



FONDATION POUR LES ÉTUDES  
ET RECHERCHES  
SUR LE DÉVELOPPEMENT  
INTERNATIONAL

# Getting Globalization Right: Sustainability and Responsible Nationalism in the Post Brexit Age

Session

Climate Change, Migration Flows and Sustainability

Sahel, Africa, and the European Migration challenge:  
Now and to Come

Jaime de Melo

FERDI

Mondragone seminar, June 21 2017

# Outline

- ❑ South-North Migration is rising
  - Migration Patterns
  - G5- inflow to Europe by country of origin
  - G5- inflow by destination country

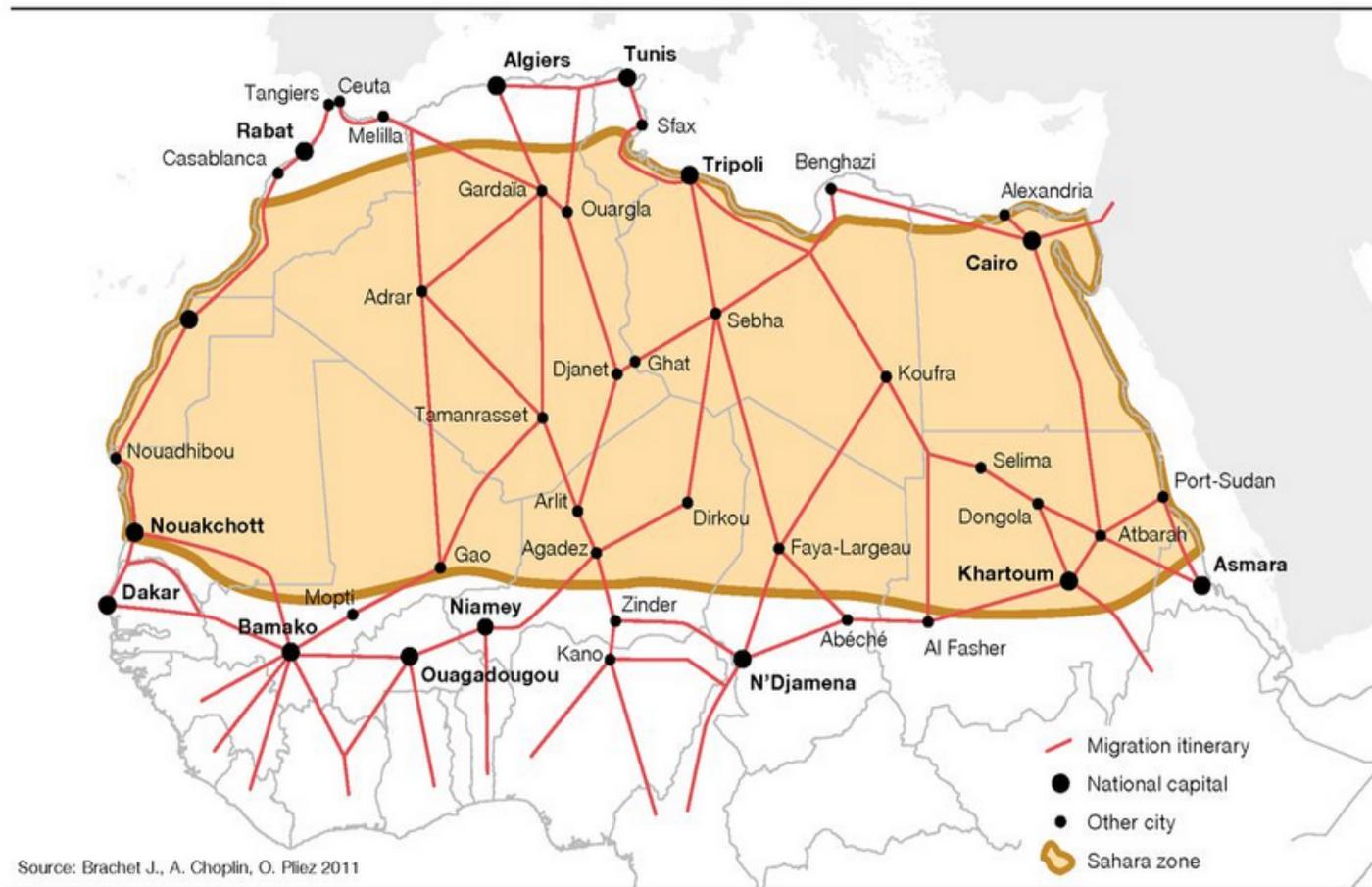
## ➔ **Now: A Marshall Plan for the Sahel**

