Ankara University
Faculty of Languages, History and Geography
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Forced Migration: Refugees and Internally Displaced Persons

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GGR 106 POPULATION GEOGRAPHY
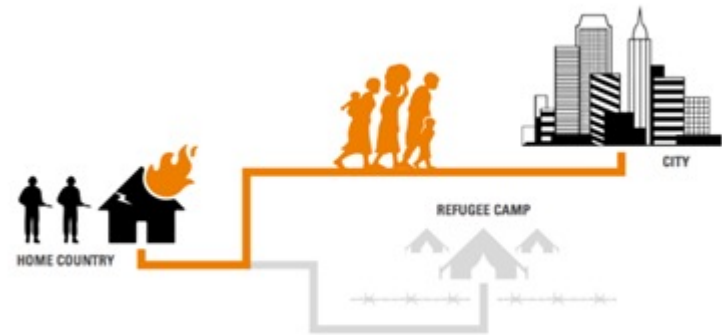
- **Migration is generally known as a regular and basically voluntary movement of people seeking better economic and social opportunities, different life experiences and styles.**

- However, more and more people are involuntarily participating in internal migration or cross-border movements for reasons such as war, conflict, terrorism and natural disasters.

- Migration, which is a complex and growing global phenomenon, has become a part of global problems and international agenda by being politicized.

- There were approximately 281 million people living outside their country of origin in the world in 2020.

- The current number of international migrants is growing rapidly and is expected to continue to rise in the future.

- This increase is both a result and a factor of the economic globalization process that has spread in recent years (Zetter, 2014).

- Unlike voluntary and regular migration, small but significant international migration includes people who involuntarily (forced) leave their homes or countries.

- **In this context, around 75 million people worldwide are forced immigrants and there are also millions of undocumented immigrants.**

- Forced and irregular migration is now a major problem for the international community. Especially the number of participants in this movement, the diversity of factors and the diversification of objectives have expanded so tremendously in the last two decades that the trend can be expected to continue in the coming years.

- Conflict and violence, persecution, armed non-state actors, separatist movements, oppression and violations of human rights are forcing more and more people to flee their place of residence or country. When the victims of disasters due to environmental changes are added to these, the problem of forced immigrants in the world is growing.

- **As it is known, the words chosen to describe a situation are important. The scope of the terms defined is contextual and may be insufficient for new situations that arise over time, as with the term refugee**.

- Today, the increasing complexity, unpredictability, and haphazard patterns of violence, conflict and persecution, as well as the complex and diverse patterns of mobility of people forcibly displaced by these events, are challenging the effectiveness of established protection norms and practices (Zetter, 2014).

- Other risk factors that increase involuntary migration include poverty and mismanagement.

- Often it is a combination of many factors that underlies displacement. That's why so many displaced people today fall outside established protection categories and tools. Because the norms of the existing protection categories cannot meet the protection duty and requirements.

- Changing circumstances indicate that the scope of protection for forcibly displaced people is changing and its interpretation needs to be broadened.

- Simply, refugee (refugee) is "a person who seeks asylum in another country and whose request is accepted by that country".

- **A more comprehensive definition is in the 1951 Convention Relating to the Status of Refugees, which was amended in 1967.**

- **Item 1 of the Convention defines a refugee as:**

  ▫ A refugee is a "refugee who is outside the country of his/her nationality because of a well-founded fear of being persecuted because of his/her race, religion, nationality, membership of a particular social group or political opinion, and who is unable or unwilling to benefit from the protection of that country due to such fear, or does not have a nationality, and such incidents A person who is outside of his/her previous country of residence as a result of which he/she cannot return or does not want to return due to the fear in question.

- **The refugee label in this definition is problematic in that it is limited in international law not only to its specific sense of persecution, but also that its scope falls short of reflecting the complex and multivariate causes that compel people to flee.**

- Traditional "status-based protection" is no longer a single and sufficient answer for people who have to be displaced, and the concepts of "needs-based" or "rights-based protection" are important.

- At this point, since coercion and necessity are common features at a certain level, it would be more appropriate to name this broad category of people as forced immigrants.

- There are four key considerations for those falling under this definition:

1. The person must be outside the country of nationality or former permanent residence.
2. The person should have a fear of being oppressed/persecuted.
3. The fear of being oppressed must be tied to one of the accepted circumstances.
4. Fear must be a place of doubt.

- The concept of asylum seekers is used for people who have requested to be refugees, but this request has not been accepted and is under evaluation.

- **Forced Migration Types**
1. **Conflict-Induced Displacement**
2. **Development-Induced Displacement**
3. **Disaster-Induced Displacement**

- **Forced Migrant Types**

1. Refugees
2. Asylum seekers
3. Internally Displaced Persons
4. Environmental and disaster displacees
5. Smuggled people
6. Trafficked people

Source: http://www.forcedmigration.org/about/whatisfm

GGR 106 POPULATION GEOGRAPHY

- Although the decision to migrate is usually taken in a different context of push-pull factors and rarely due to a single reason, an existing and life-threatening situation leads to migration.

- **Reasons for the origin of migration:**

1. Economic factors (poverty and unemployment)
2. Social factors (poor welfare indicators or education)
3. Presence of migrant networks
4. Deteriorated security conditions (human rights violations, oppression/persecution of minority groups, armed conflicts, etc.)
5. Environmental factors (ecosystem degradation, environmental disasters)

- According to the International Union for Migration Studies, forced migration; refugee and asylum-seeking movements and internal displacement; includes displacement of people due to natural disasters, famine, chemical and nuclear disasters, or development projects.

The number of people who are in the interest of UNHCR is increasing.

POPULATIONS

UNHCR POPULATION REPORTS AND PROJECTIONS

INCREASE IN
16% 2019

POPULATIONS OF CONCERN:

Year	Population
2021*	97,283,150
2020*	94,357,287
2019	86,531,669
2018	74,791,939

*projections

Source: https://www.unhcr.org/globalappeal2021/
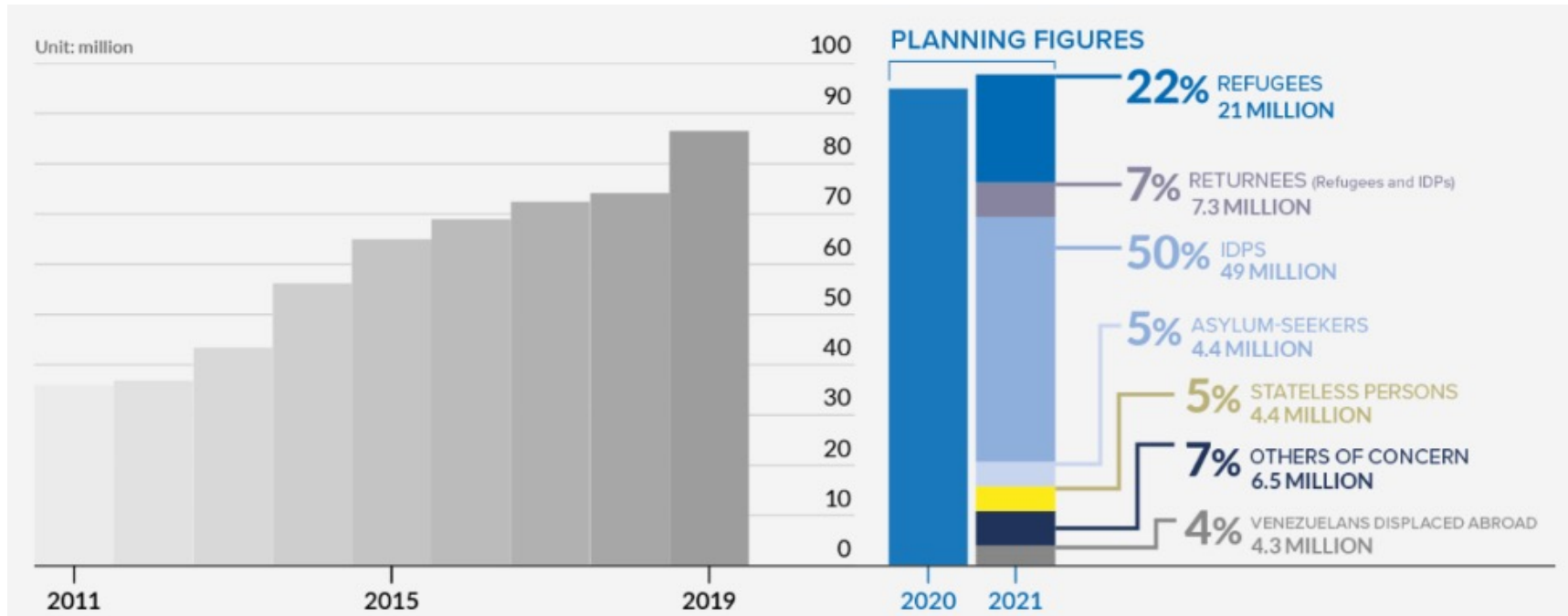
The number of people who are in the interest of UNHCR is increasing.

Source: https://www.unhcr.org/globalappeal2021/

The number of people who are in the interest of UNHCR is increasing.

Source: http://reporting.unhcr.org/population
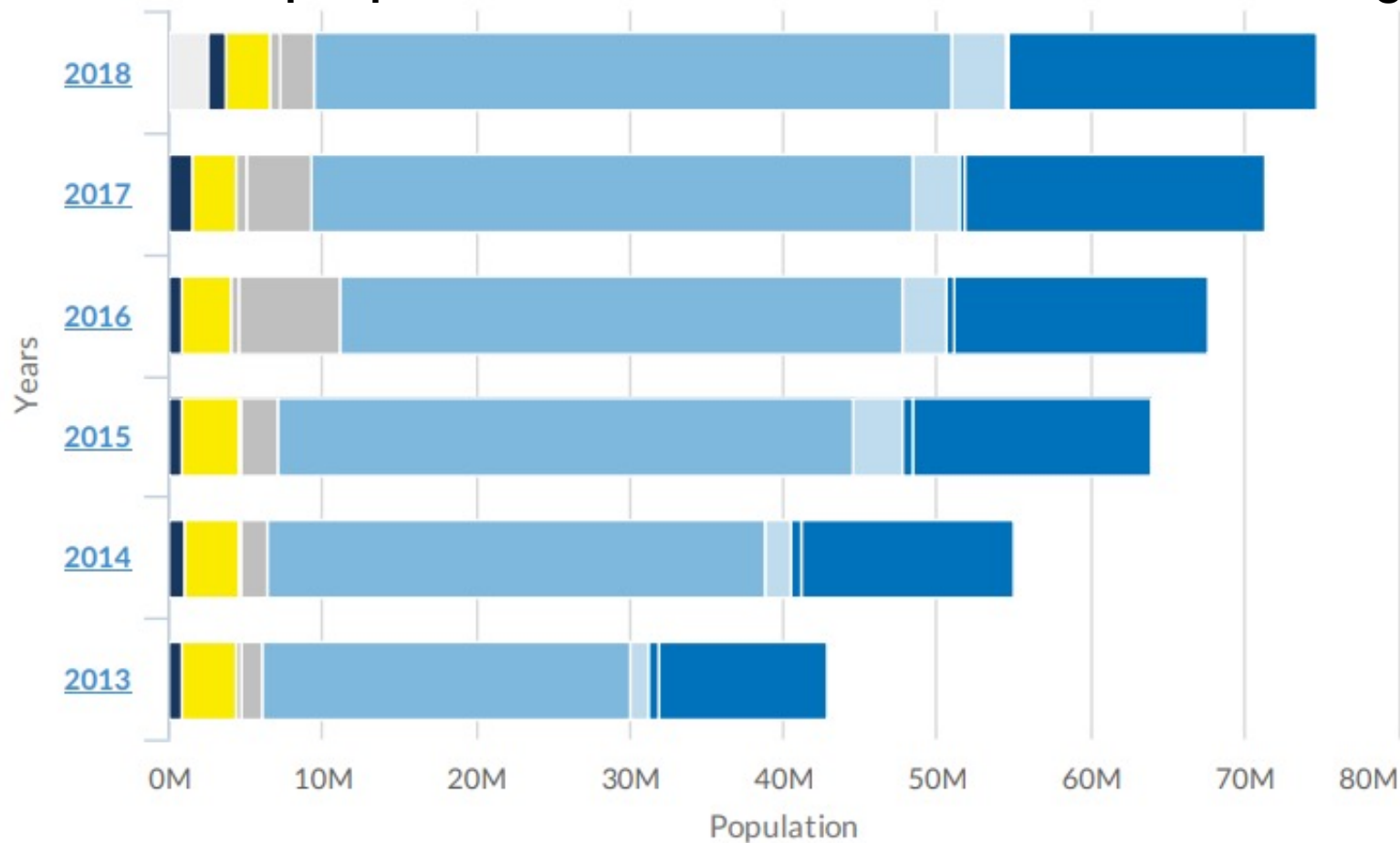
Global Forced Displacement Trends and Rates

