

# Session VI: Projecting the level and pattern of international migration

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Population Estimates and Projections Section

[www.unpopulation.org](http://www.unpopulation.org)

Regional Workshop on the Production of Population Projections  
Addis Ababa, 7-11 March 2016



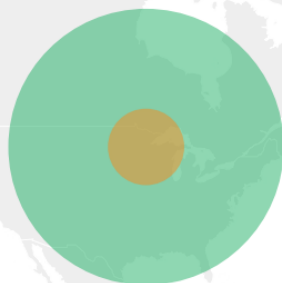
# Outline

- I. Brief overview of international migration in Africa
- II. International migration concepts
- III. Sources of data
- IV. Projecting the level of net international migration
- V. Age pattern of international migration

# International migration in Africa: Findings from Trends in International Migrant Stock: The 2015 Revision

## International Migrants Stock Dataset in 2015

**North America**  
54 million  
4 million



**244 million**

The number of international migrants reached 244 million in 2015.

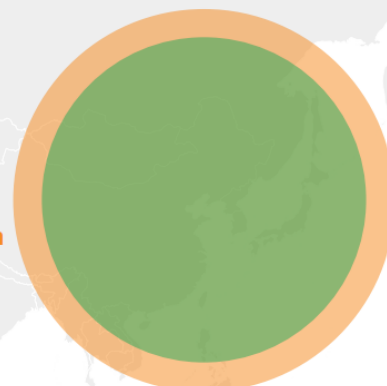
An increase of 71 million since 2000.

Two thirds of international migrants live in Europe or Asia

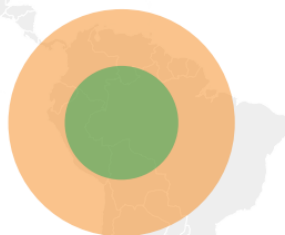
**Europe**  
76 million  
62 million



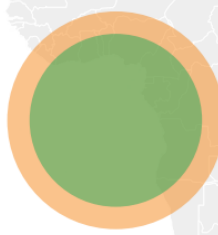
**Asia**  
75 million  
104 million



**Latin America and the Caribbean**  
9 million  
37 million



**Africa**  
21 million  
34 million



**Oceania**  
8 million  
2 million



- Indicates where international migrants live
- Indicates where international migrants come from
- The size of the circles is proportional to the number of migrants

**Notes:**

-All numbers are millions of people.  
-Unknown residuals were redistributed proportionally to the size of groups for which data on international migrants were available by origin.

