant population
- Competition for scarce resources
- Ethnic tensions
- Distrust



Table 1  
Environmental migration episodes

Panel A: conflict							
Origin, period	Destination	Environmental push factors	Other push factors	# Moving	Conflict in destination	Conflict intensity	Sources
1. Bangladesh, rural areas, coastal areas, islands, 1970s–1990s	Bangladesh, Chittagong Hill Tracts	Droughts, water scarcity, floods, storms, erosion, desertification	Overpopulation, underdevelopment, government migration incentives	600,000	Migrant–resident ethnic strife, insurgency	High	Hafiz and Islam (1993), Lee (2001), and Shelley (1992)
2. Ethiopia: (a) central/northern; (b) Awash river basin-Afar, 1984–1985	Ethiopia: (a) southwest, west; (b) Wollo region	Drought, famine, forest fires, locust invasion	Underdevelopment, overpopulation, government promotes cotton/sugar, overgrazing	600,000	Nomad–farmer conflict over land	Medium	Ezra and Kiros (2001), Otunnu (1992), and Rahmato (1991)
3. Rwanda, rural south, center, early 1990s	Rwanda, north, Zaire	Arable land/water scarcity, land degradation, deforestation	Overpopulation, food scarcity, civil war, underdevelopment, government aid in north	1.7 Million	Ethnic tension with colonial roots, civil war, genocide	Very high	Kane (1995a, 1995b), Patterson (1995), and Uvin (1996)
4. Mexico, Southern Guatemala, 1960s–1990s	Mexico, eastern, Chiapas	Land degradation, deforestation, land pressure	Persecution, civil war in Guatemala, Mexican government resettlement policy, unequal land distribution, overpopulation	280,000	Peasants–loggers/ranchers conflict over land, insurgency	High	Brown, Kane, and Roodman (1994), Collier (1994), and Renner (1996)
5. Bangladesh, various regions 1950s–current	India, West Bengal, Assam, Tripura	Droughts, water/land/food scarcity, land erosion, storms, salt intrusion	India’s diversion of Ganges River, failure to share river water, overpopulation	12–17 Million	Hindu–Muslim violence, massacre	High	Homer-Dixon (1999), Kalbag (1983), and Swain (1996)
6. El Salvador, 1950s–1980s	Honduras up to the late 1960s, then US	Deforestation, land degradation, arable land/water scarcity	Wealth disparity, skewed land-tenure, poverty, overpopulation, repression	300,000 to Honduras, 500,000 to US	Migrant–resident resource contest, border dispute, 1969 Soccer War	Very high	Durham (1979), Homer-Dixon (1999), and Myers (1993)
(continued on next page)							

R. Reuveny / Political Geography 26 (2007) 656–673

663



# Speed of change

**Faster** change can make absorbing migrants more threatening to existing population.



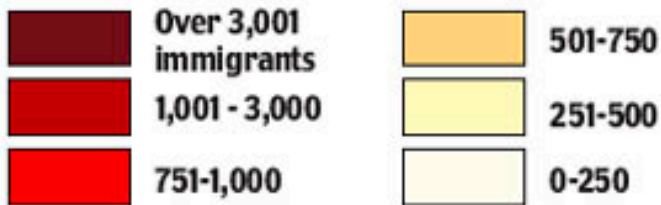


HOW TO READ THIS MAP

■ Each panel shows the five local authorities in that region with the highest number of registered migrant workers from Eastern Europe.\*

■ The first column is the number of immigrants.

■ The second column shows the percentage rise in total population since May 2004 as a result of migration from Eastern Europe.



NORTH EAST			No.	% rise
6. Newcastle	1,308	0.48		
7. Derwentside	513	0.59		
8. Sunderland	469	0.16		
9. Gateshead	455	0.23		
10. Darlington	410	0.41		
REGION TOTAL	5,773	0.2		

YORKSHIRE AND HUMBER			No.	% rise
11. Bradford	6,263	1.3		
12. Leeds	5,088	0.7		
13. Wakefield	3,860	1.2		
14. Hull	3,209	1.3		
15. Doncaster	3,026	1.1		
REGION TOTAL	40,190	0.8		

EAST			No.	% rise
16. Peterborough	6,753	4.2		
17. Luton	5,990	3.3		
18. King's Lynn	4,056	2.9		
19. Fenland	3,355	3.9		
20. Breckland	3,080	2.5		
REGION TOTAL	59,688	1.1		

EAST MIDLANDS			No.	% rise
21. Northampton	10,008	5.1		
22. Boston	5,479	9.4		
23. Nottingham	4,061	1.5		
24. Leicester	3,904	1.4		
25. South Holland	3,890	4.8		
REGION TOTAL	49,799	1.2		

SCOTLAND			Number of immigrants	% rise in population
1. Edinburgh	5,734	1.3		
2. Glasgow	4,166	0.7		
3. Perth and Kinross	4,152	3.0		
4. Highland	3,584	1.7		
5. Aberdeenshire	2,984	1.3		
REGION TOTAL	38,797	0.8		

NORTHERN IRELAND			No.	% rise
56. Belfast	3,408	1.3		
57. Dungannon	1,832	3.7		
58. Craigavon	1,700	2.0		
59. Newry and Moume	1,583	1.8		
60. Ballymena	1,211	2.0		
REGION TOTAL	19,144	1.1		

NORTH WEST			No.	% rise
51. Manchester	4,120	0.9		
52. Crewe	2,620	2.3		
53. Trafford	2,190	1.0		
54. Liverpool	2,055	0.5		
55. Sefton	1,788	0.6		
REGION TOTAL	40,737	0.6		