Trend of global displacement & proportion displaced | 1997-2016


Source: http://www.unhcr.org/5943e8a34.pdf
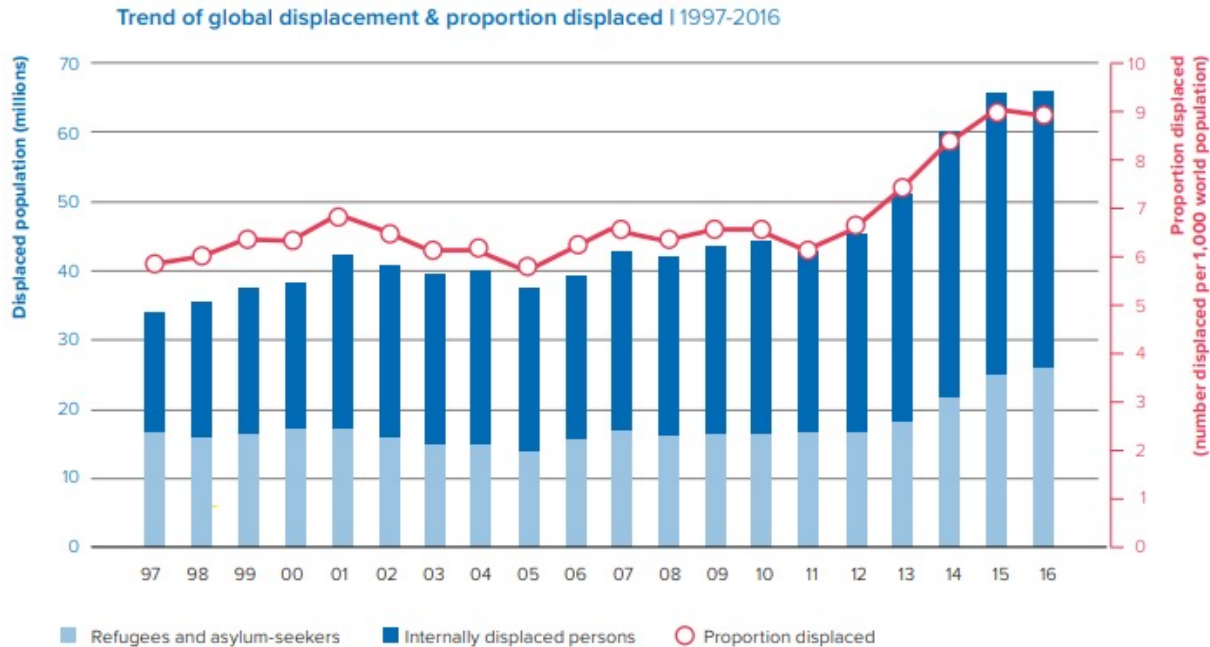
- Between 1997-2019, the number of forcibly displaced people globally increased from 33.9 million to 86.5 million and is increasing further.

- Much of this increase was concentrated after 2012, mostly due to the Syrian conflict. However, this increase has resulted from other conflicts in sub-Saharan African regions such as Burundi, Central African Republic, Democratic Republic of Congo, South Sudan and Sudan, as well as in Iraq and Yemen. It is necessary to add displacements from Venezuela abroad.

2012

2018

Refugees

Displaced Persons

GGR 106 POPULATION GEOGRAPHY
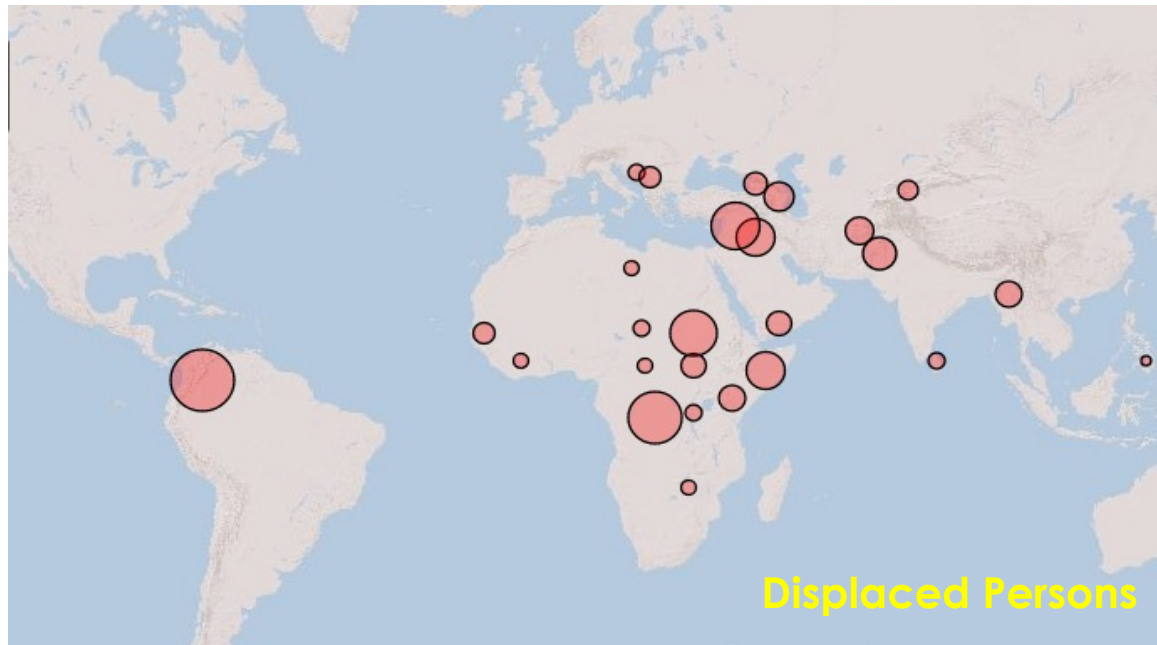
74.79 million persons of concern
globally - end of 2018

Legend
— 10 million
— 5 million
— 1 million
— 0
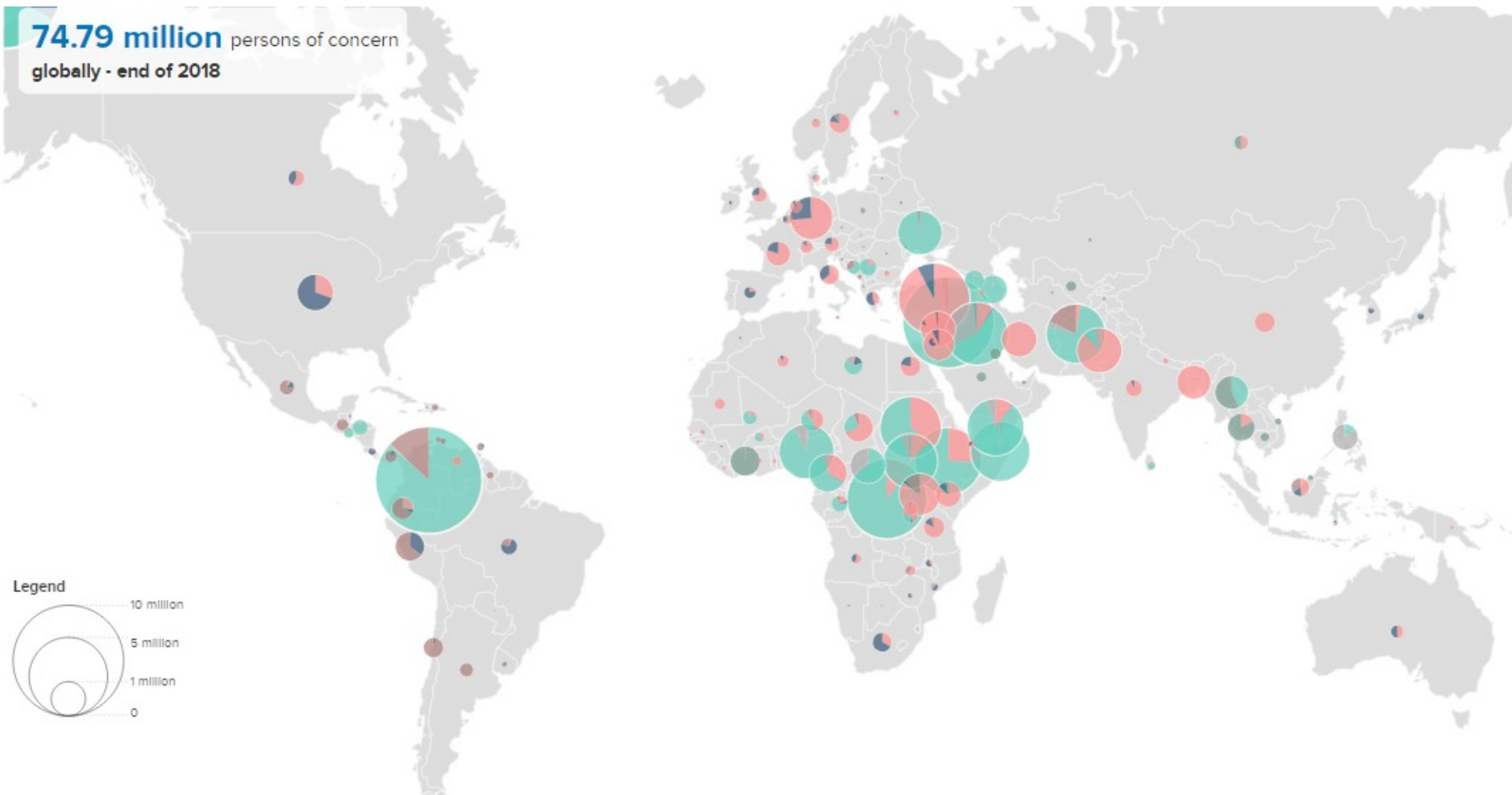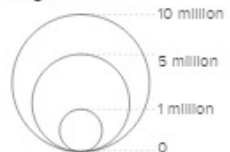
Syrian Humanitarian Crisis, Forced Immigrants and Turkey

Syrian Humanitarian Crisis, Forced Immigrants and Turkey

Background of Forced Migration from Syria

- **Foundation of the Syrian Arab Republic, 8 March 1963**
- The coming to power of the Baathist Assad family, 1971
- The armed rebellion of the Muslim Brotherhood in Hama, 1982
- **The death of Hafez Assad, 2000**
- Damascus Spring, 2001
- Emergence of the Islamic State of Iraq and the Levant (Iraqi al-Qaeda), 2004
- **Syrian National Council/Foundation of the Free Syrian Army, 2011**
- Anti-ISIS, pro-YPG/PYD Western states such as the USA, the UK, and France
- States that support the Assad Regime, such as Russia and Iran
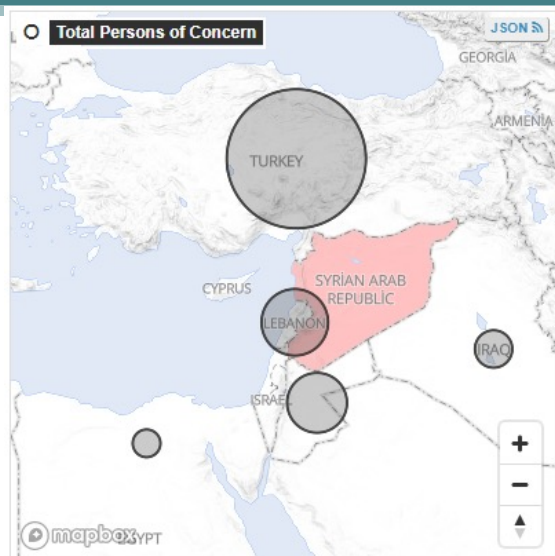- Anti-Assad Regime regional states such as Turkey, Saudi Arabia, Qatar