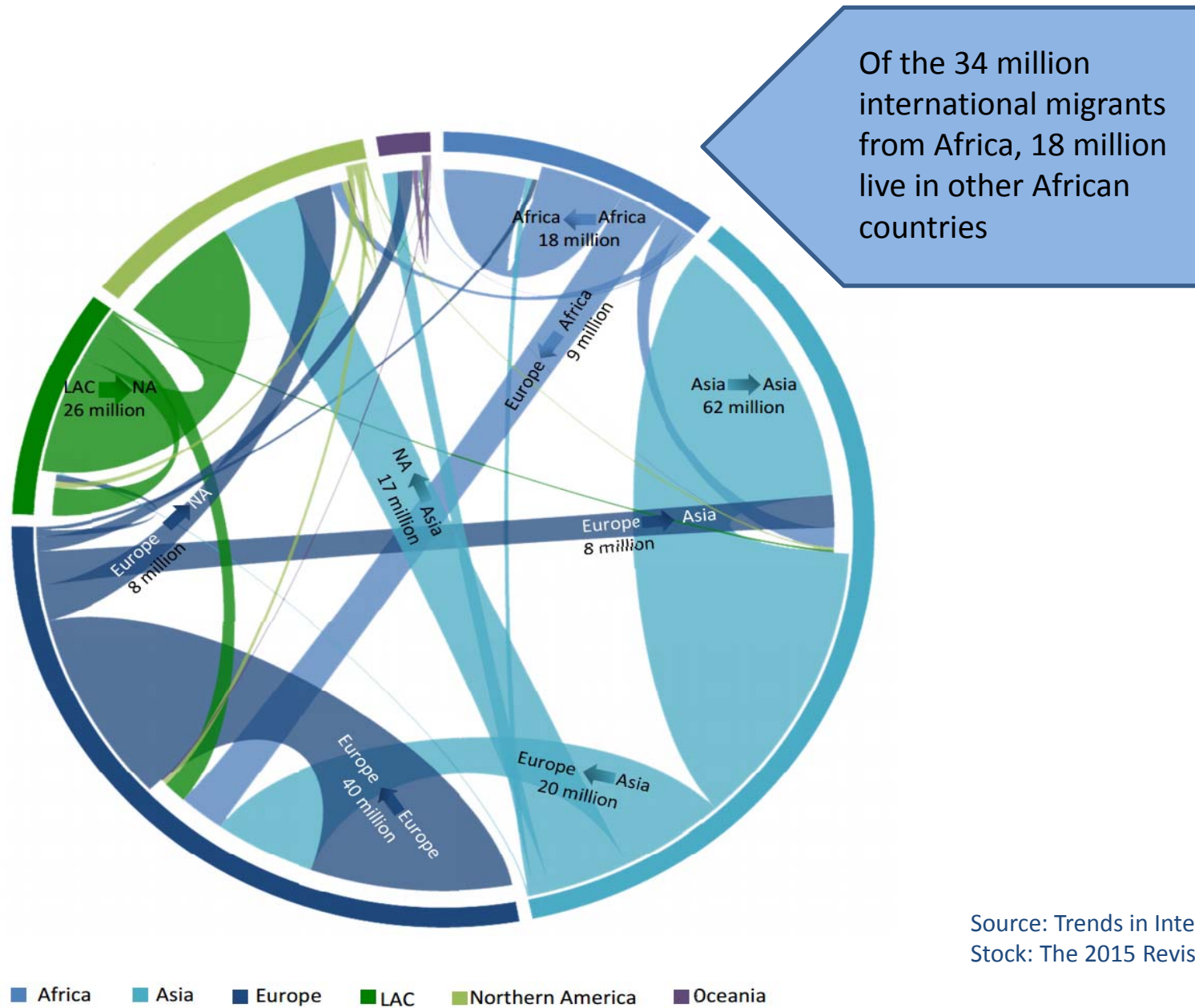
**48%**  
are women

**39**  
median age

**15%**  
are below 20 years old

Source: United Nations, Department of Economic and Social Affairs, Population Division (2015).  
*Trends in International Migrant Stock: The 2015 revision.*  
(United Nations database, POP/DB/MIG/Stock/Rev.2015).  
For more information visit: [www.unmigration.org](http://www.unmigration.org)

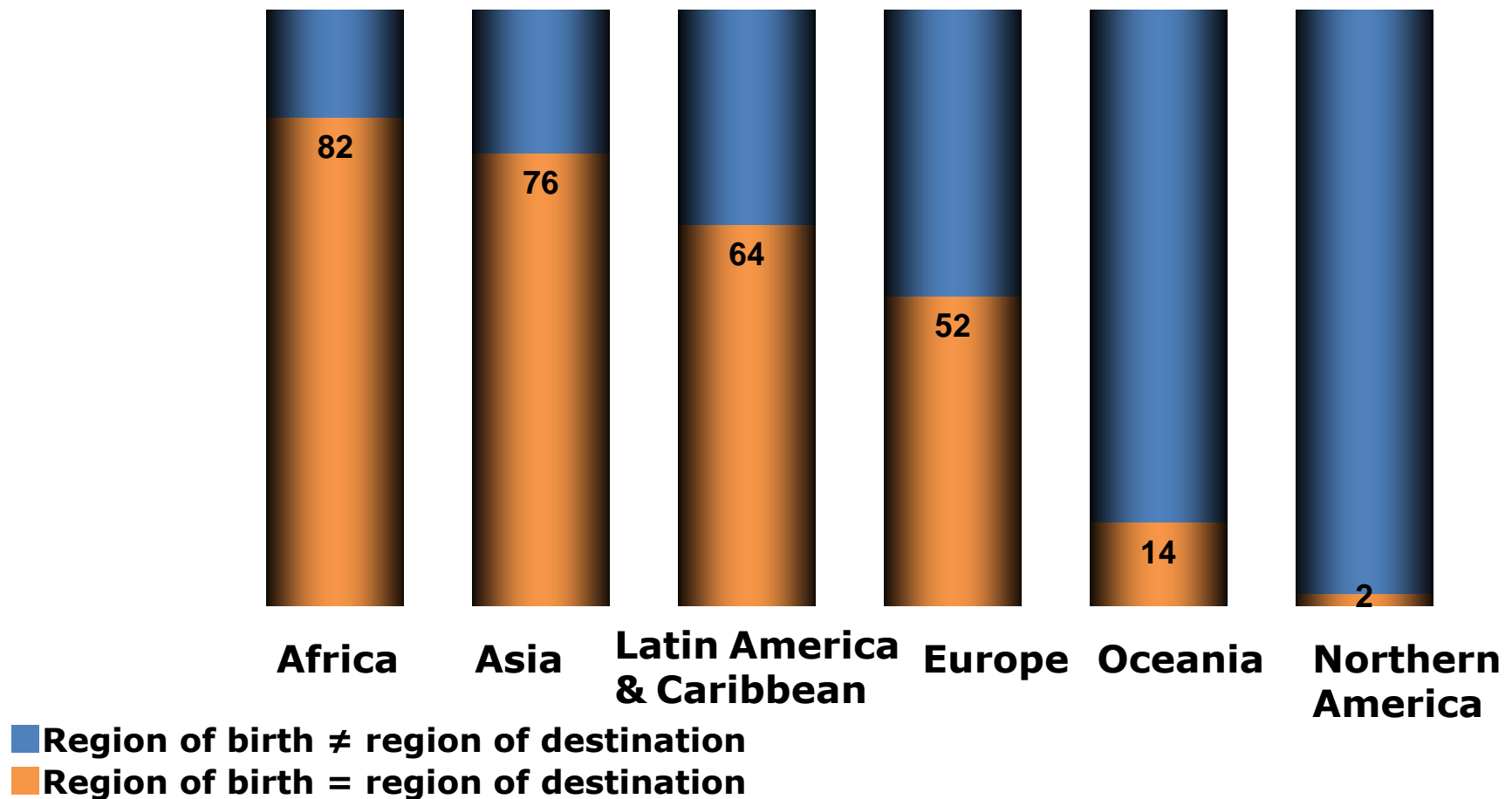
## Projecting the level of migration: I- Overview