- ❑ Sahel heading towards 'failed state' status?
  - On the edge of conflict traps
  - On the edge of poverty traps
  - A Marshall plan to invest in security/development

## ➔ **Looking Ahead: Facing up to the Climate challenge**

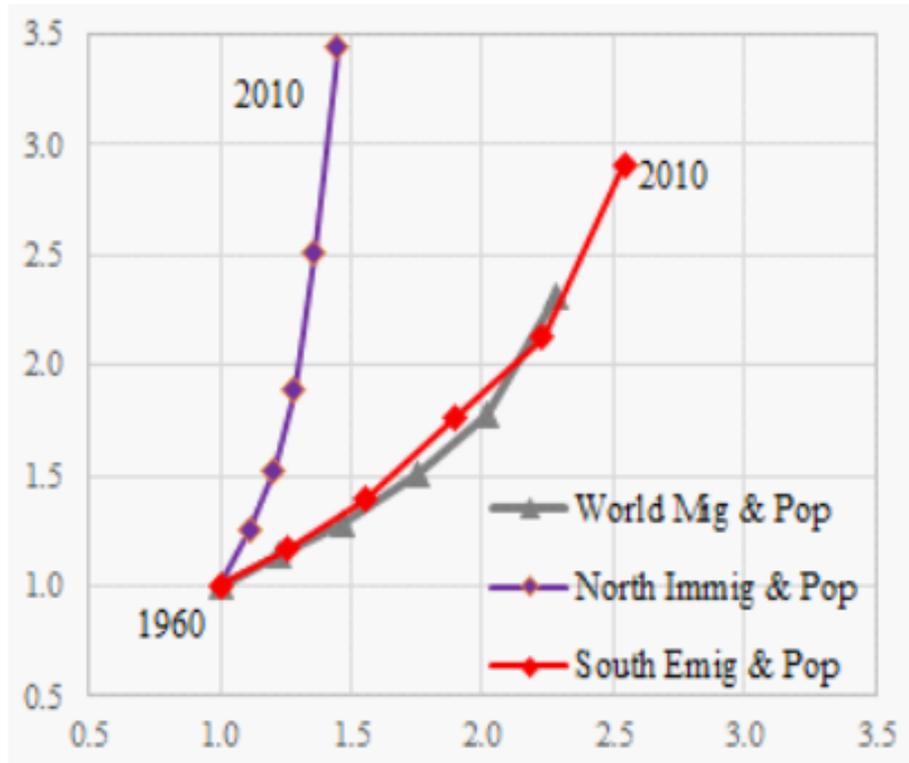
- ❑ SSA: Climate change victims now and victims to come
    - CO2 emissions vs. Population shares
    - Projected damages by region (in 2050)
- ➔ Increase funding (for both adaptation & mitigation)**
- Funding for adaptation + for cities and forest conservation

# Sahelian Migratory Itineraries



# South-North Migration is accelerating

## Migration & Population (1960-2010)



### Global Trends

- Flow of migrants relative to population (not shown) has been constant at 3%
- ...but over 1960-2010, S-N migration was 3 times higher than N-N migration

### Change in decadal rates

- S-N (1.5% → 8.0%)
- N-N (4.6% → 10.9%)