WALES			No.	% rise
46. Carmarthenshire	2,286	1.3		
47. Newport	2,197	1.6		
48. Wrexham	2,130	1.6		
49. Cardiff	1,589	0.5		
50. Flintshire	995	0.7		
REGION TOTAL	14,106	0.5		

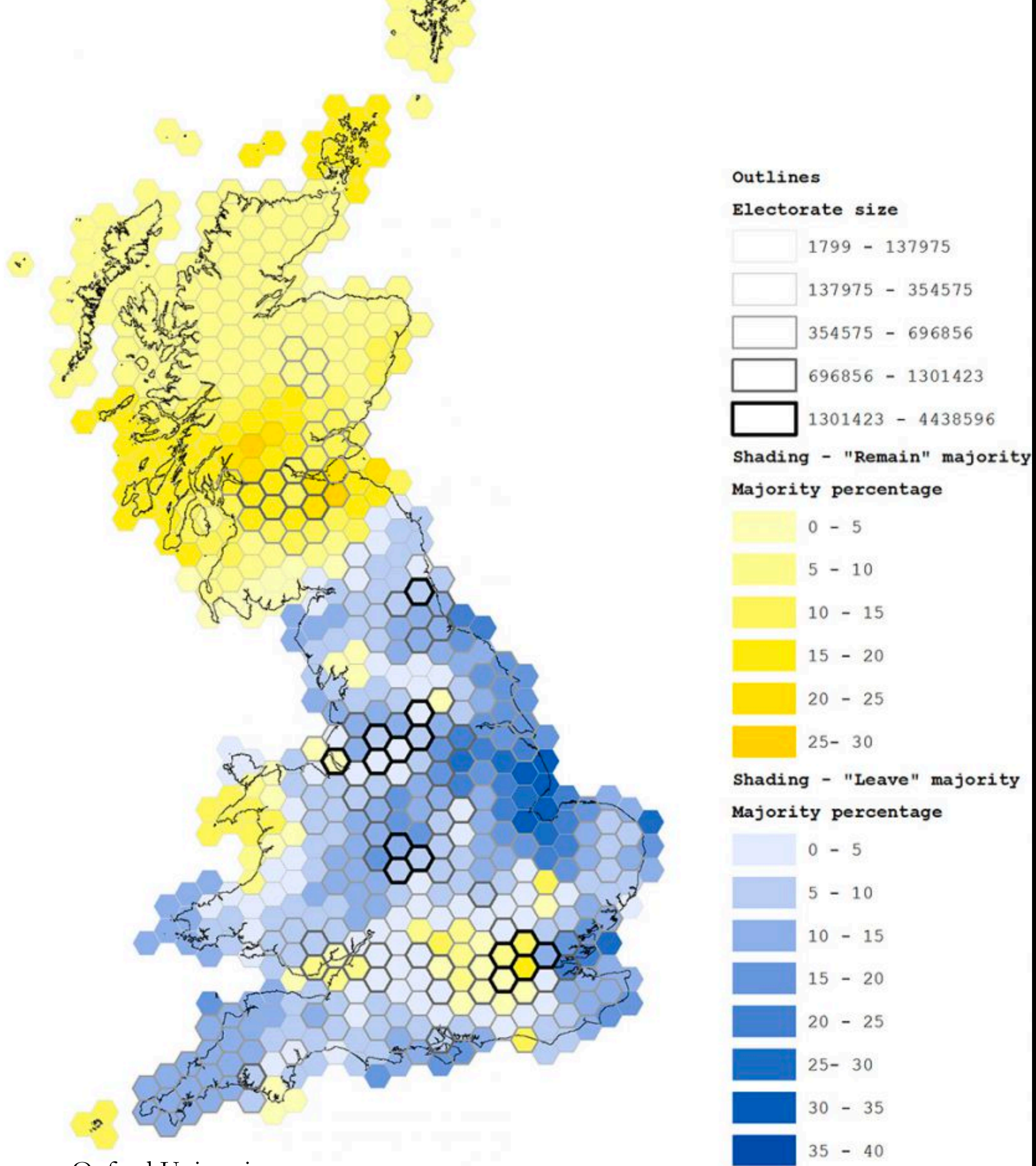
WEST MIDLANDS			No.	% rise
41. Herefordshire	6,611	3.7		
42. Birmingham	6,063	0.6		
43. Coventry	2,393	0.8		
44. Stratford-upon-Avon	2,096	1.8		
45. Walsall	1,917	0.8		
REGION TOTAL	41,370	0.8		

SOUTH WEST			No.	% rise
36. Bristol	3,111	0.8		
37. Bournemouth	2,037	1.3		
38. West Wiltshire	1,944	1.6		
39. Cheltenham	1,637	1.5		
40. Poole	1,506	1.1		
REGION TOTAL	37,008	0.7		

SOUTH EAST			No.	% rise
31. Southampton	4,296	1.9		
32. Slough	2,812	2.4		
33. Arun	2,803	1.9		
34. Brighton and Hove	2,286	0.9		
35. Swale	1,986	1.6		
REGION TOTAL	67,649	0.8		

LONDON			No.	% rise
26. Westminster	14,466	6.2		
27. Camden	6,814	3.1		
28. Ealing	4,771	1.6		
29. Southwark	3,778	1.5		
30. Barnet	3,648	1.1		
REGION TOTAL	79,100	1.1		





Source: Oxford University  
([http://www.ox.ac.uk/sites/files/oxford/styles/ow\\_content\\_width/public/media\\_wysiwyg/4\\_Brexit\\_hexes.jpg?itok=LCjhfwo3](http://www.ox.ac.uk/sites/files/oxford/styles/ow_content_width/public/media_wysiwyg/4_Brexit_hexes.jpg?itok=LCjhfwo3))



Now I want to move to a different case study: Syria.