Syria

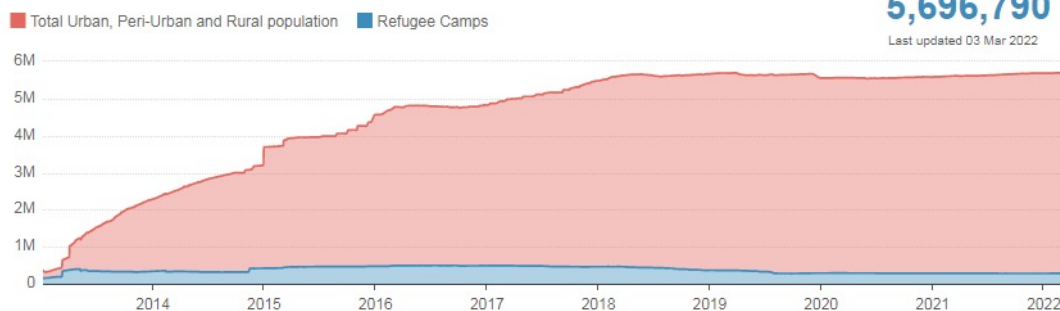**Syrian Humanitarian Crisis and Forced Migration**

Turkey

Europe

Trend of Registered Syrian Refugees

Total Urban, Peri-Urban and Rural population ■ Refugee Camps

5,696,790
Last updated 03 Mar 2022

Total Persons of Concern

5,696,790

Last updated 03 Mar 2022

Total Persons of Concern by Country of Asylum

Location name	Source	Data date	Population		
Turkey	Government of Turkey	3 Mar 2022		65.8%	3,747,734
Lebanon	UNHCR	31 Jan 2022		14.7%	839,788
Jordan	UNHCR	28 Feb 2022		11.8%	673,957
Iraq	UNHCR	31 Jan 2022		4.5%	256,006
Egypt	UNHCR	31 Dec 2021		2.4%	136,727
Other (North Africa)	UNHCR	31 Dec 2020		0.7%	42,578

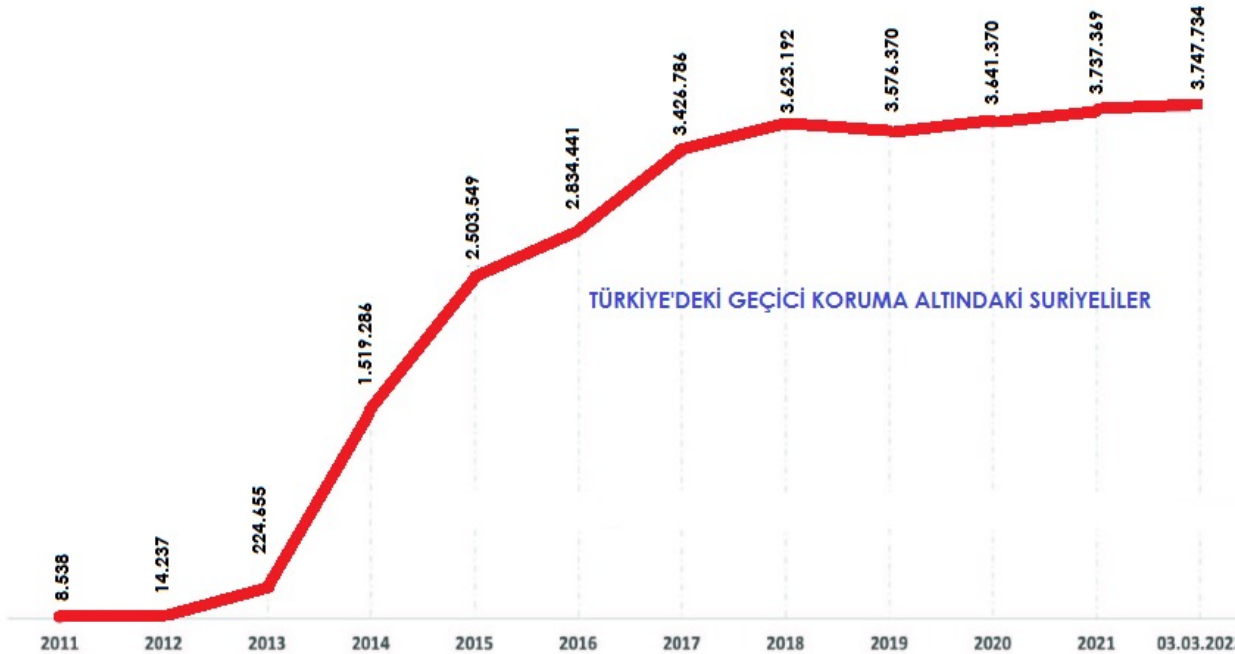Source - UNHCR, Government of Turkey

Source: 07.03.2022 tarihinde https://data2.unhcr.org/en/situations/syria adresinden erişildi.

Under Temporary Protection Syrians, 03.03.2022
3.747.734
8.538
2011

TÜRKİYE'DEKİ GEÇİCİ KORUMA ALTINDAKİ SURİYELİLER

Source: https://www.goc.gov.tr/gecici-koruma5638

- The movements of Syrian refugees to Turkey first started in April 2011.
- Turkey has declared that it will implement an "Open Door Policy" for Syrians from this date on.
- When AFAD made its first statement on refugees on 14 June 2011, it was announced that 8,538 Syrians lived in the camps established in Hatay Yayladağı and Altınözü.
- After 11 years in Turkey, 3.75 million Syrians are now living under temporary protection. Interior Minister Süleyman Soylu announced that as of 31 December 2021, a total of 193,293 Syrians are Turkish citizens.

Cities with the Most Population of Syrians Under Temporary Protection in Turkey

03.03.2022

City	Population
İSTANBUL	538.126
GAZİANTEP	461.613
HATAY	433.212
ŞANLIURFA	428.887
ADANA	256.196
MERSİN	241.045
BURSA	184.065
İZMİR	149.786
KONYA	123.341
KİLİS	106.862

Source: https://www.goc.gov.tr/gecici-koruma5638
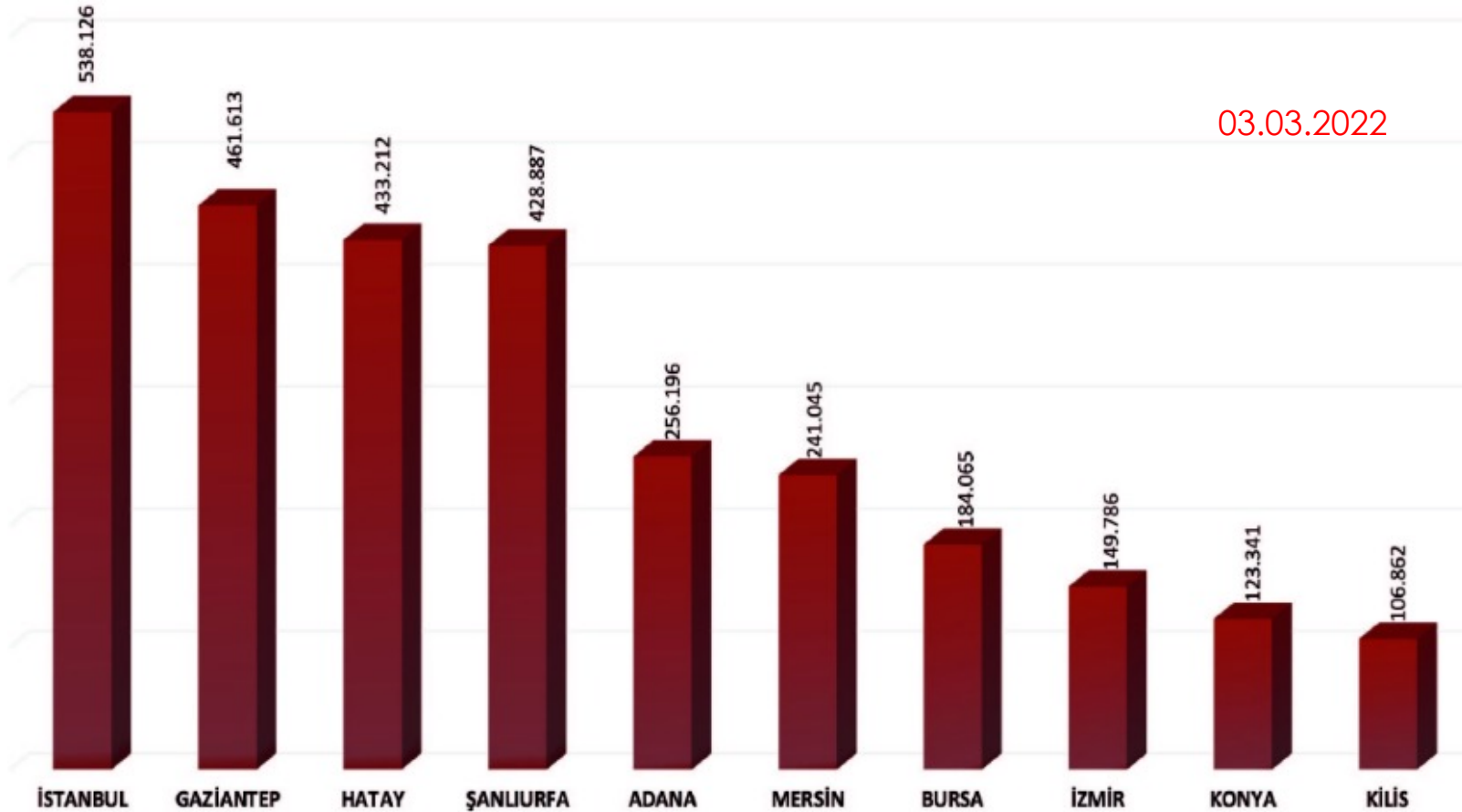
- Two geographical trends regarding migration to Turkey are identified:

- (1) Clustering of immigrants/refugees in certain cities

- (2) Demonstrate segregation of residence in urban areas

- Syrian refugees under temporary protection in Turkey tend to cluster in metropolitan and border cities.

GEÇİCİ KORUMA KAPSAMINDA BULUNAN SURİYELİLERİN İLK 10 İLE GÖRE DAĞILIMI

İSTANBUL
496.533

BURSA
175.698

KONYA
113.828

İZMİR
145.516

ADANA
246.086

GAZİANTEP
450.032

HATAY
438.580

MERSİN
210.833

KİLİS
112.576

ŞANLIURFA
422.864

$$LQ_i = X_i : Y_i$$

LQ_i = Lokasyon katsayısı

X_i = İlk nüfus için yüzde değeri

Y_i = İkinci nüfus için yüzde değeri

Location quotients (LQs)

If LQ > 1.0, it means there is a tendency to cluster

Example:

LQ Kilis = (1) : (2)

(1) Percentage of Syrians in Kilis in Kilis Population
(2) Percentage of Syrians in Turkey in Turkish Population

LQ **Kilis= 77,6 : 4,3**

LQ **Kilis =18,1**

Türkiye'de İllere Göre Suriyeli Kümelenmesi

İller	Suriyeli Nüfus	Toplam Nüfus	İldeki Suriyeli %'si	LQ	Türkiye'deki Suriyeli %'si
Kilis	110641	142541	77,6	18,1	3,1
Hatay	435903	1609856	27,1	6,3	12,2
G.Antep	449946	2028563	22,2	5,2	12,6
Ş.Urfa	423082	2035809	20,8	4,8	11,8
Mersin	210978	1814468	11,6	2,7	5,9
Adana	246004	2220004	11,1	2,6	6,9
Mardin	88242	829195	10,6	2,5	2,5
Osmaniye	49539	534415	9,3	2,2	1,4
K.Maraş	92225	1144851	8,1	1,9	2,6
Bursa	175711	2994521	5,9	1,4	4,9
Kayseri	75999	1389680	5,5	1,3	2,1
Konya	113872	2205609	5,2	1,2	3,2
Adıyaman	21728	624513	3,5	0,8	0,6
İzmir	145497	4320519	3,4	0,8	4,1
İstanbul	496635	15067724	3,3	0,8	13,9
Türkiye	3583584	83154997	4,3	1,0	100,0