Source: Trends in International Migrant Stock: The 2015 Revision

# Most migrants move within their region of origin

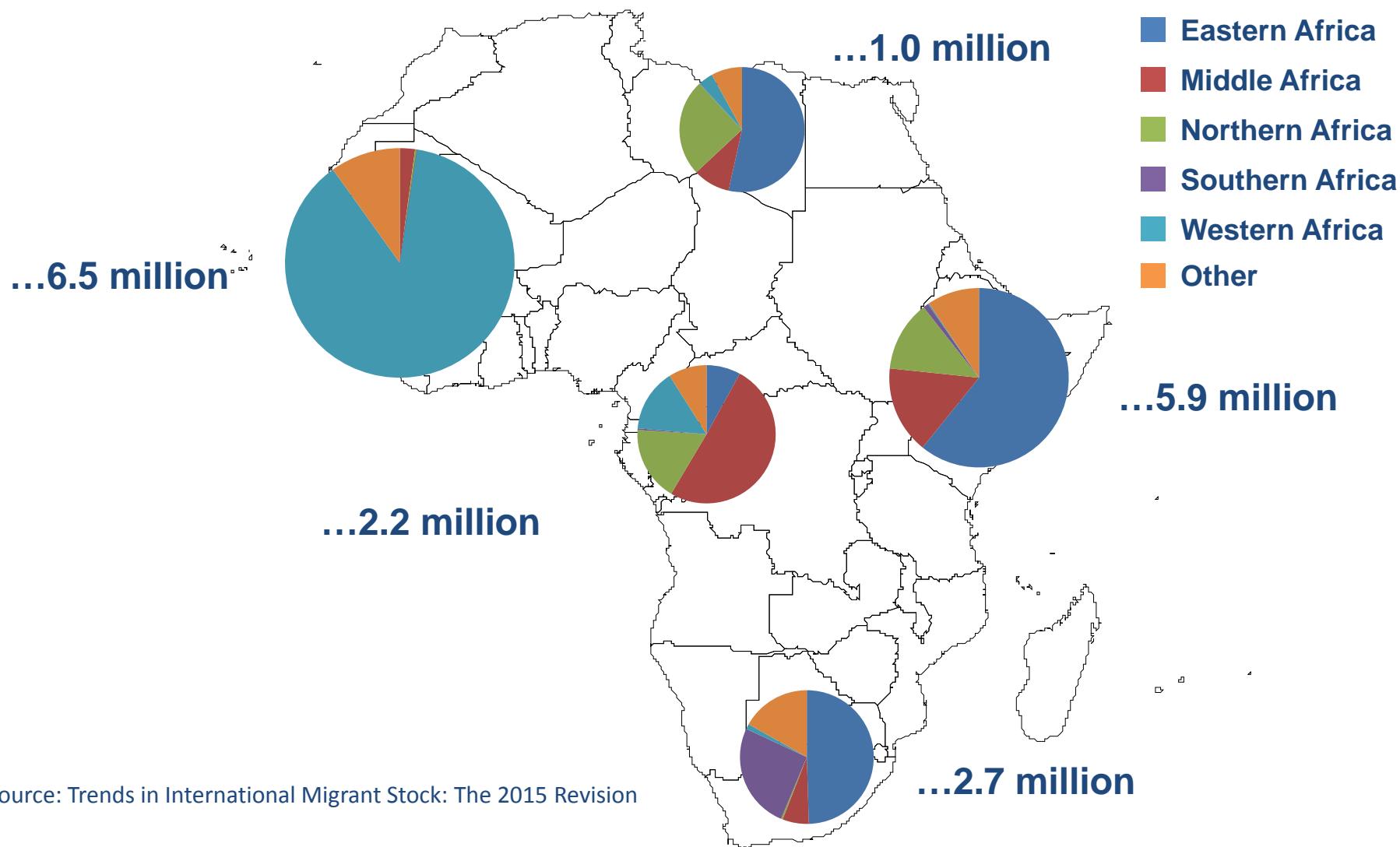
Migrant stocks by destination region, according to their region of birth, 2013 (percentage)