Video #1 includes on the ground coverage in a refugee camp and over the border

Video #2 provides a more theoretical approach to understanding the conflict.

Video #3 shows a recent pipeline explosion in Syria that led to widespread blackouts. You are more likely to have heard about the recent Beirut explosions.

There are a bunch of explainer videos on YouTube of varying quality and age from the likes of *BBC News*, *The Guardian*, and *Vox* if you are interested.



# V. Environmental migration and conflict





# VI. Syria



Image source: *Time Magazine*  
(<https://time.com/5195442/eastern-ghouta-syria-civil-war-anniversary/>)



# Analysis // The World Is Forgetting About Syria

Among those suffering the ravages of the civil war are Syrian students at local universities, or in their countries of refuge, who are in dire need of scholarships

Zvi Bar'el | [Send me email alerts](#)

Nov 12, 2018 2:26 PM



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Syrian refugees arriving in Ruwaished, Jordan, in 2015. Credit: Raad Adayleh/AP

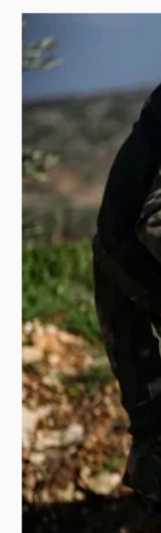
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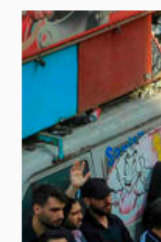
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## Syrian Revolution NINE years on: 586,100 persons killed and millions of Syrians displaced and injured

On Mar 15, 2020

### The Syrian Observatory for Human Rights

#### 14th of March 2020

The Syrian Observatory for Human Rights has documented the death of 384,000 persons across Syria since the start of the Syrian Revolution on the 15th of March 2011 to the 14st of March 2020.

A breakdown of the overall death toll is as follows:

• Civilians: 116,086 Syrians, including 22,075 children under the age of eighteen and 13,704 women over the age of eighteen

• Syrian fighters of rebel and Islamic factions and other various factions, movements, and organizations: 54,281

• Syria Democratic Forces (SDF) and Kurdish units: 12,694

• Syrian army defectors: 2,625.

• Bashar al-Assad's regime forces: 67,388; fighters of NDF and Syrian regime loyalists: 52,060; fighters of the Lebanese Hezbollah: 1,697; and gunmen of non-Syrian nationalities loyal to the regime forces of the Shiite community: 8,331, of whom, 264 were Russian soldiers and mercenaries

• Turkish soldiers: 191.

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# Actors in Syrian conflict

## Civilians

- 23 Million (2011)
- UN estimated 6.6 million internally displaced and 4.7 million refugees
- 125,000 killed

## Armed non-state groups (up to 1,000)

- Free Syrian Army
- Islamic State of Iraq and the Levant (ISIS)
- Kurdish YPG (People's Protection Units)
- Jabot al-Nusra
- Hezbollah

## Government, military, and political representatives

## International actors

- US, UK, France, Turkey
- Russia, Iran, Hezbollah



# Iraqi refugees in Syria

- Following the US-led invasion of Iraq in 2003, Iraqi refugees in Syria were offered **protection** by the Assad government.
- By the end of 2003 70,000-100,000 Iraqis were living in Syria.
- By 2009, the Government of Syria estimated the Iraqi refugee population in Syria at **1.1 million people**.
- Given the current Syrian conflict many view Iraqi refugee populations as **potential supporters of the Assad** regime, and they have therefore been subject to targeted attacks and discrimination.



# Syria, 2017-2020

2017—peace talks in Kazakhstan lead to Russia, Iran, and Turkey enforce ceasefire between government and non-Islamist rebels.

2018 January - Turkey launches an assault on northern Syria to oust Kurdish rebels controlling the area around Afrin.

2018 July - Syrian army recaptures almost all of the south of the country, up to the borders with Jordan and Israeli-held territory.

2018 Sept-Dec- Kurdish-led SDF launch offensive that reduces ISIS territory to a tiny enclave on Iraqi border.

2019 January - After announcing plan to withdraw US troops from Syria, President Trump warns Turkey of punitive economic measures if it goes ahead with plan to attack US Kurdish allies in northern Syria.

2019 October - US withdraws from N. Syria; Turkey attacks Kurdish forces



Nation & World | Nation & World Politics | World

# In Syria, Putin seizing on window of opportunity before U.S. election

Originally published October 4, 2016 at 8:53 pm | Updated October 5, 2016 at 6:33 am



Activists say this explosion in Daret Izza, Syria, northwest of Aleppo, was caused by a rocket launched by forces loyal to the Syrian government. (Uncredited/AP)

**U.S. intelligence analysts have told the White House that the Russian goal is to help the Syrian military retake the besieged city of Aleppo so that Moscow can resume talks on Syria’s future on vastly stronger terms.**

By [MICHAEL R. GORDON](#) and [NEIL MacFARQUHAR](#)

*The New York Times*

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WASHINGTON — Russia is using the waning days of the Obama administration to strengthen President Bashar Assad’s hold on power, expand the territory he controls in Syria and constrain the options of the next



## **Armed Conflict in Syria: Overview and U.S. Response**

Updated July 27, 2020

**Congressional Research Service**  
<https://crsreports.congress.gov>  
RL33487



**Figure 4. Syria Areas of Influence 2017**  
As of August 1, 2017



**Source:** CRS using area of influence data from IHS Conflict Monitor, as of August 1, 2017. *All areas of influence approximate.* Other sources include U.N. OCHA, Esri, and social media reports.