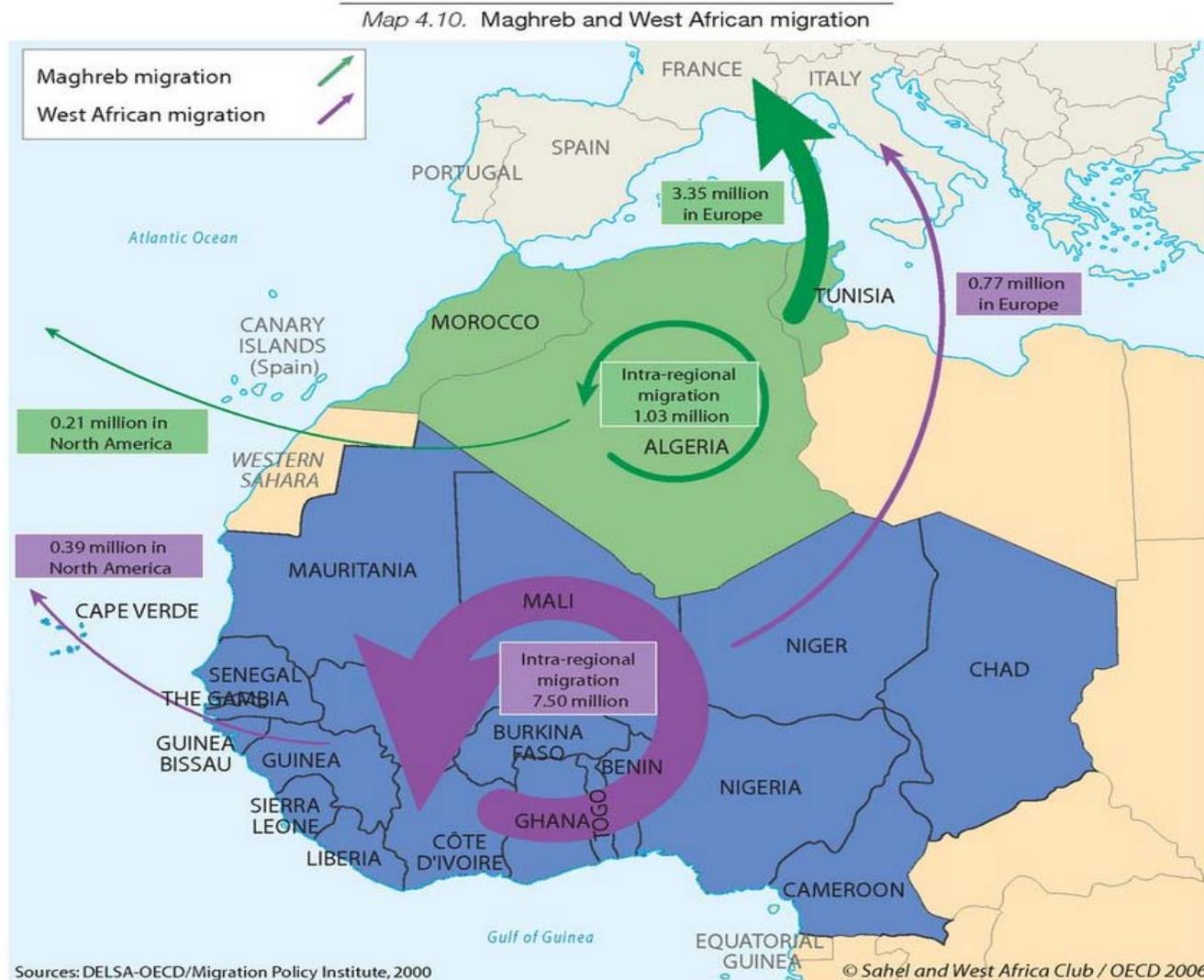
- Migration rates on vertical axis
- Population growth on horizontal axis.
- Stocks normalized to 1 in 1960

Source: Docquier and Machado (2014)

### Implications for G7 (and others)

- For now: conflict and poverty driven pressures from Sahel G5 to Europe (no evidence of climate-driven international migration so far—Beine and Parsons (2015))
- To come: climate driven challenge from low-latitude countries, mostly from SSA for all high latitude countries

# Sahelian Migration patterns in 2000



- 2/3 of migratory flows are intra-African
- 82% of extra-regional are towards Europe

## Migrants from Sahel and Maghreb by destination (number of migrants)

		Region of origin			
		Sahel		Maghreb*	
		2000	2015	2000	2015
Region of destination	<b>WORLD</b>	<b>2 461 942</b>	<b>3 143 249</b>	<b>3 452 405</b>	<b>5 249 456</b>
	<b>Africa</b>	<b>95,7%</b>	<b>93,9%</b>	<b>1,4%</b>	<b>1,2%</b>
	<b>Asia</b>	<b>0,4%</b>	<b>0,2%</b>	<b>7,2%</b>	<b>4,9%</b>
	<b>Europe</b>	<b>3,8%</b>	<b>5,7%</b>	<b>88,1%</b>	<b>89,3%</b>
	<b>Latin America and the Caribbean</b>	<b>0,0%</b>	<b>0,0%</b>	<b>0,1%</b>	<b>0,1%</b>
	<b>Northern America</b>	<b>0,1%</b>	<b>0,2%</b>	<b>3,0%</b>	<b>4,3%</b>
	<b>Oceania</b>	<b>0,0%</b>	<b>0,0%</b>	<b>0,2%</b>	<b>0,1%</b>