Kaynak: Göç İdaresi genel Müdürlüğü, 17.04.2020
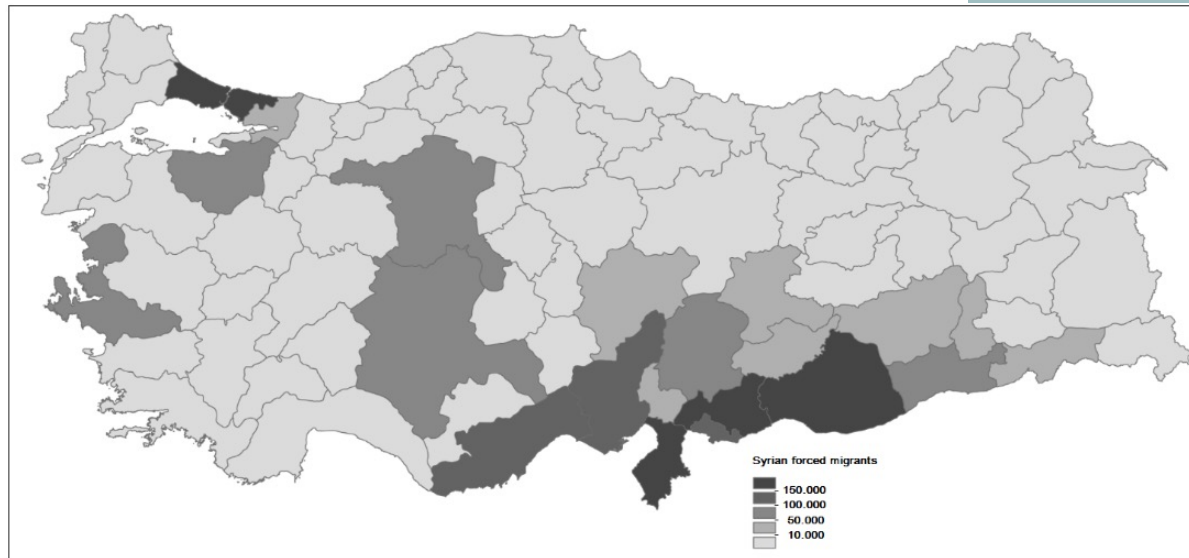
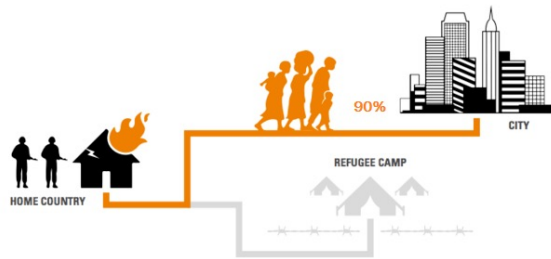**Factors affecting the concentration of Syrians near the border:**

Geographical proximity to the region of origin

Ethno-cultural similarity with indigenous people

Network connections

previous spatial experiences

Distribution of temporary accommodation centers

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- **The vast majority of Syrians in Turkey are urban refugees living outside the camps.**

Year	People Living in Temporary Accommodation Centers		People Living in Outside Temporary Accommodation Centers	
	Number	%	Number	%
2014	220.000	15,0	1.280.000	85,0
2016	268.000	10,0	2.482.000	90,0
2018	223.000	6,0	3.356.000	94,0
2019	130.881	3,6	3.475.327	96,4
2020	**63.518**	**1,8**	**3.520.066**	**98,2**

- While immigrants/refugees cluster in Turkey's border and big cities on a macro scale, they show an unequal geographical distribution pattern and socio-spatial segregation/aggregation tendency in micro scale, within the cities where they gather, in certain districts or neighborhoods.

Fatih
Sultangazi
Sultanbeyli

Suriyeli mülteci sayısı
- 20.000 kişiden fazla
- 10.001-15.000
- 5.001-10.000
- 1.001-5.000
- 1.000 kişiden az

Başakşehir
Sultangazi
Esenyurt
K.Çekmece
Bağcılar
Fatih
Zeytinburnu
Sultanbeyli
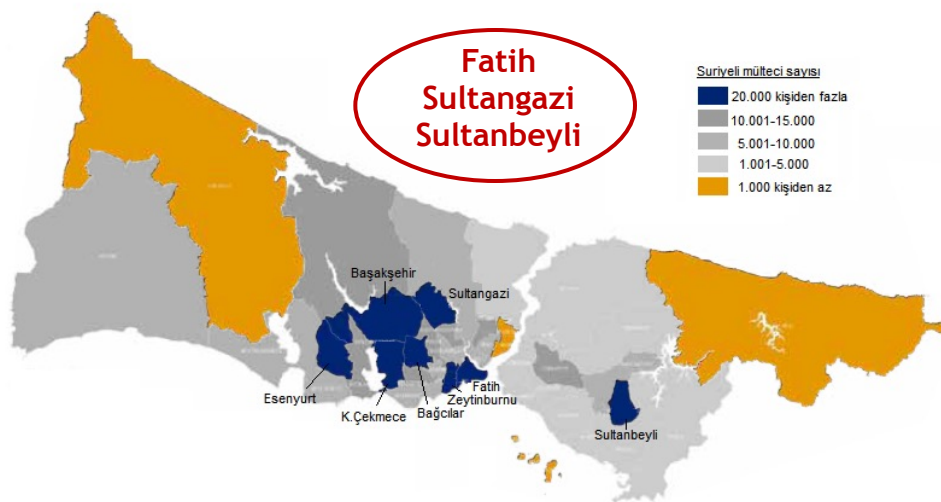
İstanbul'daki 'Küçük Suriye!'

Aksaray / İstanbul

Source: Erdoğan, 2017: 34

- The Syrian population living in Fatih district in Istanbul has created clusters in Akşemsettin, Aksaray, Ali Kuşçu and Molla Gürani neighborhoods. Akşemsettin Street is also called "Syria Street".

- Syrians living in Sultangazi district of Istanbul clustered in Zübeydehanım and İsmetpaşa neighborhoods, exhibiting strong in-group relationships (Kavas et al., 2019).

Hürriyet
8 bin nüfuslu mahallenin üçte ikisi Suriyeli
DHA   29.01.2019 - 12:55 || Son Güncelleme : 29.01.2019 - 13:01

- Önder and Ulubey neighborhoods in the Siteler district of Altındağ District, where Syrians constitute a significant part of the settled population in Ankara, have become an enclave where refugees live intensely and reflect their own cultures.

Otel, lokanta, taksiciler, döviz büroları, hatta kuaförler bile Arapça hizmet vermeye başladı.
İzmir'in merkezi Arap kasabasına döndü

- 2/3 of the Syrian refugees in İzmir have gathered in Konak, Karabağlar and Bornova districts. Basmane (Konak), the entrance gate to the city, Zeytinlik Neighborhood is a concentration area.
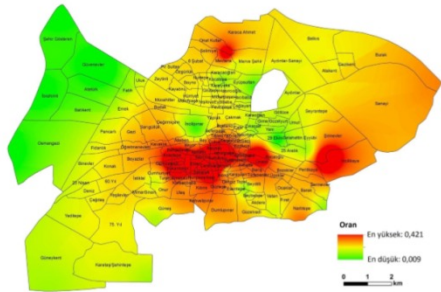

BURSA'DAKİ SURİYE ÇARŞAMBA

- In Bursa, Syrian refugees gathered in the district of Çarşamba, known as "Little Damascus/Little Şam" in Osmangazi district, in Altınparmak, İntizam and Hocahasan neighborhoods.

- In Adana, Syrian refugees concentrated in the Mirzaçelebi neighborhood of Seyhan District, and this place began to be called "Little Aleppo/Halep".

- In Gaziantep, Syrians are concentrated in the Bey, Tışlaki, Eyüboğlu, Alaybey, İsmetpaşa, Yukarıbayır, and İncilikaya neighborhoods within the boundaries of Şahinbey district in the city center (Sönmez, 2016).


- In Samsun, Syrian refugees are clustered in the Hürriyet neighborhood of Ilkadım district. An invasion-succession is taking place in this neighborhood.

- In Antakya, Syrian refugees gathered in Ürgenpaşa, Akasya, Odabaşı, General Şükrü Kanatlı, Hacı Ömer Alpagot, Akevler, Altınçay, Saraykent and Ekinci neighborhoods close to the old city center, but especially in Narlıca. In Narlıca, the Syrian population has reached 3 times the local population.
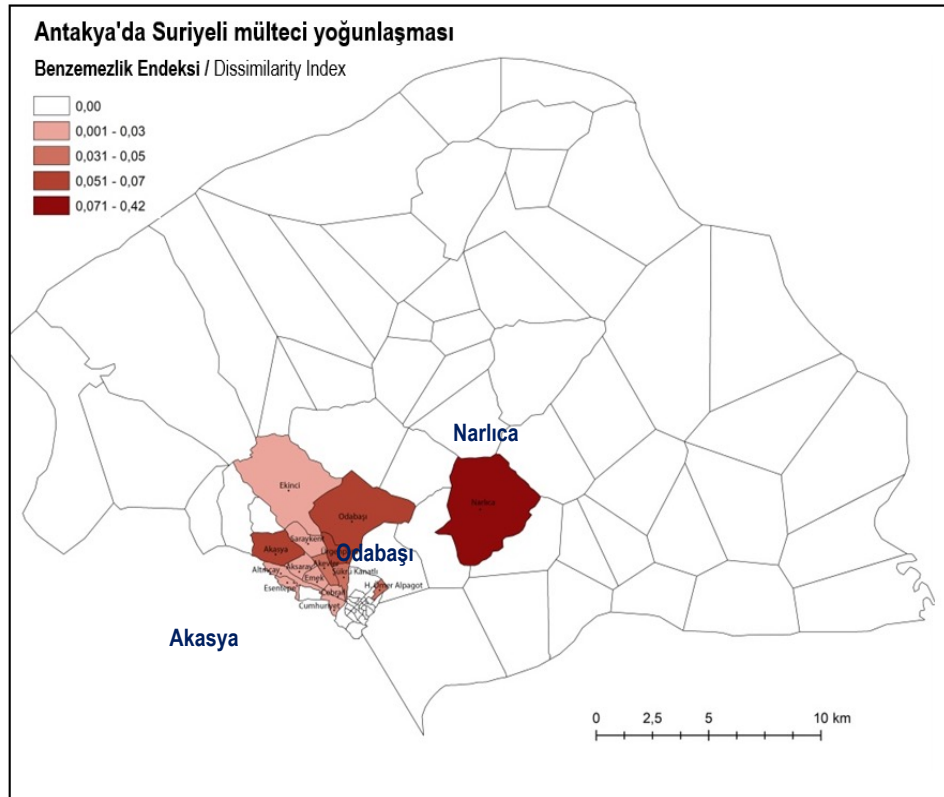
Taken from Deniz Cengiz's doctoral thesis titled "Spatial Aggregation/Segregation of Syrian Refugees in Antakya: Patterns, Processes and Results".

- Covering the costs of refugees
- Social life of refugees
- Spatial effects of refugees
- Effects of refugees on working life
- Effects of refugees on social life
- Political and security implications of refugees
- Demographic effects of refugees
- Integration and conflict of refugees with indigenous society
- The future of refugees

- Change in demographic structure (fertility, population growth rate)
- Marriage with locals: Polygamy widespread, increase in divorces
- Change of ethno-demographic structure in border provinces
- The prevalence of child labor

- Language, culture and lifestyle differences and social cohesion difficulties
- Possible increase in crime rates
- Mass reaction of conflict and violence between indigenous peoples and refugees
- Increased likelihood of terrorist attack
- Ethnic and sectarian polarization trend

- Socio-spatial segregation of Syrian refugees (emergence of refugee neighborhoods)
- Inadequate municipal budgets and services (garbage collection, city cleaning, public transportation, water supply and distribution, municipal police, control of constructions)
- Uncontrolled urban growth (increase of unhealthy housing)

- *Risks*
- Housing shortage: rising rents and difficulty finding a home
- Inflation increase in border provinces
- The prevalence of illegal employment,
- Indigenous people's unemployment
- Increase in unfair competition between companies

- *Opportunities*
- Closing the labor shortage in border provinces
- Positive contribution to regional investment
- The revival of regional trade
- Increase in the number of Syrian investments

- The ratio of Syrians to Turkey's population is 4.65%.

- The rate is 20% in Kilis, Hatay, G.Antep and Ş.Urfa. It exceeds 10% in Adana, Mersin and Mardin.

- More than 500,000 Syrians live in Istanbul.

- The number of Syrian babies born in Turkey is around 450 thousand (2019).

- The number of Syrians granted Turkish citizenship is 193.293 (end of 2021).

- The number of Syrians granted work permits in Turkey is 31,185 people.

- The number of companies with at least one partner of Syrian origin is 15,159 (February 2019).

- In total, 771,428 children continue their education life.

- There are 432,956 children of educational age who do not go to school (June 2021).

- The number of Syrian students studying at universities in the 2021-2022 academic year is 48,192 (June 2021).