**Notes:** U.S. military officials have acknowledged publicly that U.S. forces are operating in select areas of eastern Syria to train, advise, assist, and equip partner forces. This map does not depict all chemical attacks reported in Syria.



**Figure 3. Syria Areas of Influence 2020**

As of May 25, 2020



**Sources:** CRS using area of influence data from IHS Conflict Monitor, last revised May 25, 2020. All areas of influence approximate and subject to change. Other sources include U.N. OCHA, Esri, and social media reports.

**Note:** U.S. military officials have acknowledged publicly that U.S. forces are operating in select areas of eastern Syria to train, advise, assist, and equip partner forces.



ENVIRONMENT

Researchers Link Syrian Conflict to a Drought Made Worse by Climate Change

By HENRY FOUNTAIN MARCH 2, 2015



Women working in fields in northeastern Syria in 2010. A new report suggests extreme drought in Syria was most likely a factor in the violent uprising that began there in 2011.  
Louai Beshara/Agence France-Presse — Getty Images

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Drawing one of the strongest links yet between [global warming](#) and human conflict, researchers said Monday that an extreme drought in [Syria](#) between 2006 and 2009 was most likely due to [climate change](#), and that the drought was a factor in the violent uprising that began there in 2011.

The drought was the worst in the country in modern times, and in a [study](#) published Monday in [Proceedings of the National Academy of Sciences](#), the scientists laid the blame for it on a century-long trend toward warmer and



# Climate change in the Fertile Crescent and implications of the recent Syrian drought

Colin P. Kelley<sup>a,1</sup>, Shahrzad Mohtadi<sup>b</sup>, Mark A. Cane<sup>c</sup>, Richard Seager<sup>c</sup>, and Yochanan Kushnir<sup>c</sup>

<sup>a</sup>University of California, Santa Barbara, CA 93106; <sup>b</sup>School of International and Public Affairs, Columbia University, New York, NY 10027; and <sup>c</sup>Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY 10964

Edited by Brian John Hoskins, Imperial College London, London, United Kingdom, and approved January 30, 2015 (received for review November 16, 2014)

**Before the Syrian uprising that began in 2011, the greater Fertile Crescent experienced the most severe drought in the 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. We show that the recent decrease in Syrian precipitation is a combination of natural variability and a long-term drying trend, and the unusual severity of the observed drought is here shown to be highly unlikely without this trend. Precipitation changes in Syria are linked to rising mean sea-level pressure in the Eastern Mediterranean, which also shows a long-term trend. There has been also a long-term warming trend in the Eastern Mediterranean, adding to the drawdown of soil moisture. No natural cause is apparent for these trends, whereas the observed drying and warming are consistent with model studies of the response to increases in greenhouse gases. Furthermore, model studies show an increasingly drier and hotter future mean climate for the Eastern Mediterranean. Analyses of observations and model simulations indicate that a drought of the severity and duration of the recent Syrian drought, which is implicated in the current conflict, has become more than twice as likely as a consequence of human interference in the climate system.**

drought | Syria | climate change | unrest | conflict

Syria’s water security by exploiting limited land and water resources without regard for sustainability (10).

One critical consequence of these unsustainable policies is the decline of groundwater. Nearly all rainfall in the FC occurs during the 6-month winter season, November through April, and this rainfall exhibits large year-to-year variability (Figs. 1*A* and 2*A*). In Syria, the rain falls along the country’s Mediterranean Sea coast and in the north and northeast, the primary agricultural region. Farmers depend strongly on year-to-year rainfall, as two thirds of the cultivated land in Syria is rain fed, but the remainder relies upon irrigation and groundwater (11). For those farms without access to irrigation canals linked to river tributaries, pumped groundwater supplies over half (60%) of all water used for irrigation purposes, and this groundwater has become increasingly limited as extraction has been greatly overexploited (4). The government attempted to stem the rate of groundwater depletion by enacting a law in 2005 requiring a license to dig wells, but the legislation was not enforced (6). Overuse of groundwater has been blamed for the recent drying of the Khabur River in Syria’s northeast (6). The depletion of groundwater during the recent drought is clearly evident from remotely sensed data by the NASA Gravity Recovery and Climate Experiment (GRACE) Tellus project (Fig. 2*C*) (12).

The reduced supply of groundwater dramatically increased



# 2016 study examining tree rings found that drought in Levant **worst in 900 years.**



## Journal of Geophysical Research: Atmospheres

### RESEARCH ARTICLE

10.1002/2015JD023929

#### Key Points:

- There is large multidecadal drought variability across the Mediterranean over the last 900 years
- Droughts tend to be zonally symmetric, but there is strong north-south antiphasing in eastern basin
- There is an 89%/98% likelihood that the recent Levant drought is the worst of the last 900/500 years

#### Correspondence to:

B. I. Cook,  
benjamin.i.cook@nasa.gov

#### Citation:

Cook, B. I., K. J. Anchukaitis, R. Touchan, D. M. Meko, and E. R. Cook (2016), Spatiotemporal drought variability in the Mediterranean over the last 900 years, *J. Geophys. Res. Atmos.*, 121, 2060–2074, doi:10.1002/2015JD023929.