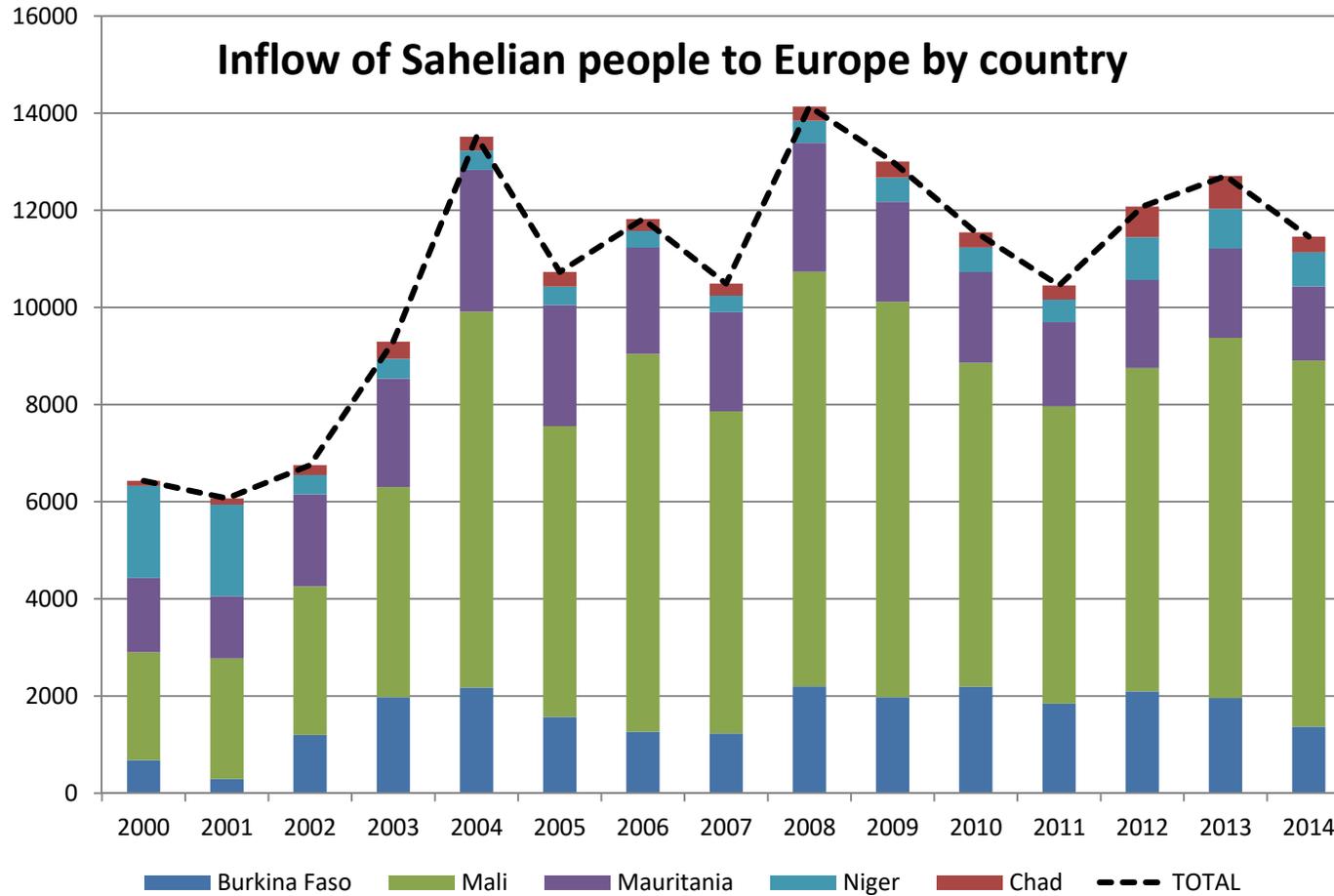
\*Algeria, Morocco, Tunisia

- Developed regions
- Least developed countries
- Less developed regions excluding least developed countries



Source: Migration Policy Institute tabulation of data from the United Nations, Department of Economic and Social Affairs (2015), "Trends in International Migrant Stock: Migrants by Destination and Origin," United Nations database, POP/DB/MIG/Stock/Rev.2015. Available

# G5- Inflow to Europe by origin

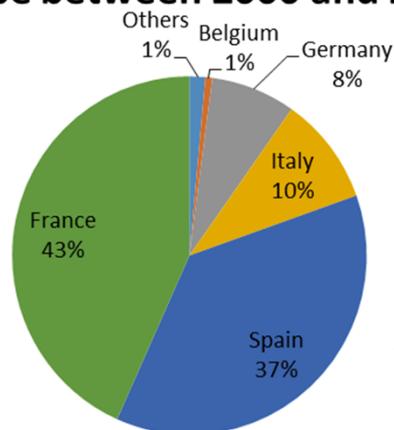


- Sustained inflow increase from Mali starting around 2002
- Relatively constant flow from other countries