Yaş Grupları	Erkek 2.016.767	Kadın 1.730.967	Toplam 3.747.734	
0-4	256.392	239.289	495.681	10 yaş altı %28.6
5-9	296.207	278.495	574.702	0-14 yaş grubu
10-14	229.471	215.857	445.328	% 40.4
15-18	141.101	121.816	262.917	
19-24	273.654	206.585	480.239	
25-29	233.243	166.598	399.841	
30-34	167.072	122.842	289.914	15-64 yaş grubu
35-39	130.231	100.202	230.433	%57.7
40-44	88.326	74.694	163.020	
45-49	61.127	59.524	120.651	
50-54	46.155	45.162	91.317	
55-59	36.378	36.613	72.991	
60-64	23.574	24.550	48.124	
65-69	15.455	16.665	32.120	
70-74	9.419	10.373	19.792	
75-79	4.527	5.511	10.038	65 ve üstü yaş grubu
80-84	2.461	3.310	5.771	%1.9
85-89	1.173	1.701	2.874	
90 ve üstü	801	1.180	1.981	

Opponents

Opponents

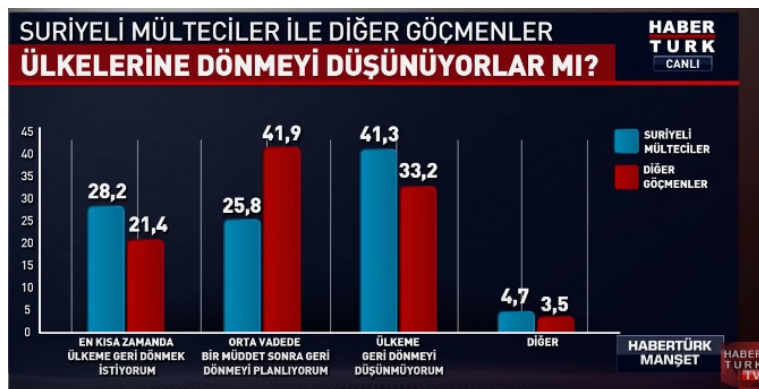**PYD/YPG**

Regime Forces
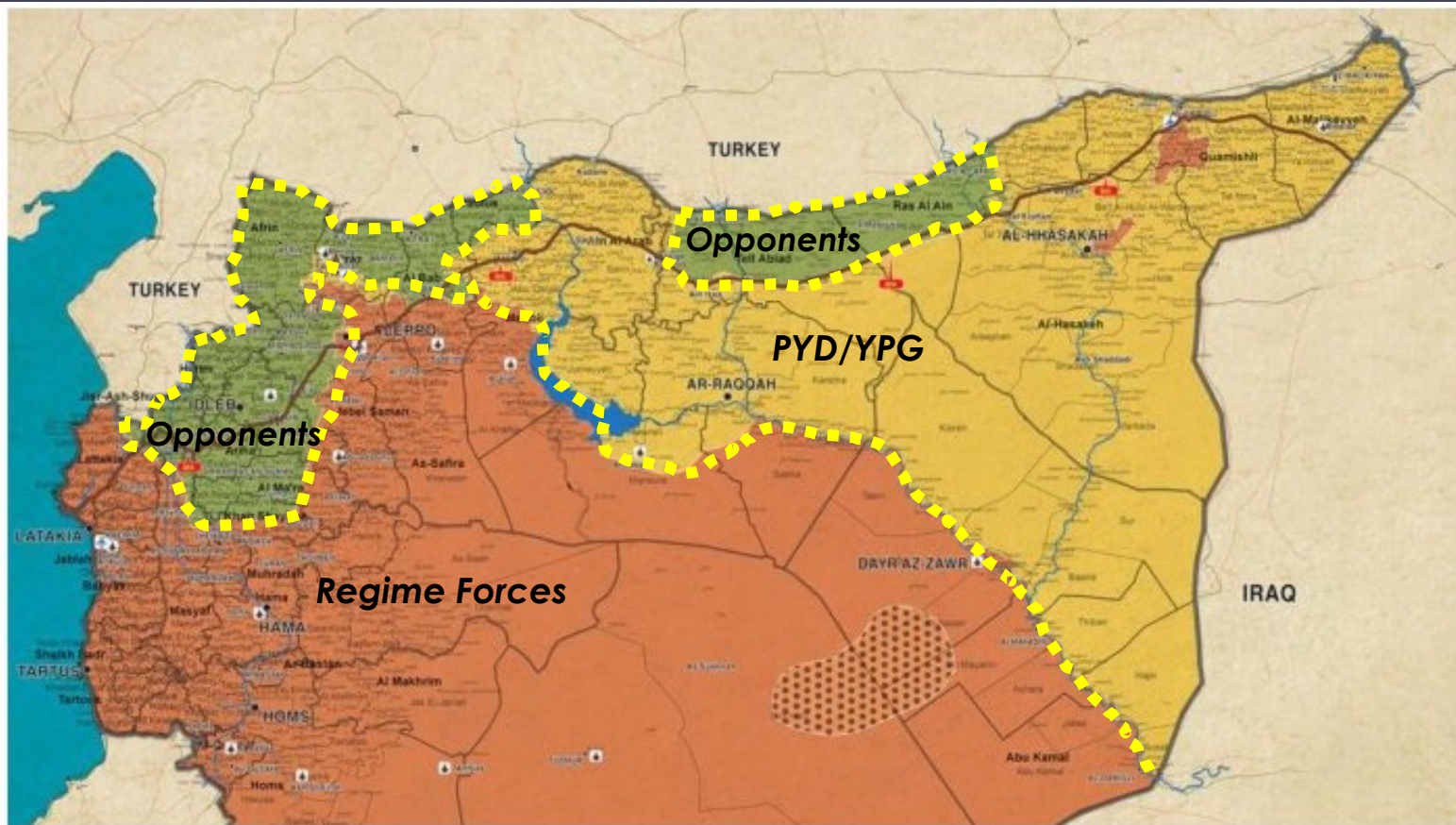
- The conflicts in Syria have been going on for 11 years and the country is de facto divided into 3 parts.

- Studies and UN reports point to the low return levels of refugees and the decrease in returns as the length of stay out of the country increases. The return rate of refugees who had to leave their country in the world is below 5%.

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Return?

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- **Refugees and irregular migrants generally want to either go to Western countries or stay in Turkey.**

SURIYELİ MÜLTECİLER İLE DİĞER GÖÇMENLER
ÜLKELERİNE DÖNMEYİ DÜŞÜNÜYORLAR MI?
HABER TURK CANLI

- SURIYELİ MÜLTECİLER
- DİĞER GÖÇMENLER

	EN KISA ZAMANDA ÜLKEME GERİ DÖNMEK İSTİYORUM	ORTA VADEDE BİR MÜDDET SONRA GERİ DÖNMEYİ PLANLIYORUM	ÜLKEME GERİ DÖNMEYİ DÜŞÜNMÜYORUM	DİĞER
Suriyeli Mülteciler	28,2	25,8	41,3	4,7
Diğer Göçmenler	21,4	41,9	33,2	3,5

HABERTÜRK MANŞET

TÜRKİYE VATANDAŞLIK VERSE
ÜLKELERİNE DÖNERLER Mİ?
HABER TURK CANLI

- SURIYELİ MÜLTECİLER
- DİĞER GÖÇMENLER

	KESİNLİKLE GENE DE GERİ DÖNERİM	BELKİ DÖNERİM / DÖNEBİLİRİM	HAYIR DÖNMEM
Suriyeli Mülteciler	23,0	33,2	43,8
Diğer Göçmenler	26,8	34,4	38,7

HABERTÜRK MANŞET

Milliyet Son Dakika Yazarlar Siyaset Ekonomi Dünya Milliyet TV Gündem Galeri

Oxfordlu araştırmacı: Suriyeliler dönmez

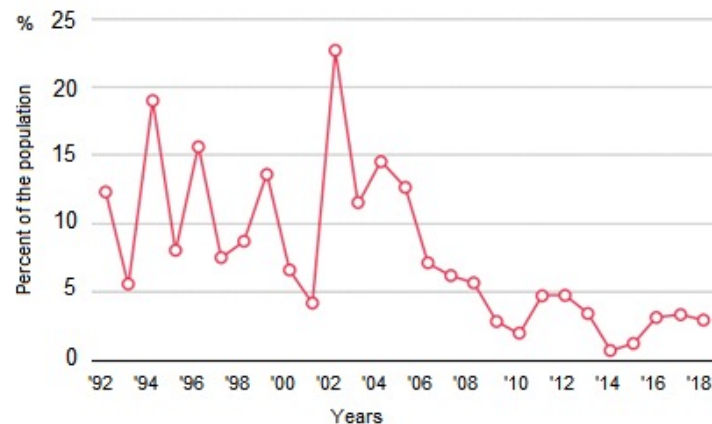Refugee returns as a proportion of the overall refugee population, 1992-2018

Source: UNHCR

Source: Habertürk Manşet - 6 Aralık 2019
Türk-iş', "Türkiye'de Yaşayan Mülteciler ve Kaçak Göçmenler Araştırması"

Return?

- Syrians associate their return with the end of the war in their country, the end of turmoil and a change of administration, and say that large numbers of refugees may become permanent (AFAD, 2017). However, the future of Syria still remains uncertain.

When will the Syrians in Turkey return?	
Never return	16,1
I may return if otorities changed	20,3
I may return when conflict stopped	34,9
I may return when my city be safe	16,1
I want to return soon	5,0
No idea	7,6
Total	100,0

% 87,4

How many Syrians in Turkey will be permanent?	
%100	4,1
%75	22,8
%50	41,3
%25	22,1
All of them will return	9,7
Total	100,0

% 90,3

Source: AFAD, 2017:110-113

- The links between environmental change and the causes of migration are heavily debated in the public and scientific circles. Many terms are used to refer to this phenomenon:

- Environmental migrant,

- Environmental refugee,

- Environmental forced migration,

- Environmentally motivated migrant

Legend:
- ● Büyük deltalar
- ● Küçük adalar
- ▭ Büyük dalgalar ve ekstrem hava olayları
- ● Çölleşme ve kuraklık
- ● Kasırgalar
- ● Buz ve donmuş toprak erimesi
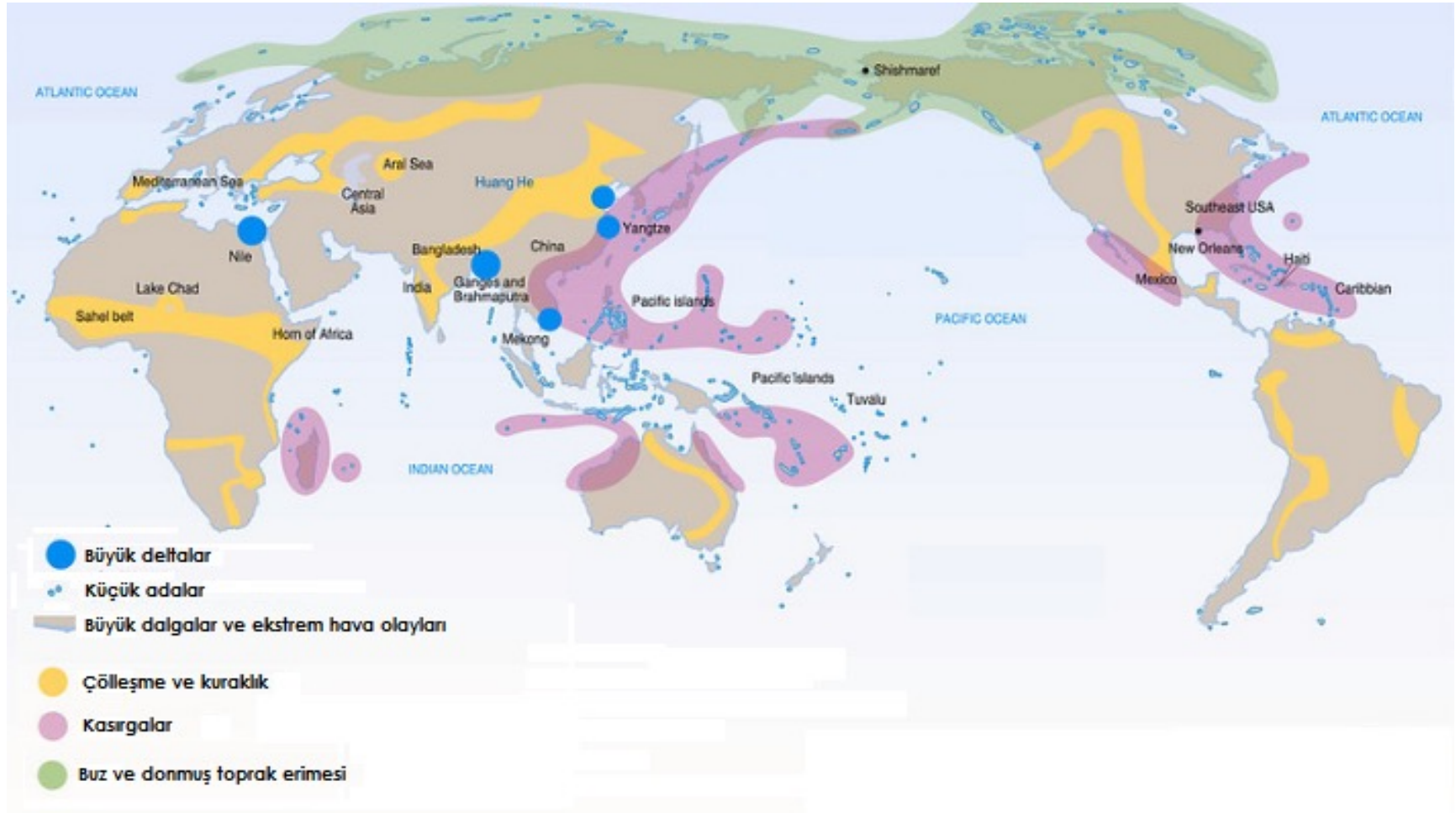
- There is not yet a complete consensus on how to define the problem and identification studies are still ongoing. The IOM's definition of "environmentally induced migration" may be considered appropriate for its flexibility:

- "Environmental migrants, whose lives and living conditions are adversely affected by the compelling effect of sudden or slow changes in the environment; They are people or groups of people who have to leave their permanent homes behind or who want to leave, who migrate temporarily or permanently inside or outside the country" (Warner, 2008: 12).