Source: Trends in International Migrant Stock: The 2013 Revision

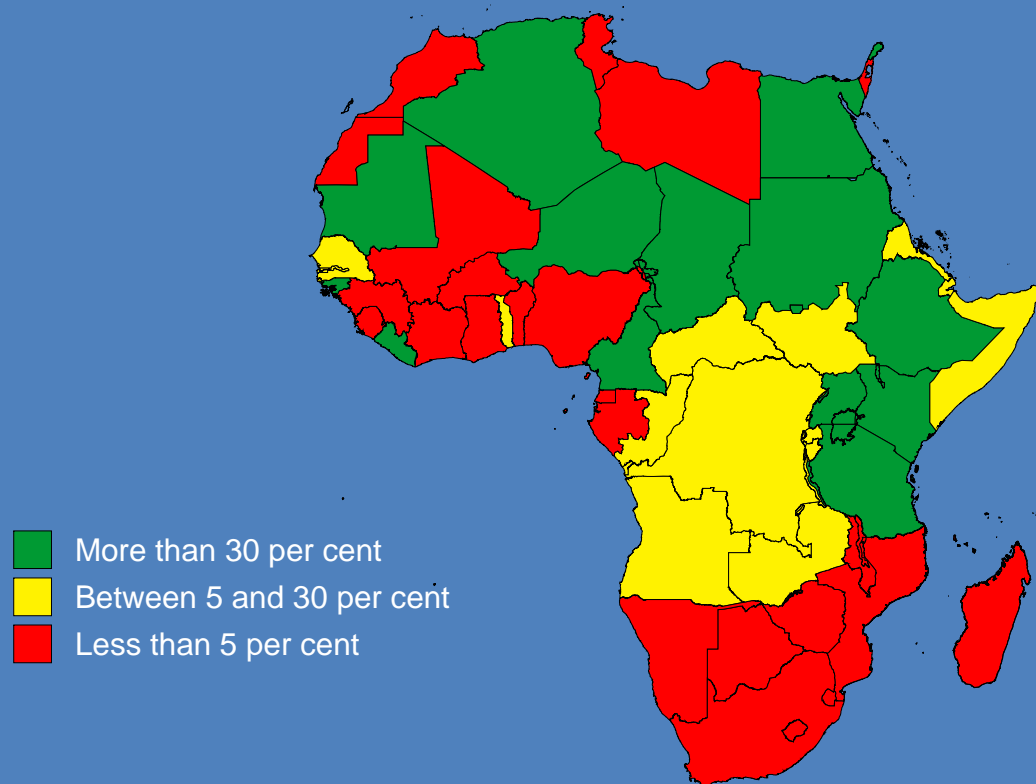
# Intra-regional migration in Africa is widespread

Migrant stock by region of origin and destination, 2015 (percentage)



Source: Trends in International Migrant Stock: The 2015 Revision

# Refugees as a percentage of the international migrant stock - 2015



Source: Trends in International Migrant Stock: The 2015 Revision

# What is a “net migrant”?

- Recall the population balancing equation

$$P_{t+n} = P_t + B_{t,t+n} - D_{t,t+n} + I_{t,t+n} - E_{t,t+n}$$

- $P_t$  is the population at time  $t$
- $B_{t,t+n}$  and  $D_{t,t+n}$  are number of births and deaths occurring between  $t$  and  $t + n$ . The difference between births and deaths is known as natural change.
- $I_{t,t+n}$  and  $E_{t,t+n}$  are number of immigrants and emigrants from the country during the same period
- Projection input uses net migrants ( $I_{t,t+n} - E_{t,t+n}$ )



## Some concepts related to international migration

- An **immigrant** of a country:
  - entering the country by crossing the border
  - not a usual resident of the country when entering
  - staying in the country for at least one year.
- An **emigrant** of a country:
  - leaving the country by crossing the border
  - being a usual resident of the country
  - staying in another country for at least one year.