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## Spatiotemporal drought variability in the Mediterranean over the last 900 years

Benjamin I. Cook<sup>1,2</sup>, Kevin J. Anchukaitis<sup>3,4,5</sup>, Ramzi Touchan<sup>4</sup>, David M. Meko<sup>4</sup>, and Edward R. Cook<sup>5</sup>

<sup>1</sup>NASA Goddard Institute for Space Studies, New York, New York, USA, <sup>2</sup>Ocean and Climate Physics, Lamont-Doherty Earth Observatory, Palisades, New York, USA, <sup>3</sup>School of Geography and Development, University of Arizona, Tucson, Arizona, USA, <sup>4</sup>Laboratory of Tree-Ring Research, University of Arizona, Tucson, Arizona, USA, <sup>5</sup>Tree Ring Laboratory, Lamont-Doherty Earth Observatory, Palisades, New York, USA

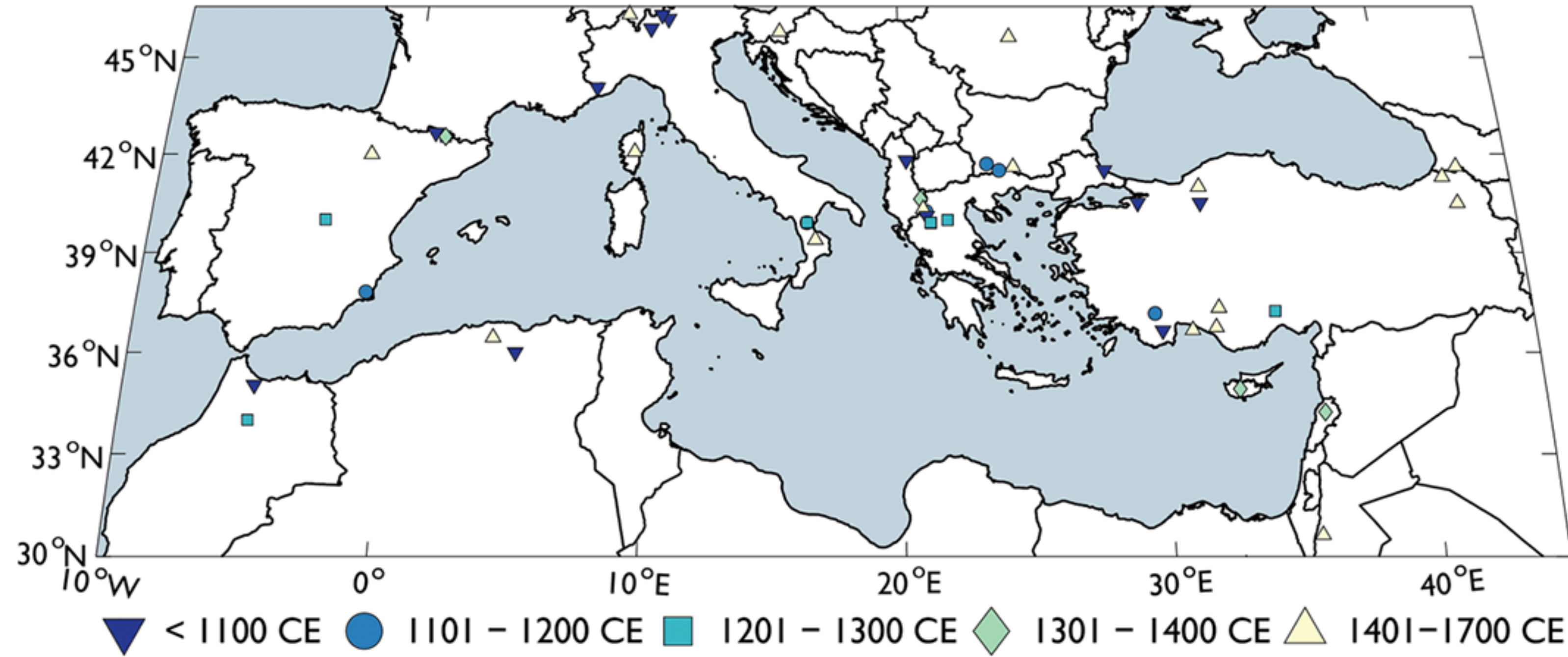
**Abstract** Recent Mediterranean droughts have highlighted concerns that climate change may be contributing to observed drying trends, but natural climate variability in the region is still poorly understood. We analyze 900 years (1100–2012) of Mediterranean drought variability in the Old World Drought Atlas (OWDA), a spatiotemporal tree ring reconstruction of the June–July–August self-calibrating Palmer Drought Severity Index. In the Mediterranean, the OWDA is highly correlated with spring precipitation (April–June), the North Atlantic Oscillation (January–April), the Scandinavian Pattern (January–March), and the East Atlantic Pattern (April–June). Drought variability displays significant east-west coherence across the basin on multidecadal to centennial timescales and north-south antiphasing in the eastern Mediterranean, with a tendency for wet anomalies in the Black Sea region (e.g., Greece, Anatolia, and the Balkans) when coastal Libya, the southern Levant, and the Middle East are dry, possibly related to the North Atlantic Oscillation. Recent droughts are centered in the western Mediterranean, Greece, and the Levant. Events of similar magnitude in the western Mediterranean and Greece occur in the OWDA, but the recent 15 year drought in the Levant (1998–2012) is the driest in the record. Estimating uncertainties using a resampling approach, we conclude that there is an 89% likelihood that this drought is drier than any comparable period of the last 900 years and a 98% likelihood that it is drier than the last 500 years. These results confirm the exceptional nature of this drought relative to natural variability in recent centuries, consistent with studies that have found evidence for anthropogenically forced drying in the region.