- According to al-Hinnawi;

- Environmental refugees are "people whose existence is threatened and/or whose quality of life is severely affected, and who are temporarily or permanently displaced from their traditional habitat, due to a significant natural or man-induced environmental degradation".

- Al-Hinnawi's environmental refugee types are:

1. Temporarily displaced by disasters, whether natural or anthropogenic
2. Permanently displaced by major environmental changes such as dam construction
3. Migrants due to the gradual deterioration of environmental conditions
4. In addition to these, those who were displaced because their environment was destroyed as a result of a war were also included in the list (Bates, 2002).

- For a person to be referred to as an environmental refugee;

1. Catastrophic weather events and geological events defined as natural disasters (earthquakes, typhoons, hurricanes, volcanic eruptions, floods and droughts, etc.)

2. Famine

3. Epidemic diseases

4. Desertification and land degradation (soil and forest degradation, salinization, erosion and excessive water consumption)

5. Global warming (flooding due to sea level rise, food and water scarcity, change in monsoon patterns, increased storm intensity)

6. Development projects (especially dam but also other infrastructure construction with large-scale environmental impacts)

7. Industrialization and exploitation of natural resources

8. Environmental and technological accidents (Related to the previous item: Toxic waste spills, nuclear reactor accidents, landfills deteriorating the environment)

9. Effects of wars (wartime plant destruction, ecological genocide, uncleaned landmines, general environmental destruction)

10. It should suffer from environmental policy practices, especially conservation policies that impose land settlement and use restrictions.

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- Bates (2002)'s criteria for environmental refugee discrimination related to environmental degradation characteristics are:

- Origin (natural or technological)

- Duration (sudden/acute or gradual/gradual)

- Whether the migration was the result of planned disruption (intentional or unintentional).

- Accordingly, migration flows resulting from disturbances have been distinguished according to three categories of disturbances:

1. Disaster
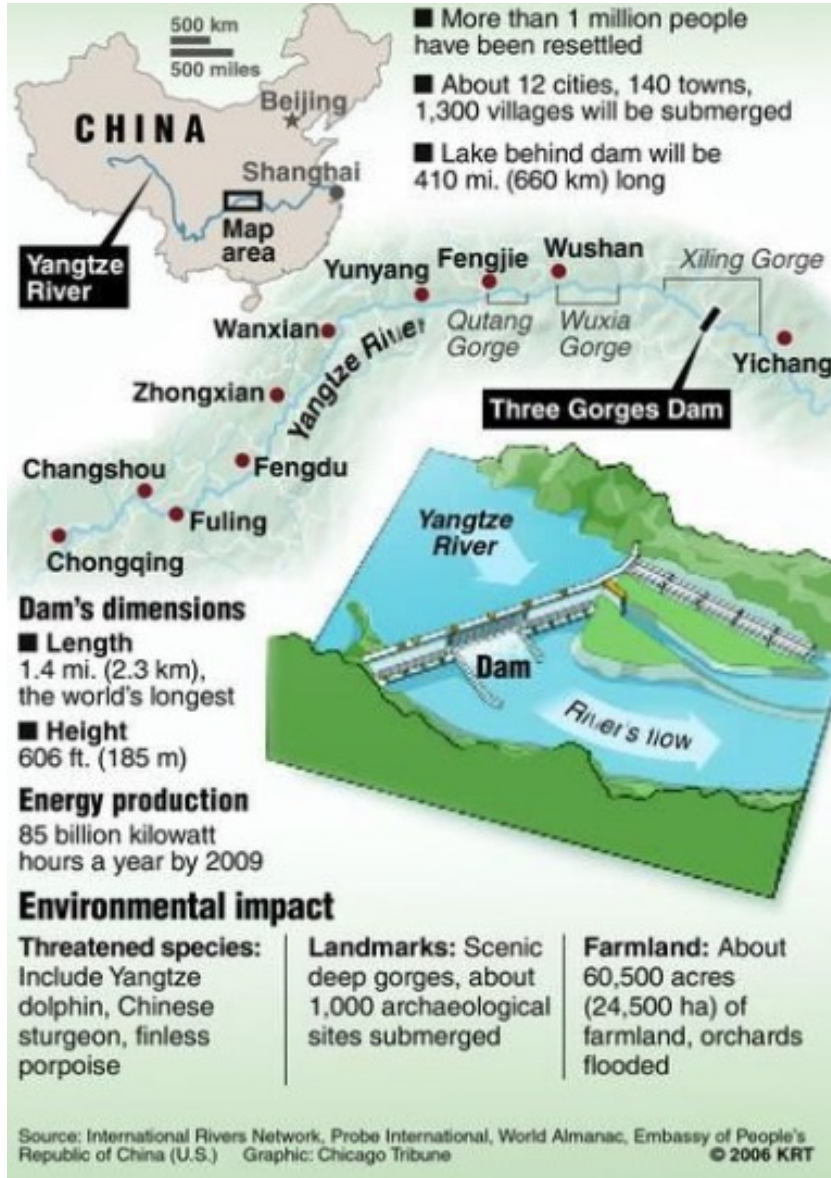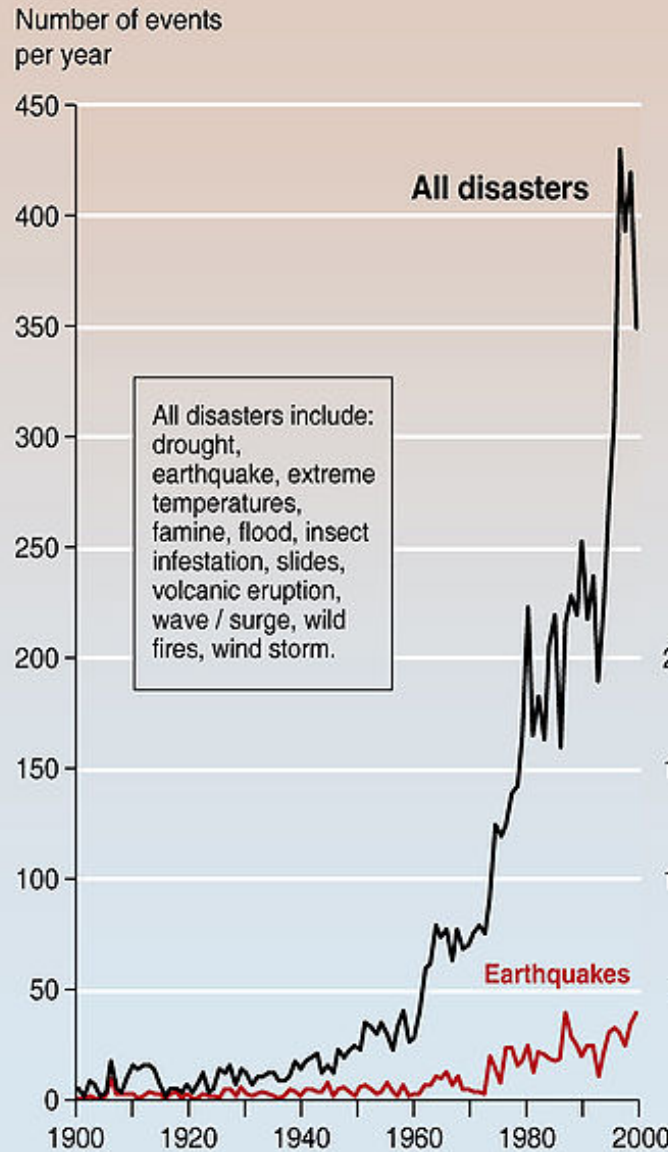2. Expropriation
3. Deterioration

	Disaster An unforeseen catastrophic event triggers the migration.		Expropriation Deliberate destruction of the environment backfires by removing suitability for human habitation.		Deterioration The gradual degradation of the environment forces migration as it increases the constraints on human survival.	
Subcategory	**Natural**	**Technological**	**Development**	**Ecocide**	**Pollution**	**Come to an end**
Origin	Doğal	Antropojenik	Antropojenik	Antropojenik	Antropojenik	Antropojenik
Migration Reason	**Unintentional**	**Unintentional**	**Intentional**	**Intentional**	**Unintentional**	**Unintentional**
Duration	Sudden	Sudden	Sudden	Sudden	Gradually	Gradually
General Example	**Volcano Eruption**	**Nuclear Reactor Leak**	**Dam Construction**	**Damage To Plants**	**Global Warming**	**Deforestation**
Specific Example	Montserrat	USA-Three Mile Island	China-Three Gorges Dam	Vietnam	Bangladesh	Ecvador-Amazon
Estimated number of displaced	**7.000**	**144.000**	**1.300.000**	**7.000.000**	**15.000.000**	**115.000**

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Three Miles Island, USA. (1979)

Number of events per year

Trends in number of reported events

All disasters

All disasters include: drought, earthquake, extreme temperatures, famine, flood, insect infestation, slides, volcanic eruption, wave / surge, wild fires, wind storm.

Much of the increase in the number of hazardous events reported is probably due to significant improvements in information access and also to population growth, but the number of floods and cyclones being reported is still rising compared to earthquakes. How, we must ask, is global warming affecting the frequency of natural hazards?

Earthquakes versus climatic disasters
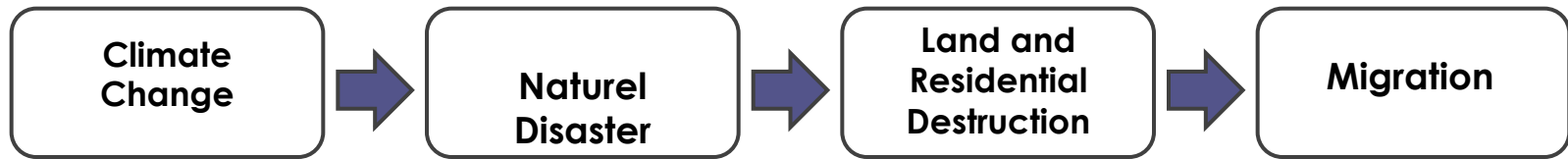
Floods