Source : International Migration Database, OECD

# G5- Inflow by destination (period averages)

**Distribution of the Sahelian inflow of people in Europe between 2000 and 2009**

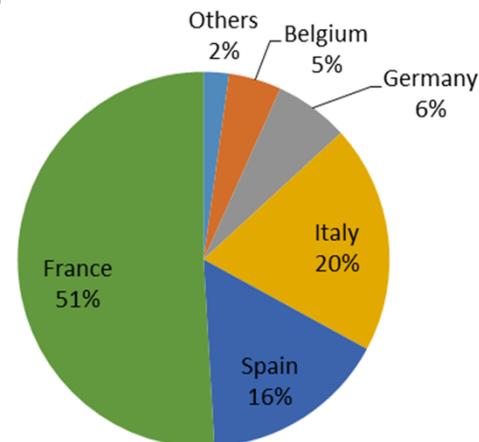


Shift of G5 migrants from Spain towards Italy and France

Source : International Migration Database, OECD

*Others = Switzerland, Slovenia, Iceland, Slovak Republic, Hungary, Poland, Finland, Czech Republic, Denmark, Luxembourg, Norway, Sweden, Austria and Netherlands.*

**Distribution of the Sahelian inflow of people in Europe between 2010 and 2014**



**Sahel heading towards 'failed state'  
status?**

# Sahel heading towards 'failed state' status?

	(1) 2015 per capita GDP <sup>b</sup> (US\$)	(2) FEW index rank <sup>c</sup>	(3) GDP (10-15) <sup>d</sup>	(4) Population growth (15-30) <sup>e</sup>	(5) CPA (05-09) <sup>f</sup> \$ per capita [educ / agri] <sup>g</sup>	(6) CPA (10-14) <sup>f</sup> \$per capita [educ / agri] <sup>g</sup>
<b>Burkina Faso</b> (18.1) <sup>a</sup>	613	139	5.5	2.6	59.2 [2.0 / 4.8]	58.9 [1.0 / 5.0]
<b>Chad</b> (14.4) <sup>a</sup>	776	145	6.4	2.8	22.6 [0.3 / 1.3]	20.0 [0.2 / 1.3]
<b>Mali</b> (17.6) <sup>a</sup>	744	133	6.1	2.8	59.5 [4.8 / 7.3]	62.1 [3.4 / 8.4]
<b>Mauritania</b> (4.1) <sup>a</sup>	1,371	118	8.7	2.1	83 [0.9 / 9.5]	82.3 [0.6 / 8.5]
<b>Niger</b> (19.9) <sup>a</sup>	359	146	4.2	3.8	29.5 [0.3 / 2.9]	30.1 [0.2 / 2.9]
<b>LDCs<sup>h</sup></b>	943	-	4.1	2.3	41.3 [3.4 / 1.8]	49.5 [3.4 / 2.0]

Notes:

<sup>a</sup> 2015 population (in millions), UN World population prospect

<sup>b</sup> WDI 2015 GDP per capita in current US\$ (2014 data for Mauritania)

<sup>c</sup> Food-Energy-Water (FEW) composite index (148 countries: 1 is highest rank). <http://www.prgs.edu/pardee-initiative/food-energy-water/interactive-index/guide.html>

<sup>d</sup> Average yearly GDP growth rate (%)

<sup>e</sup> UN World population prospect (medium fertility variant)

<sup>f</sup> CPA: Country Programmable Aid

<sup>g</sup> ODA Source: Creditor Reporting System (CRS) Aid Activities database, OECD. Expenditures in donor countries excluded

<sup>h</sup> Least Developed Countries (LDCs) UN classification. Excludes Ethiopia and Bangladesh (694 million people)

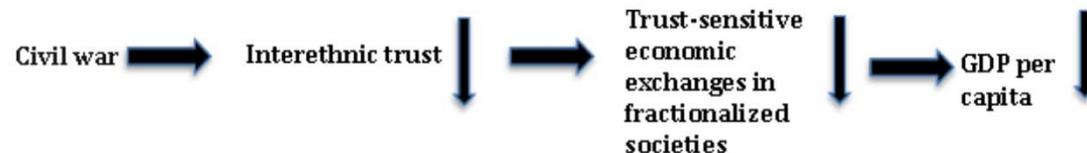
Guillaumont-Jeanneney et al. (2016)

# Sahel on the edge of conflict traps

- Disengagement of the State during donor-led Structural Adjustment Programs in 1990s.
- State: Balance [generating surplus/protecting income] broken
- Extensive interviews among actors in G5 (Ferdinand report):