# Stock vs. flow of migrants

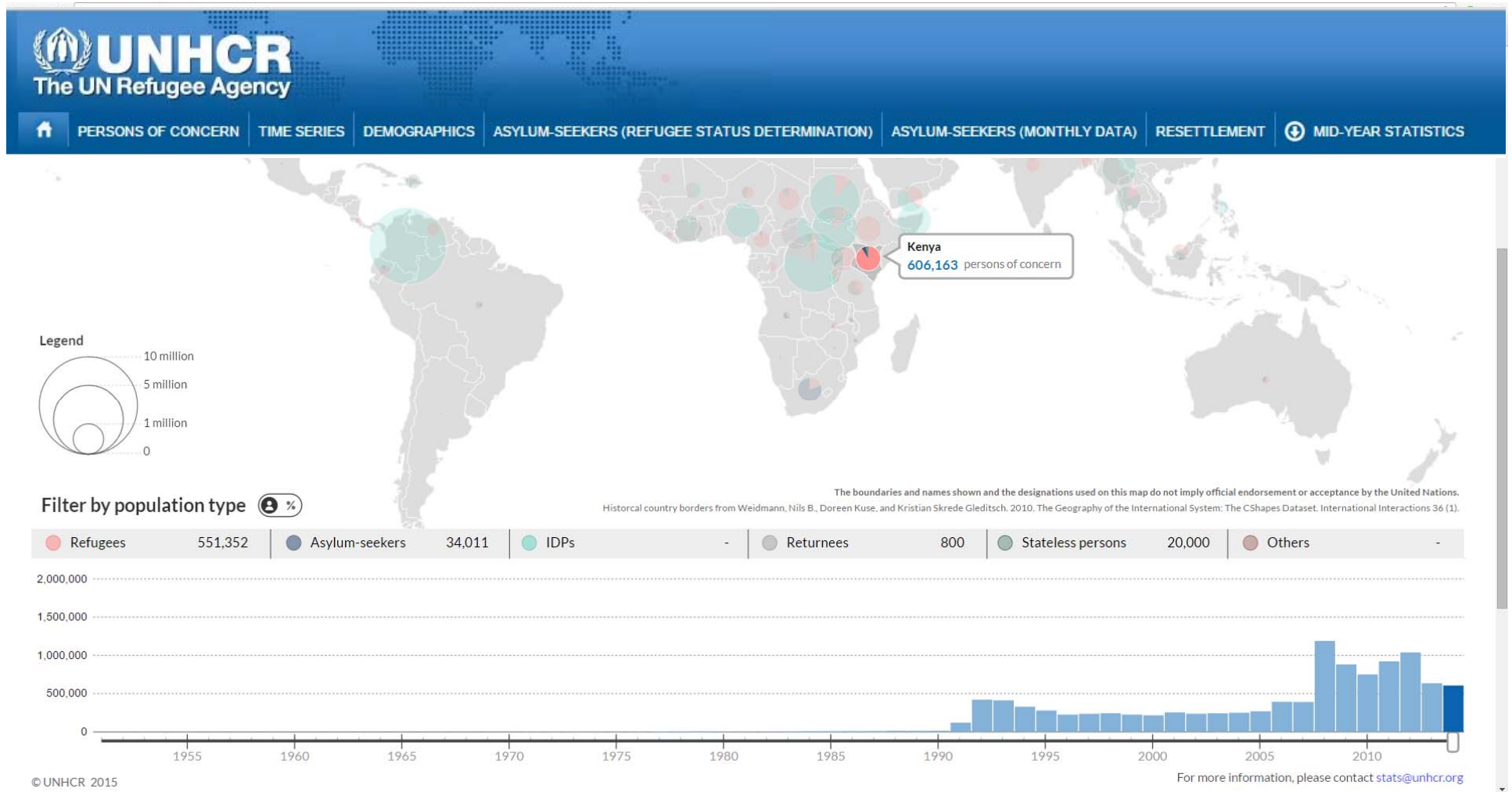
- Migrant **stocks** at a point in time
  - Stock of foreign-born
  - Stock of foreigners
  - Stock of returned migrants (citizens)
  - Stock of emigrants
- Migration **flows**
  - Migrations across an administrative boundary in a given period of time

# Sources of data (national)

- Population and housing censuses
- Sample surveys
  - Household sample surveys
  - Border surveys
- Administrative sources
  - Registers: population register; register of foreigners
  - Issuance of residence permits; work permit
  - Border: embarkation and disembarkation cards

# Data sources for migration (international)

- UNHCR refugee statistics (stocks by country of asylum and country of origin on 31 Dec.) [<http://popstats.unhcr.org/>]



## Data sources for migration (international)

- UN (2015). Trends in International Migrant Stock: Migrants by Destination and Origin: estimates in 1990, 2000, 2010 and 2015  
[UN\_MigrantStockByOriginAndDestination\_2015.xls]
- UN Global Migration database: stocks and flows  
[<http://www.un.org/en/development/desa/population/theme/international-migration/>]

# Census data related to migration

## ○ Questions on:

- Citizenship
- Country of birth
- Year or period of arrival
- Place of usual residence
- Place of previous residence
- Duration of residence
- Place of residence at a specified date in the past
- Emigration of household members

*For more information, see materials from Workshop on strengthening the collection and use of international migration data for development, Addis Ababa, November 2014*