### 1. Introduction

Climate change impacts on water resources are a significant concern in the regions surrounding the Mediterranean Sea [Iglesias *et al.*, 2007; García-Ruiz *et al.*, 2011], an area including southern Europe, northern



# Tree-Ring Chronologies



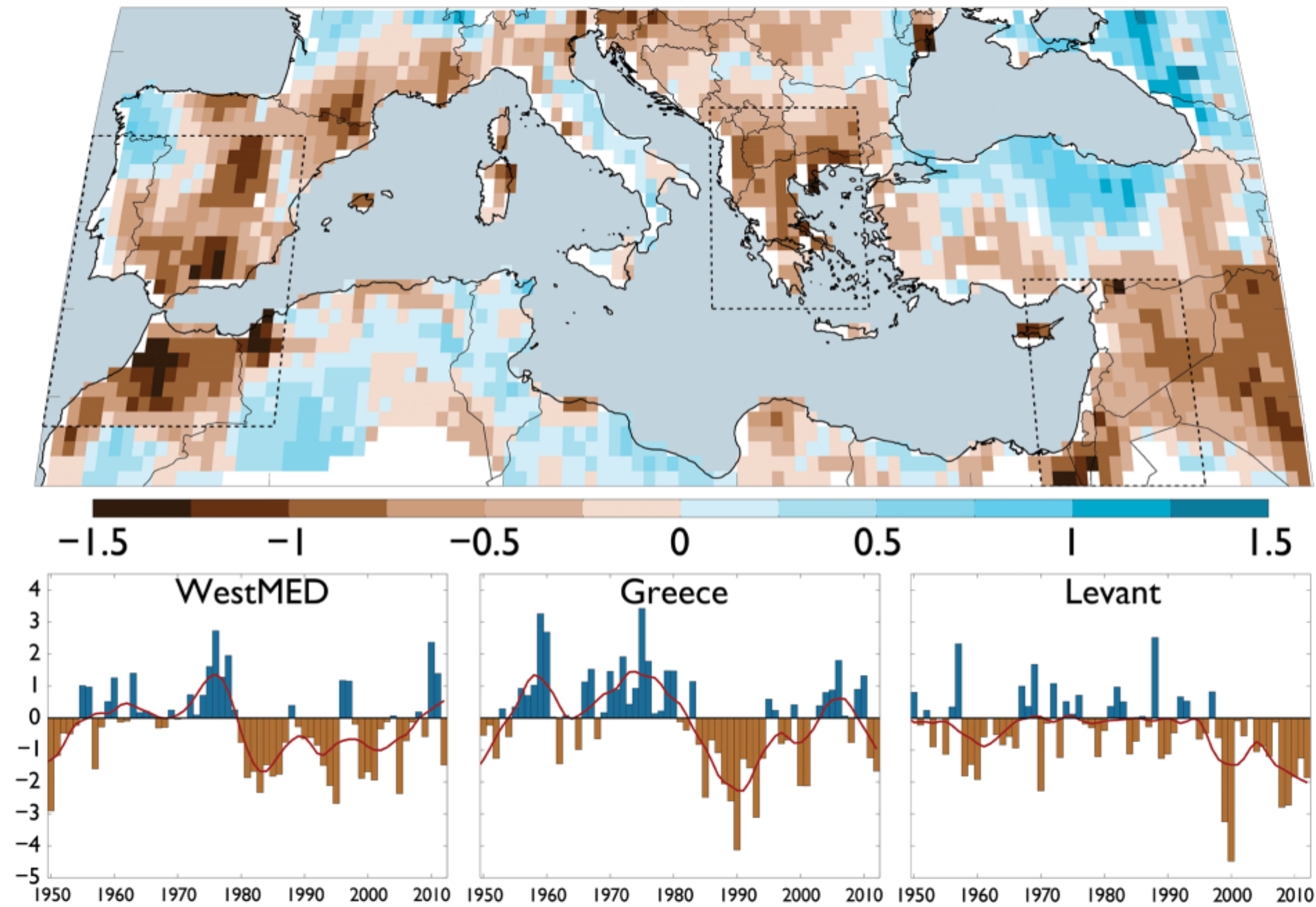
Source: Benjamin I. Cook, Kevin J. Anchukaitis, Ramzi Touchan, David M. Meko, Edward R. Cook. 2016.

“Spatiotemporal drought variability in the Mediterranean over the last 900 years. *Journal of Geophysical Research* 121(5): 2060-2074