No security ↔ No development

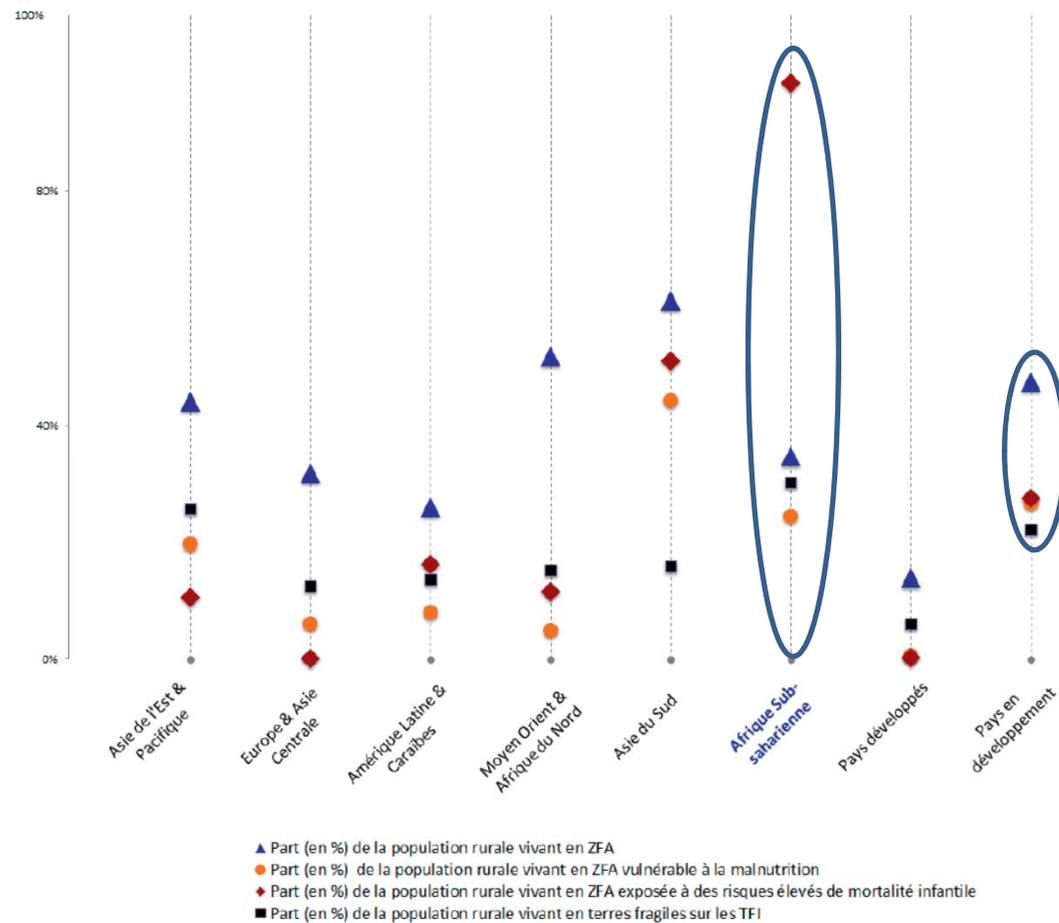
- Conflict-related Factors: Internal (Tuaregs out of political process, high population growth) External (Cocaine hub from 2005; AQIM out of Algeria; Return of armed men from Libya in 2013) → “conflict systems” & day-to-day insecurity. At edge of conflict trap/civil war, “failed state status”?
- Delayed and imbalanced international response after 2013 has contained battle against terrorism but not day-to-day insecurity.
- Military + health spending but neglect of aid for education agriculture



- Estimates of costs of civil war from synthetic counterfactuals (average 10 years in a sample of 20 Civil wars across the world)
- 17% average annual loss in per capita income largely attributable to fall in inter-ethnic trust above that backs the “war renewal” school, not the “neoclassical” school
- Loss estimates from Costalli et al. (2016)

# On the edge of poverty traps (1)

Share of rural population on fragile isolated lands (■), Low-level coastal lands (▲), high infant mortality risk (●) high malnutrition (◆) (regional averages)