Cyclones
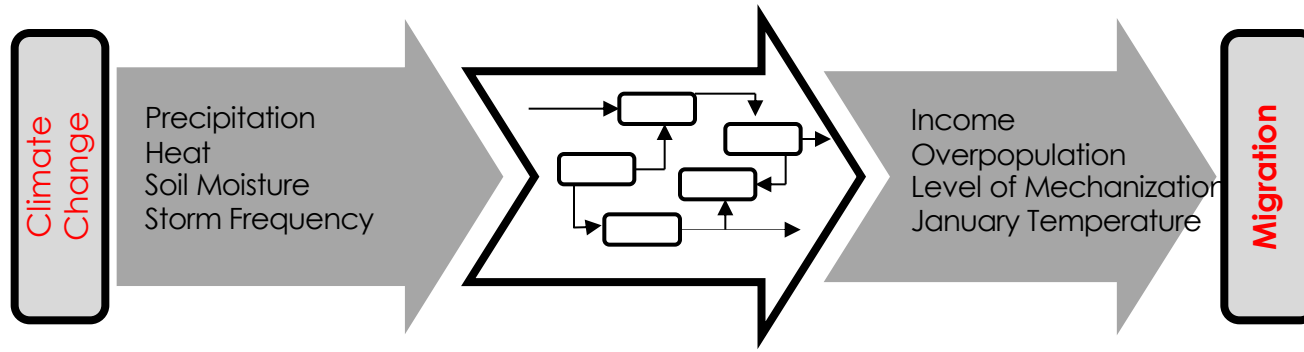
Earthquakes

Earthquakes
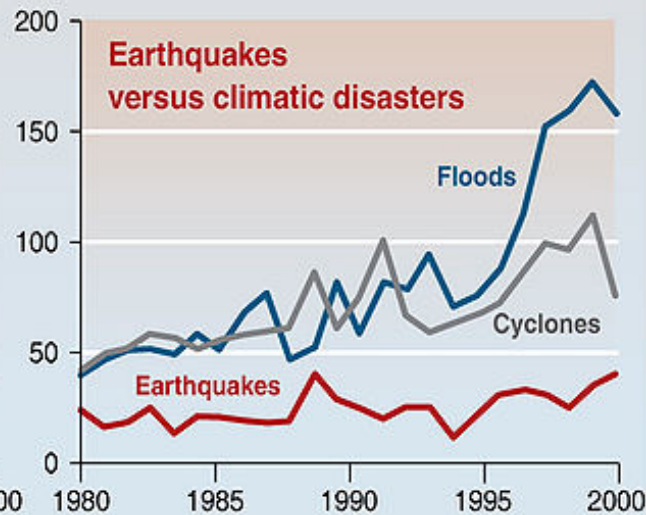
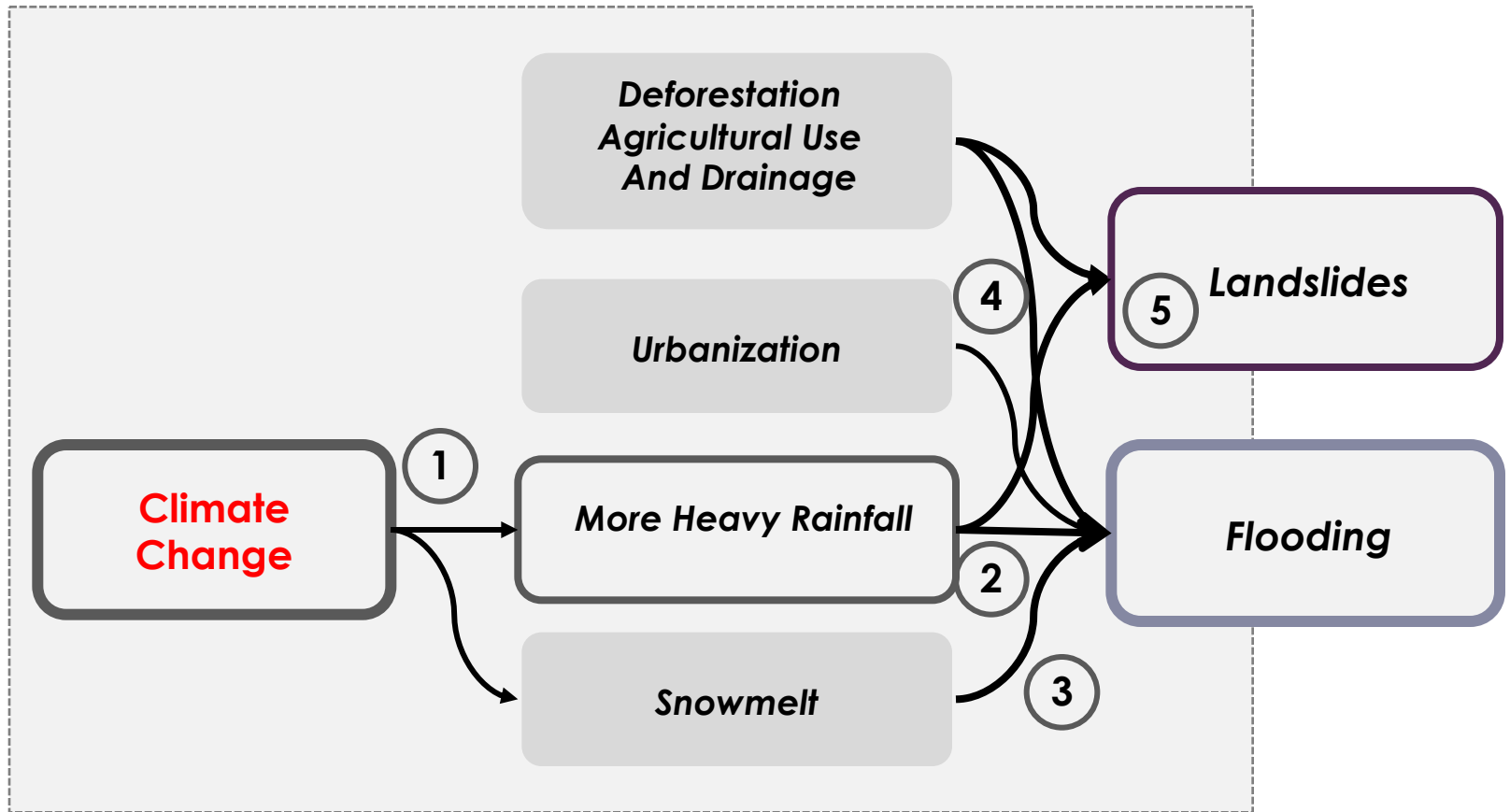Source:

- **Climate processes**
- Sea level rise
- Salinization of farmland
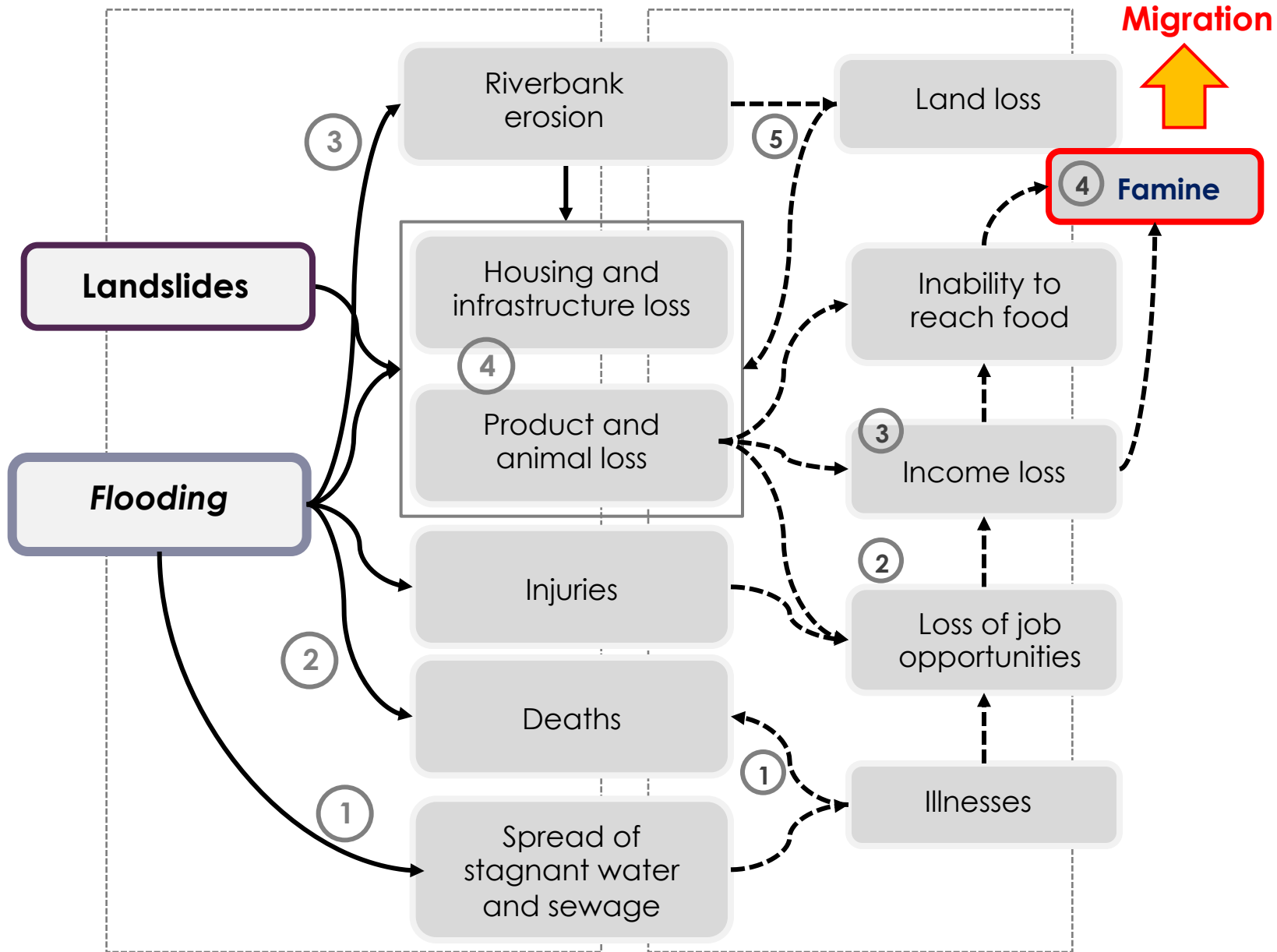- They are slow-growing changes such as drought, desertification, increasing water scarcity, food insecurity.

- **Climate Events**
- Stream and glacial lake floods
- Sudden and dramatic dangers such as hurricanes, typhoons, tornadoes ets.

Climate Change → Precipitation, Heat, Soil Moisture, Storm Frequency → Income, Overpopulation, Level of Mechanization, January Temperature → Migration

Climate Change → **Naturel Disaster** → **Land and Residential Destruction** → **Migration**

Climate Change → **Precipitation ↓** → **Agricultural Production ↓** → **Income ↓** → **Migration ↑**

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- 135 million people in the world are at risk of migration due to extreme desertification.

Desertification Vulnerability

U.S. Department of Agriculture
Natural Resources Conservation Service
Soil Survey Division
World Soil Resources

VULNERABILITY
- Low
- Moderate
- High
- Very High

OTHER REGIONS
- Dry
- Cold
- Humid/Not vulnerable
- Ice/glacier

Miller Projection
SCALE 1:100,000,000

Country boundaries are not authoritative.

Washington D.C. 1998
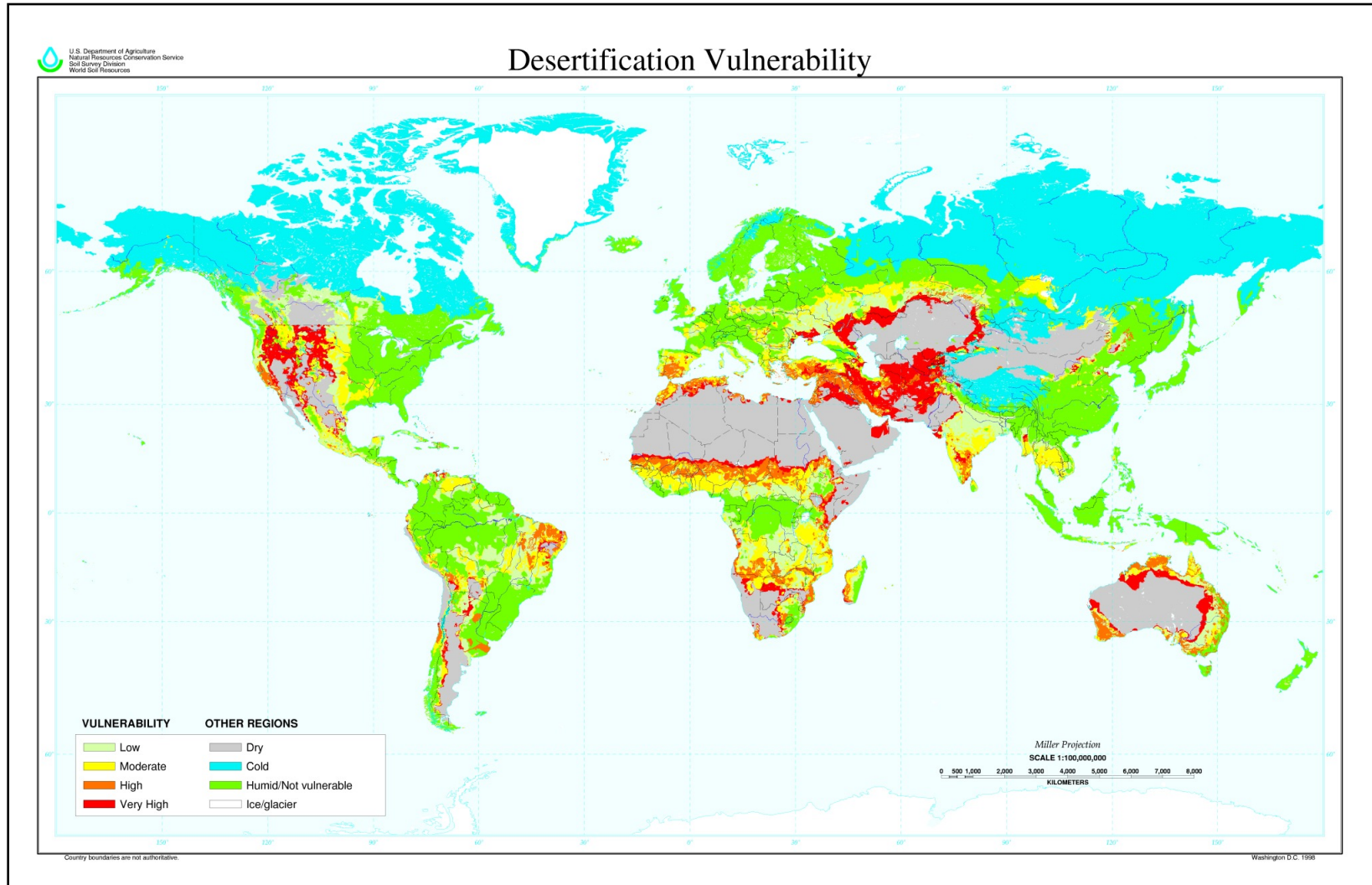
Areas to be affected in case of 1 meter rise in sea level and the World population density