# Spatiotemporal drought variability in the Mediterranean over the last 900 years

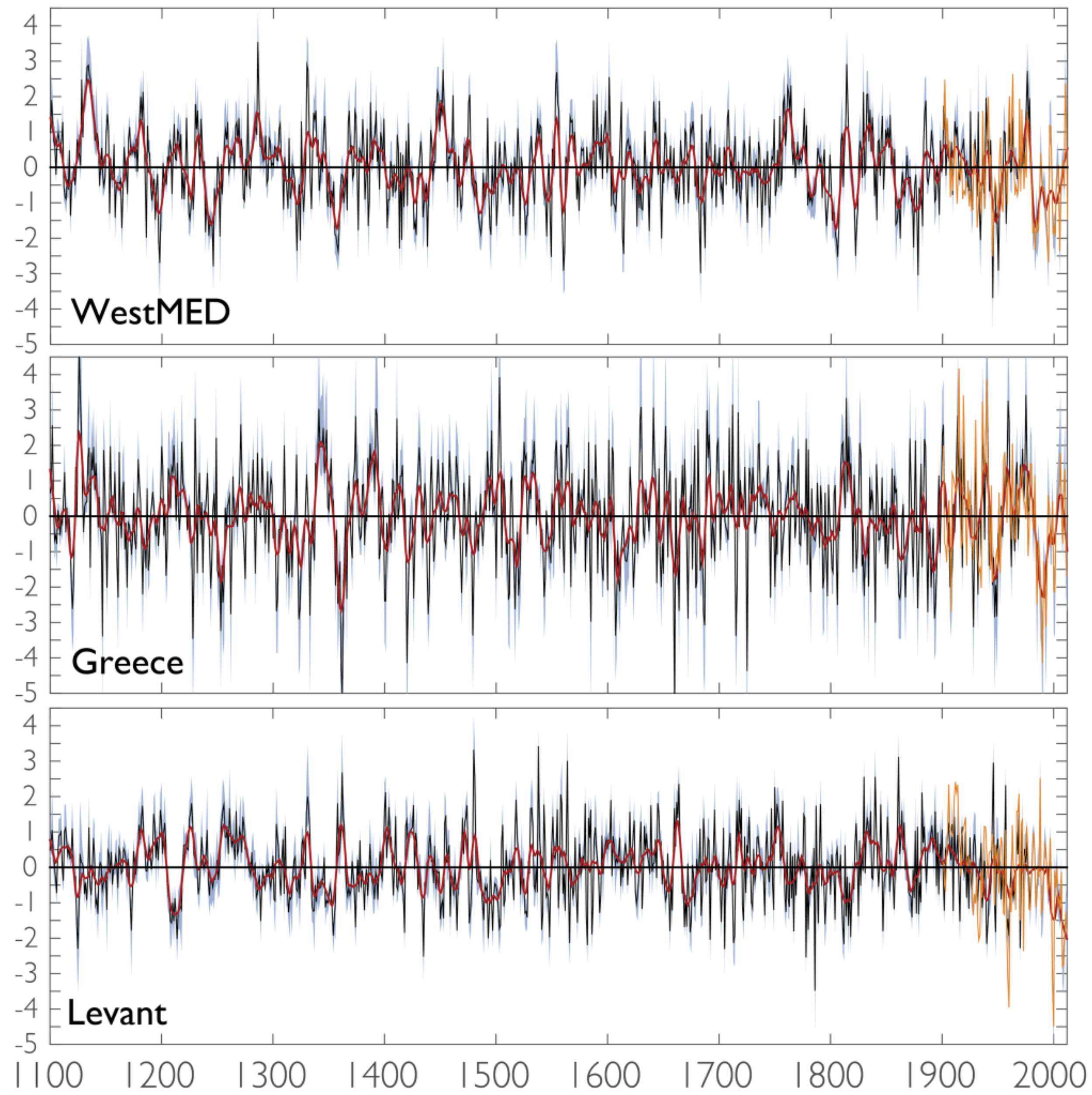
## OWDA PDSI (1980–2012)



Source: Benjamin I. Cook, Kevin J. Anchukaitis, Ramzi Touchan, David M. Meko, Edward R. Cook. 2016.

“Spatiotemporal drought variability in the Mediterranean over the last 900 years. *Journal of Geophysical Research* 121(5): 2060-2074





Source: Benjamin I. Cook, Kevin J. Anchukaitis, Ramzi Touchan, David M. Meko, Edward R. Cook. 2016.

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### Climate change and the Syrian civil war revisited



CrossMark

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#### 1. Introduction

In the view of many Western policymakers and commentators, the Syrian civil war was caused, in part, by anthropogenic climate change. Former US President Barack Obama claimed that climate change-related drought ‘helped fuel the early unrest in Syria, which descended into civil war’ (Obama, 2015); former Secretary of State John Kerry argued that ‘it’s not a coincidence that immediately prior to the civil war in Syria, the country experienced its worst drought on record’ (Kerry, 2015); erstwhile Democratic presidential candidates Martin O’Malley and Bernie Sanders have claimed similarly (Democracy Now!, 2015; Schulman, 2015); and in the UK, Prince Charles has maintained that ‘there is very good evidence indeed that one of the major reasons for this horror in Syria was a drought that lasted for five or six years’ (Mills, 2015). International organisations (e.g. the World Bank: Verme et al., 2016: p. 33), leading NGOs (e.g. Friends of the Earth: Bennett, 2015), official governmental and intergovernmental reports (e.g. Adelphi et al., 2015; King et al., 2015), defence think tanks (e.g. CNA Military Advisory Board, 2014: pp. 13–14), academics (e.g. Cole, 2015; Malm, 2016), activists (e.g. Brand, 2015) and commentators of various political persuasions (e.g. Box & Klein, 2015; Friedman, 2012, 2013) – all have argued similarly.

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For its advocates, this Syria-climate change thesis is powerful not so much for its own sake, but because it illustrates the chaos that may ensue as greenhouse gas emissions rise. Climate change, runs the common policy refrain, is a ‘threat multiplier’ (CNA Military Advisory Board, 2007: p. 44) which will cause ‘more drought, more famine, more mass displacement – all of which will fuel more conflict for decades’ (Obama, 2009). The Syria case appears to confirm this, showing that the conflict effects of climate change are already with us, and lending extra credibility to warnings of future climate-driven instability. The Syria example, in turn, has potentially important policy implications, especially for the ways in which political, military and development institutions might prepare for and adapt to the changing global climate. The Syria-climate change link has been widely invoked, for example, in discussions about Europe’s migrant and refugee crisis, with European Commission President Jean-Claude Juncker (2015) identifying climate change as one of the ‘root causes’ of the new migration, others suggesting that those displaced Syrians arriving in Europe are ‘climate migrants’ and ‘climate refugees’ (e.g. Baker, 2015; Dinshaw, 2015b), and still others arguing that the numbers currently arriving in Europe will inevitably rise as the planet warms (e.g. Hockenos, 2015; O’Hagan, 2015).