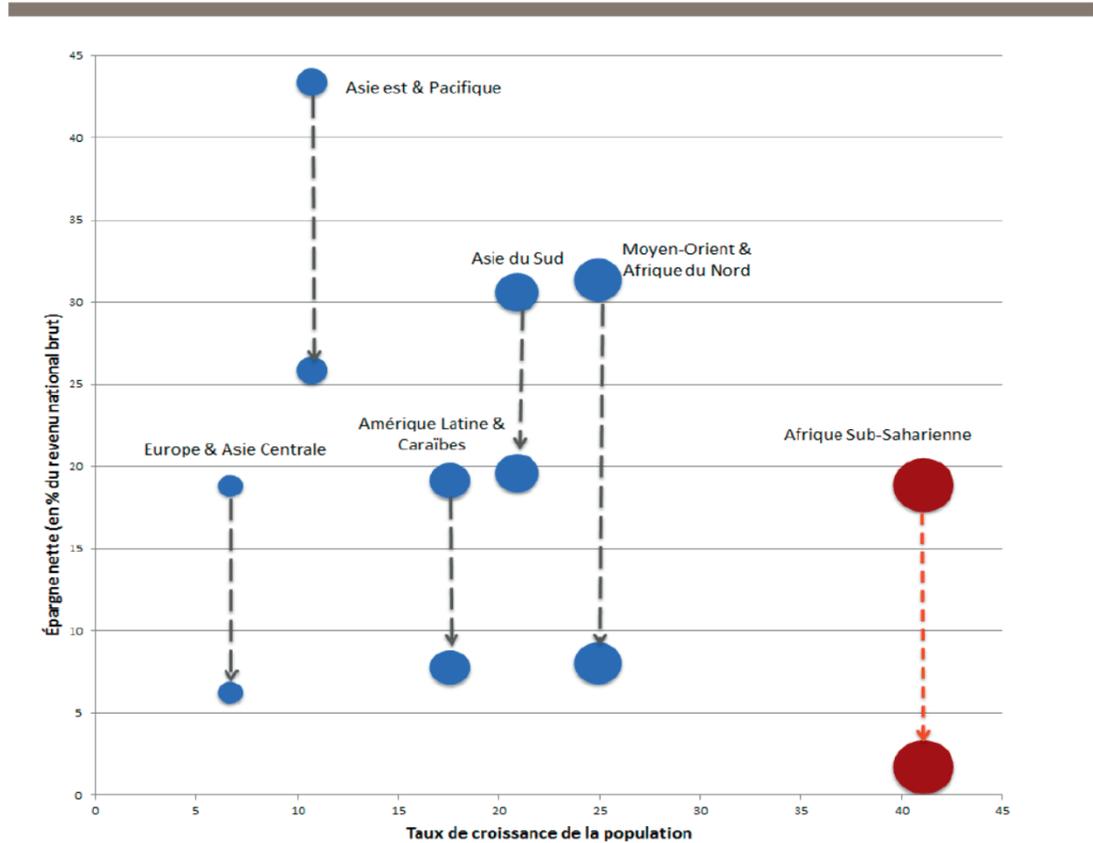


Source: Corneille, A. and J. de Melo (2016)

# On the edge of poverty traps (2)

Gross and Net Savings (adjusted for depreciation of natural capital)  
versus population growth  
(Regional averages 2000-13)

Size of bubbles proportional to population growth



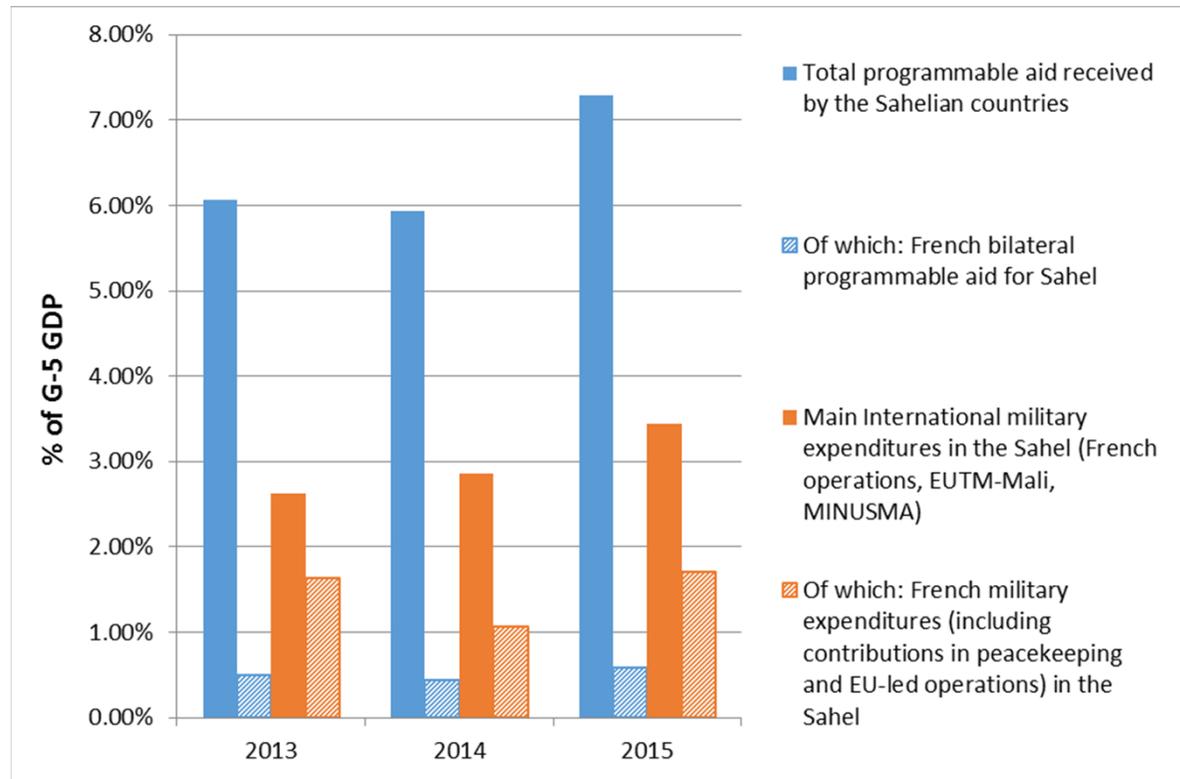
Source: Corneille, A. and J. de Melo (2016)