*<http://www.un.org/en/development/desa/population/migration/events/other/workshop/index.shtml>*

# Questions asked in the 2010 round of censuses

Country	Citizenship	Country of birth	Year or period of arrival	Place of usual residence	Place of previous residence	Duration of residence	Place of residence at a specified date in the past	Emigration of household members
Botswana	1	1		1			1	1
Ethiopia				1	1	1		
Ghana	1	1				1		1
Kenya	1	1		1	1	1		1
Namibia	1	1		1	1	1		1
Uganda	1				1	1		
Zambia	2	1		1		1	1	

# Indirect estimates of migration

- Obtain migration as residual from projection to census date
- Need accurate estimates of population, mortality, fertility



# Projecting levels of migration

- International migration is often the most challenging part of a population projection exercise:
  - Reliable data on the number of immigrants and emigrants are often not available
  - Migration exhibits strong fluctuations that make extrapolations difficult, if not untenable.
  - Not possible to calculate meaningful demographic rates (exposure/occurrence rates) for immigration and net migration.
- International (net) migration is often formulated in terms of absolute numbers. Because of its irregular fluctuations, (net) migration is often kept constant over time.

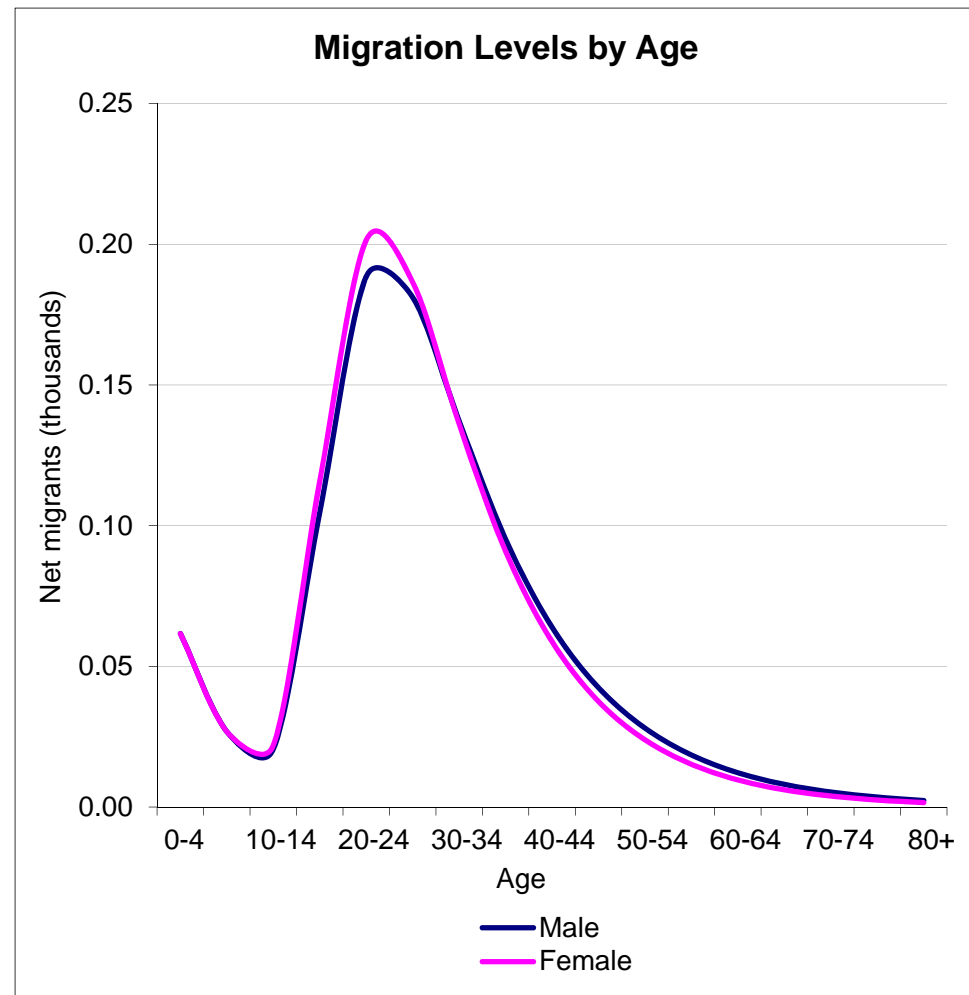
# Projecting age patterns of migration: United Nations Model

- Excel template  
UNPD\_Migration Age Patterns.xlsm
- The model generates typical age patterns of migration for net-migration.
- The model estimates a typical sex ratio.
- The user may select one of three typical patterns.