For all this, there is good reason for caution about the Syria-climate change thesis. Until a few years ago, the 2003–05 war in Darfur was widely identified by Western commentators and policymakers as climate change-related – and even as the ‘first climate war’ (e.g. Mazo, 2010: pp. 73–86; Welzer, 2012: pp. 61–5) – with UN Secretary General Ban Ki Moon going so far as to claim that ‘the Darfur conflict began as an ecological crisis, arising in part from climate change’ (Ki Moon, 2007). But such claims have since been discredited, with critics finding among other things that Darfur’s war neither occurred during nor was directly preceded by drought (Kevane & Gray, 2008); that there existed no solid evidence linking the Sahelian drought to anthropogenic climate change, in fact possibly the opposite (Dong & Sutton, 2015); and that claims like those of the UN Secretary General misrepresented the political and economic causes, and the essentially counter-insurgency character, of the Darfur war (Verhoeven, 2011; Selby and Hoffmann, 2014a). More broadly, there is no consensus within the growing field of





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## A comment on “climate change and the Syrian civil war revisited”

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“Climate change and the Syrian civil war revisited” is an important and necessary corrective to an emerging discourse that climate change is primarily to blame for the massive humanitarian and geopolitical catastrophe that has become the Syrian Civil War. This study will have important consequences for both the broader literature on climate change and conflict and for policy discussions thereof. These consequences will not be uniformly positive.

On the one hand, this piece certainly will refocus scholarly attention on tracing causal paths between climate forcings and conflict outcomes, especially in the context of particular cases. The study by Kelley, Mohtadi, Cane, Seager, and Kushnir (2015), the critique of which motivates much of this article, made a strong and convincing argument for a climate change signal in the Syrian drought but did very little to substantiate the stronger, much more politically charged claim that the drought caused the conflict there. The literature on climate impacts on civil conflict and political violence more broadly is now sufficiently large and nuanced that it is not enough to simply argue *post-hoc ergo propter-hoc*. Selby, Dahi, Fröhlich, & Hulme (2017) have done the literature and the policy community a great service by pointing out the dubious nature of much of the evidence for the intermediate claims that would help establish the causal import of Syria’s drought for the subsequent conflict. More generally, this piece will create the expectation that future case studies investigating links between environmental factors and conflict outcomes will need to pay more attention to the specific pathways and mechanisms by which climatic events create grievances, create space for violent political entrepreneurs, and/or incentivize opportunistic, destabilizing behavior by political elites (Benjaminsen, 2008; Kahl, 2006).

I am generally convinced there are relationships between climate, climate change, and conflict, though the relationships appear to be scale- and context-dependent (Hsiang, Burke, &

Miguel, 2013; Salehyan, 2014). But arguing that any particular conflict was “caused” by climate change is exceedingly difficult, in part because multiple motivations are almost always present among combatants, these motivations are both stated and unstated, and because contextual factors, like dependence on agriculture for livelihoods, patterns of exclusionary ethnic rule, and low levels of economic development affect whether a given climate “shock” results in violence (O’Loughlin, Linke, & Witmer, 2014;; Salehyan & Hendrix, 2014;; von Uexkull, Croicu, Fjelde, & Buhaug, 2016). The drought that affected Syria also affected neighboring Jordan, Lebanon and Cyprus, yet widespread violence did not occur there. Even if and when climate matters, it matters in a specific political, social, and economic context that must be taken into account.

On the other, I fear getting the Syrian case “right” – or at least correcting a flawed dominant narrative – will negatively affect discussions of environmental impacts on conflict in the policy sphere. Many will read this article as “all this talk of climate change and conflict is wrong,” when in fact the evidence supports a much more limited conclusion: the impact of climatic factors on the Syrian civil war is not entirely clear. But the dramatic nature of the Syrian civil war and the vocal nature of those linking it to climate change have caused this case to exert inordinate influence on how influential non-specialists and the general public view the relationship between climate change and conflict. Former US President Barack Obama linked climate change to the Syrian conflict, saying it was a contributing factor.<sup>1</sup> Documentaries like Thomas Friedman’s *Climate Wars*, *The Age of Consequences*, and VICE News’ *Assad’s Syria and the Costs of Climate Change* have all made a strong claim for security impacts of climate change building off of the Syrian case, in spite of the fact that most of the compelling influence for climate-conflict linkages emerges from statistical analysis of hundreds if not thousands of cases, and most of that work supports a more limited, probabilistically causal linkages. One can practically hear the anti-climate science machine revving its engine in anticipation of these findings. To the extent the dominant narrative got the Syrian case “wrong”, it will ultimately make it harder for scholars and scientists to communicate the very real economic and security

<sup>1</sup> “Obama: Climate Change Contributed to Syrian War, Is Major Security Threat,” Associated Press October 5, 2016.



# Lecture question #3

What are the policymaking implications of deciding that the drought did (or did not) contribute to the Syrian civil war's onset?



# VI. Syria



Image source: *Time Magazine*  
(<https://time.com/5195442/eastern-ghouta-syria-civil-war-anniversary/>)