The World: Population Density, 2000 — GPW [v3]

Persons per km²
- 0
- 1 - 4
- 5 - 24
- 25 - 249
- 250 - 999
- 1,000 +

Robinson Projection
Based on 2.5 arc-minute resolution data
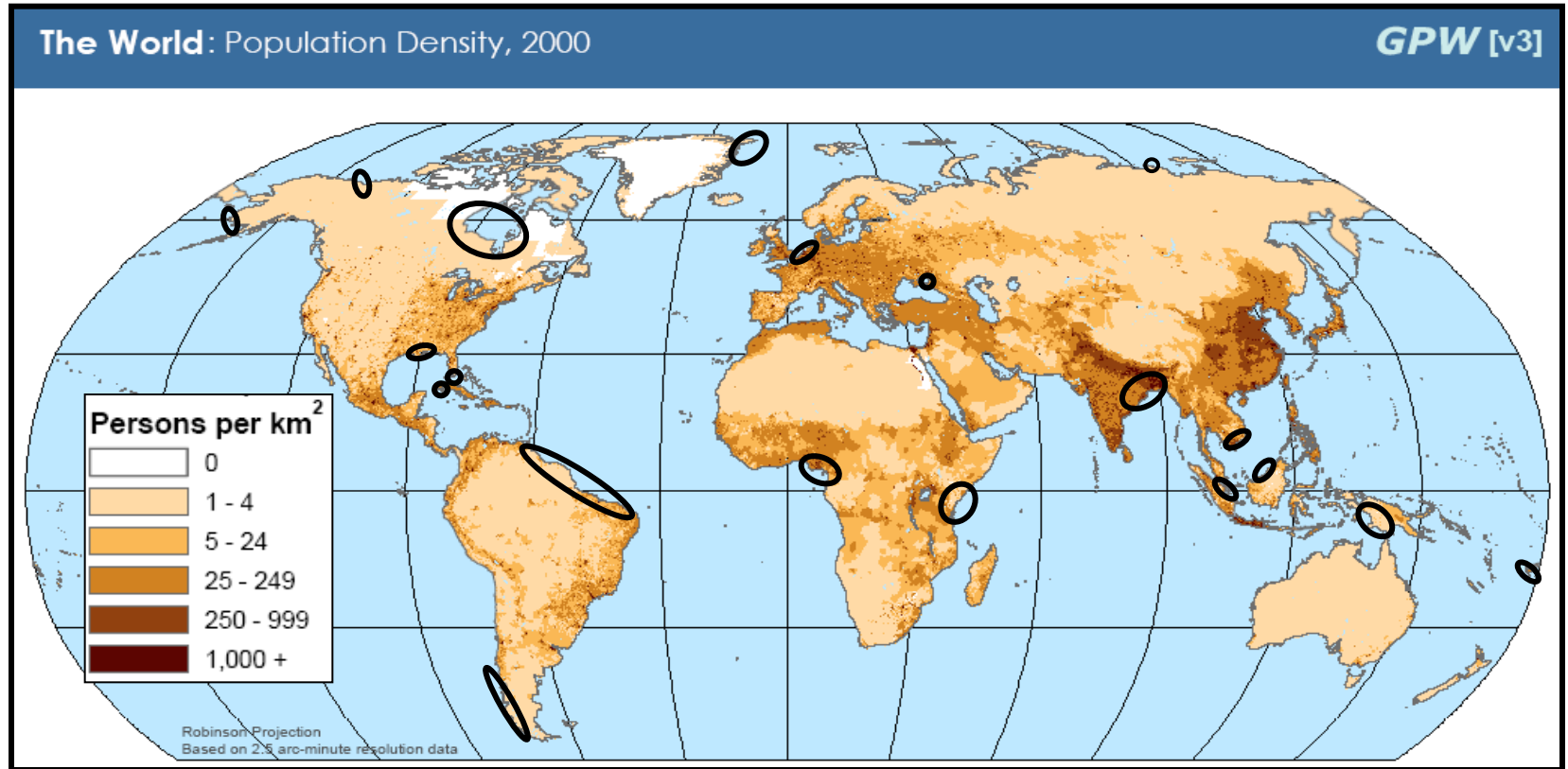
Africa: Nigeria, Cameroon, Gabon, Somalia, Kenya, Tanzania
Asia: Russia, Vietnam, India, Bangladesh, Malaysia, Indonesia
Australia & West Pacific: Papua New Guinea, Australia, Fiji and Sth Pacific Islands
Europe & Middle East: Netherlands, Greenland, Ukraine and UK coastline
South America: Venezuela, Guyan, Suriname, French Guiana, Brazil and Chile
North America: USA, Canada and Cuba

Global Environmental Migrant/Refugee Movements

- The number of global immigrants emerged with the change of environmental conditions:

- 24 million environmentally induced migrants in 2002 (UNHCR, 2002).

- In 2010: 50 million (Estimated Myers 2005)

- In 2050: Projections vary; most common estimate 200 million (IOM, 2008)

- Post 2050: Over 700 million environmental migrants (Christian Aid, 2007)

Global Environmental Migrant/Refugee Movements

- In the middle of the 21st century, it is thought that environmental irreversible thresholds will be crossed in the world, fast-moving events will increase and these developments will trigger significant new migrations.

- Recent hurricanes in Myanmar (Burma) and earthquakes in China have displaced more than 7 million people.

- In 2004, 2 million people were displaced by the tsunami in the Indian Ocean.

- Hurricane Katrina in 2005 is the largest displacement event in American history.

- Due to the hurricane, 1.5 million people were temporarily displaced, 300,000 permanently, and 107,000 illegal immigrants and temporary guest workers.
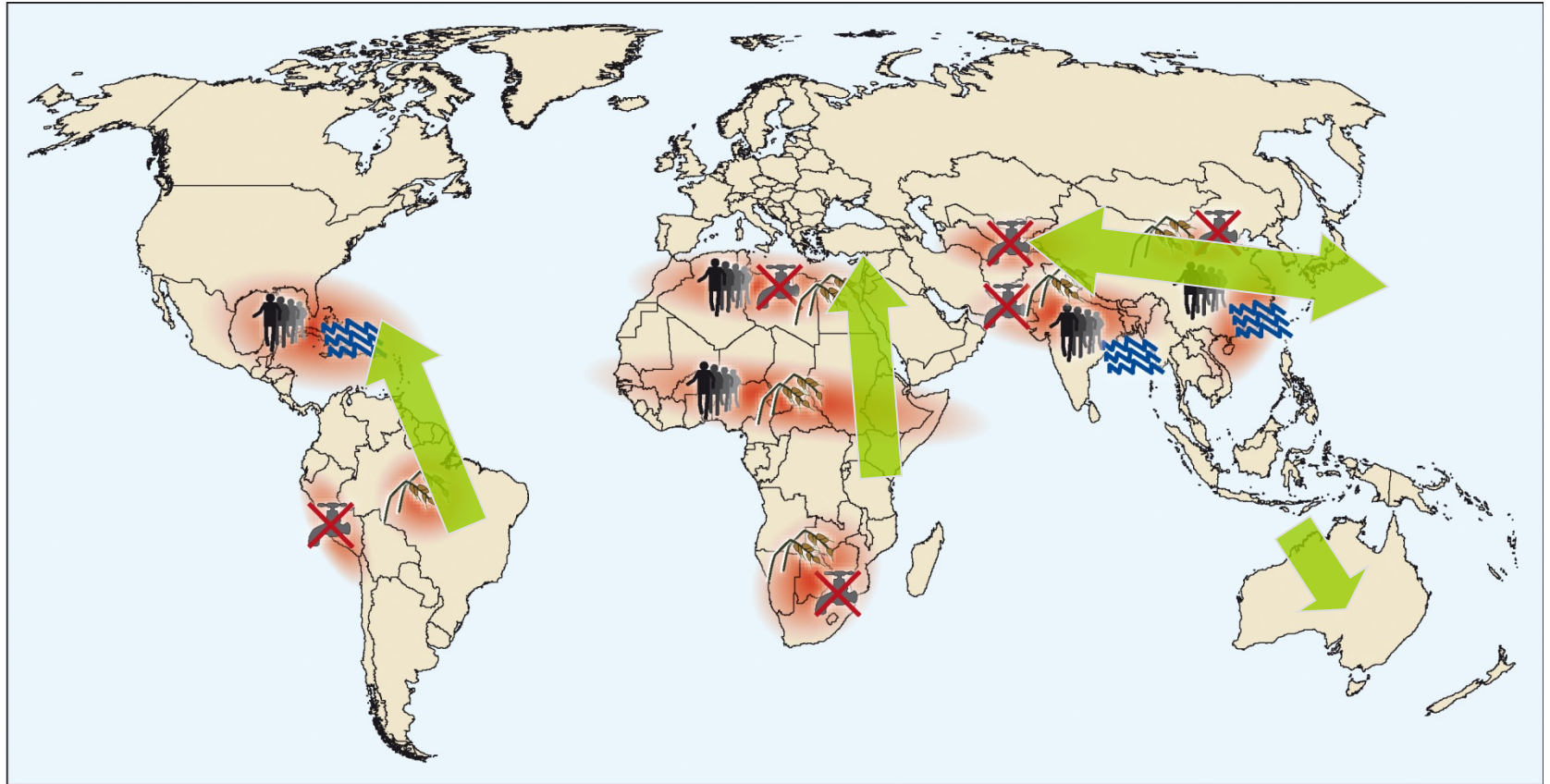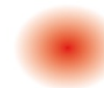
Conflict constellations in selected hotspots

- Climate-induced degradation of freshwater resources
- Climate-induced decline in food production
- Hotspot
- Climate-induced increase in storm and flood disasters
- Environmentally-induced migration
- Main trajectories

Source: WGBU 2007

Typology of Environmental Disasters (Richmond, 1993)

- **_Natural disasters_**
- Hurricane
- Typhoon
- Hose
- Earthquake
- Volcanic eruption
- Landslide
- Flooding (fresh and salt water)
- Raw
- Snow and hailstorm
- Fire
- Electric currents
- Lightning
- Earphones
- Famine
- Plague

- **_Technological Disasters_**
- Chemical
- Nuclear
- Oil spills
- Air pollution
- Water pollution
- Soil pollution
- Explosion
- Building collapse
- Train or plane crash
- Dam break
- Mining accident
- Factory accident
- Consumption of the soil

- **_Economic Disasters_**
- Deforestation
- Product Shortage
- End of Fishing
- Consumption of Minerals
- Extinction
- Human Excess
- Population Exchange
- Relocation
- Structural Arrangement

- **_Political Disasters_**
- War
- Civil War
- Terrorism
- Racial Discrimination
- Ethnic Cleansing
- Genocide
- Exile
- Persecution/Oppression
- Violation of Rights
- Totalitarian Regime
- Anarchy
- Extremism/İntolerance

- **_Social Disasters_**
- Ecological Excess
- Animal Rights Advocacy
- Green Crusaders
- Fanaticism
- Class War
- Boycott

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