## Projecting age patterns of migration: United Nations Model

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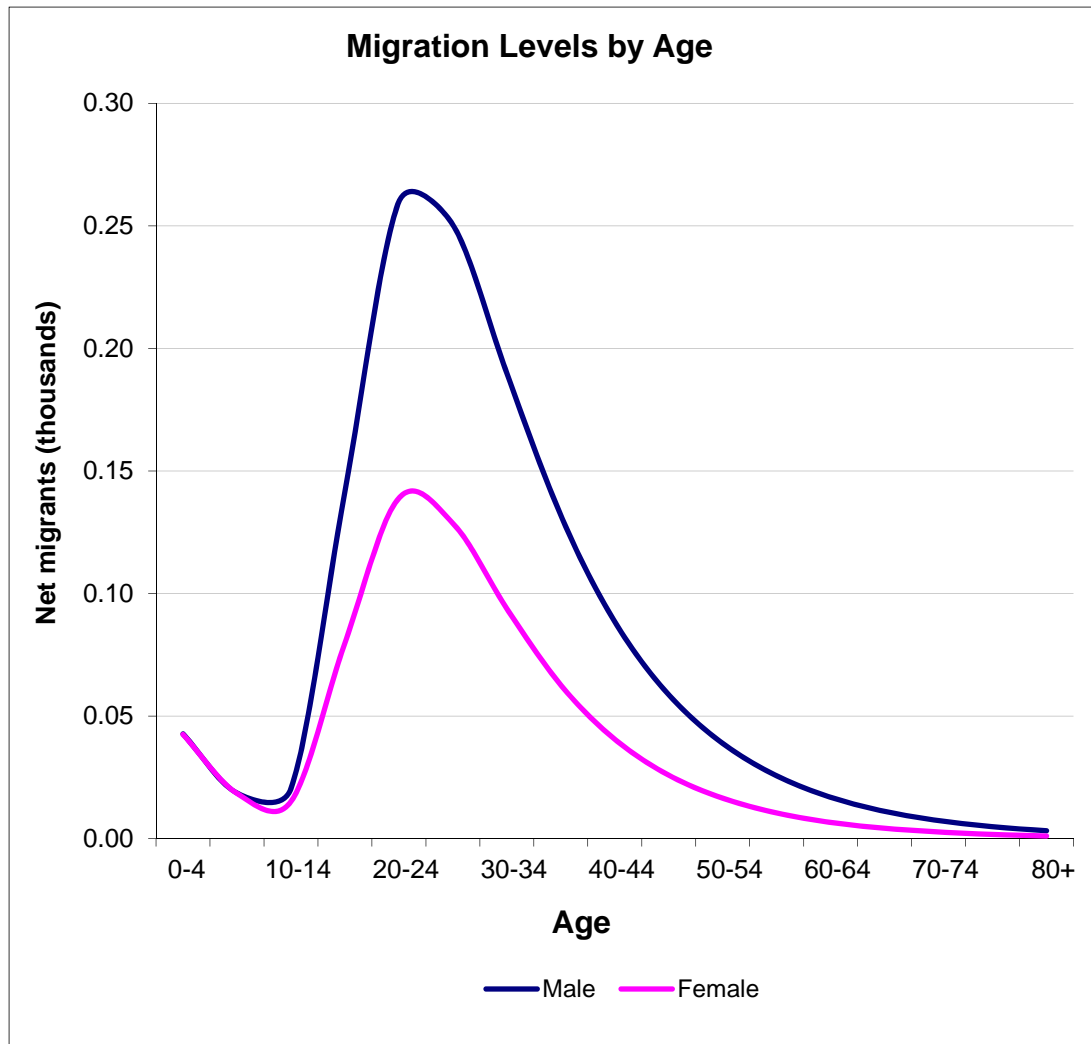
### ○ Family migration



## Projecting age patterns of migration: United Nations Model

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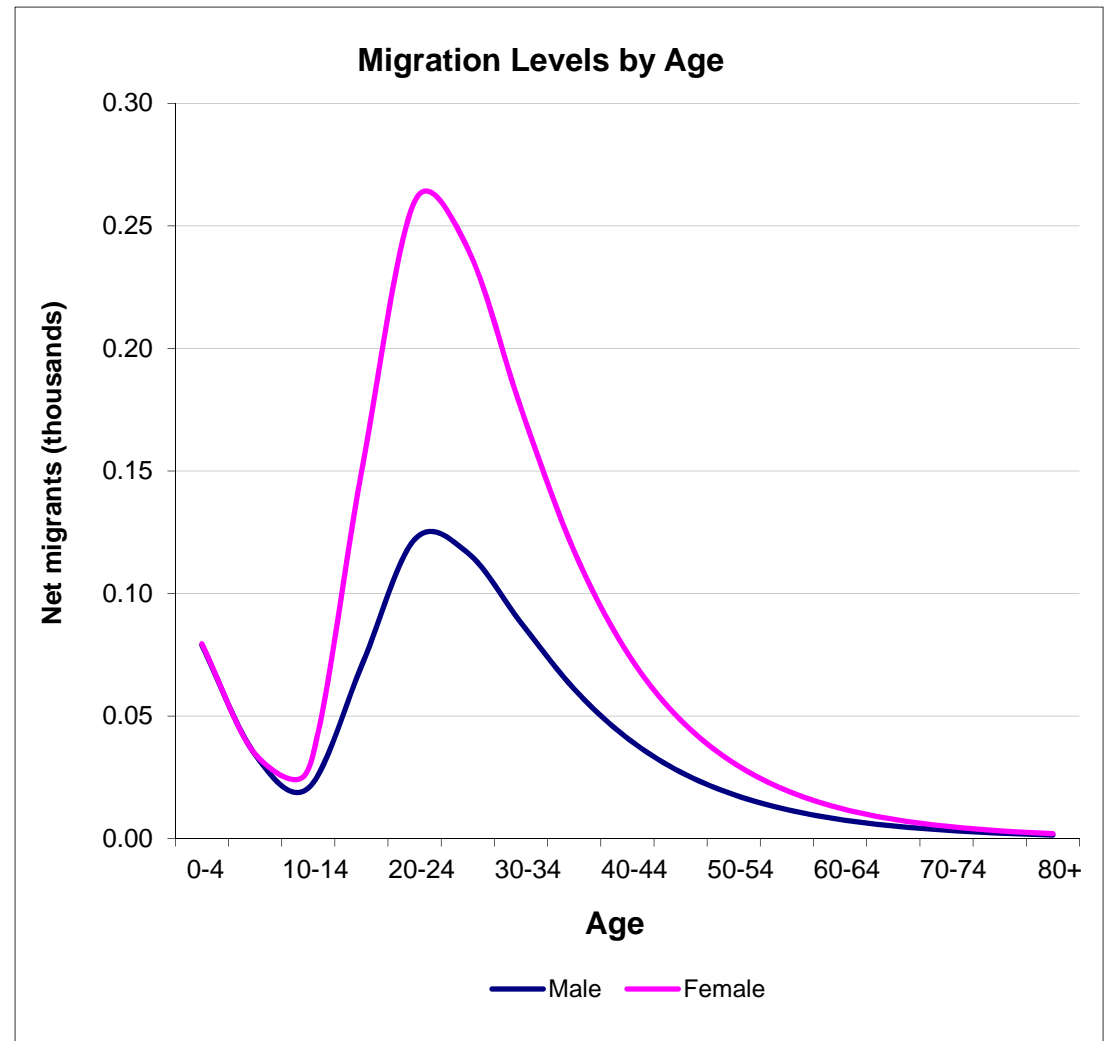
- Male labor migration (immigration)



## Projecting age patterns of migration: United Nations Model

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- Female labor migration (immigration)



# United Nations Model: input sheet

UNPD\_Migration Age Patterns\_v1 - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View

Cut Copy Paste Format Painter Clipboard

Arial 10 A+ A- Font

Wrap Text Merge & Center Alignment

General Number Styles

Conditional Formatting as Table Cell Styles Insert

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Migration by Age and Sex According to Castro

Net Migrants 2000

Age	Values in 1000			
	Migration Numbers		% Distribution	
	Male	Female	Male	Female
0-4	0.0617	0.0616	6.17	6.16
5-9	0.0268	0.0268	2.68	2.68
10-14	0.0205	0.0219	2.05	2.19
15-19	0.1047	0.1158	10.47	11.58
20-24	0.1885	0.2015	18.85	20.15
25-29	0.1812	0.1865	18.12	18.65
30-34	0.1372	0.1361	13.72	13.61
35-39	0.0952	0.0909	9.52	9.09
40-44	0.0639	0.0587	6.39	5.87
45-49	0.0424	0.0375	4.24	3.75
50-54	0.0280	0.0239	2.80	2.39
55-59	0.0185	0.0152	1.85	1.52
60-64	0.0122	0.0096	1.22	0.96
65-69	0.0080	0.0061	0.80	0.61
70-74	0.0053	0.0039	0.53	0.39
75-79	0.0035	0.0025	0.35	0.25
80+	0.0023	0.0016	0.23	0.16
TOTAL	1.0000	1.0000	100.00	100.00

Migration Levels by Age

Migration Distribution by Sex

Migration Model

- Family Migration
- Male Labor Immigration
- Female Labor Immigration
- Family Emigration
- Male Labor Emigration
- Female Labor Emigration

Age	Migration Numbers		Distribution	
	Male	Female	Male	Female
0-4	61.7	61.6	0.06	0.06
5-9	26.8	26.8	0.03	0.03

Information Migration Model Adjustments

# Hands-on exercise: Migration

- Make yourself familiar with the Excel template
- Prepare projection inputs for
  - Total net migration by sex
  - Age distribution of migrants

*Thank you*

Questions?

>> until 11 March:



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