**Over 2000-13, SSA savings barely sufficient to maintain current generation level of income !**

# A Marshall plan to invest in security/development (less costly than managing failed state status ex-post)

Country programmable aid and military expenses in G5 by donor (2013-2015)  
(% of G-5 GDP)

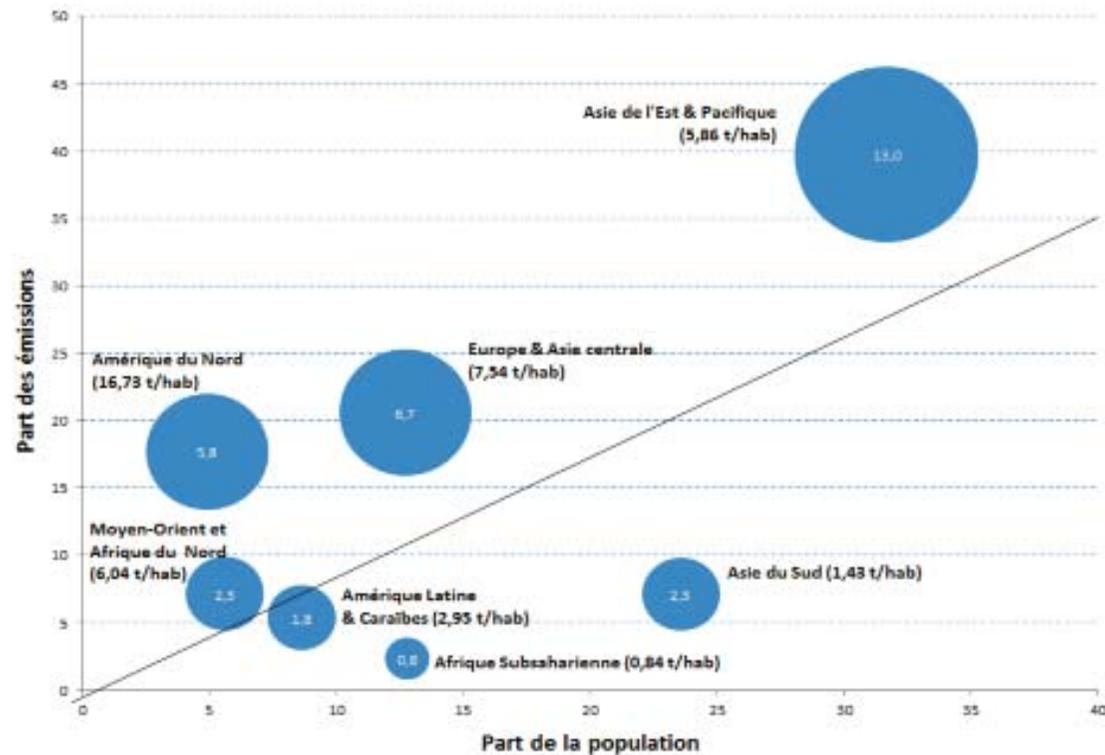
- Military spending has not addressed day-to-day insecurity
- ODA shares on health acceptable (communicable diseases are GPG)
- Low shares of ODA to education/agriculture
- Abandon “Do no harm” doctrine + non-recognition of military/security spending in ODA



Source: Guillaumont-Jeanneney et al. (2016)

# **Looking Ahead: Facing up to the Climate challenge**

# CO2 emissions vs. Population shares (regional averages)

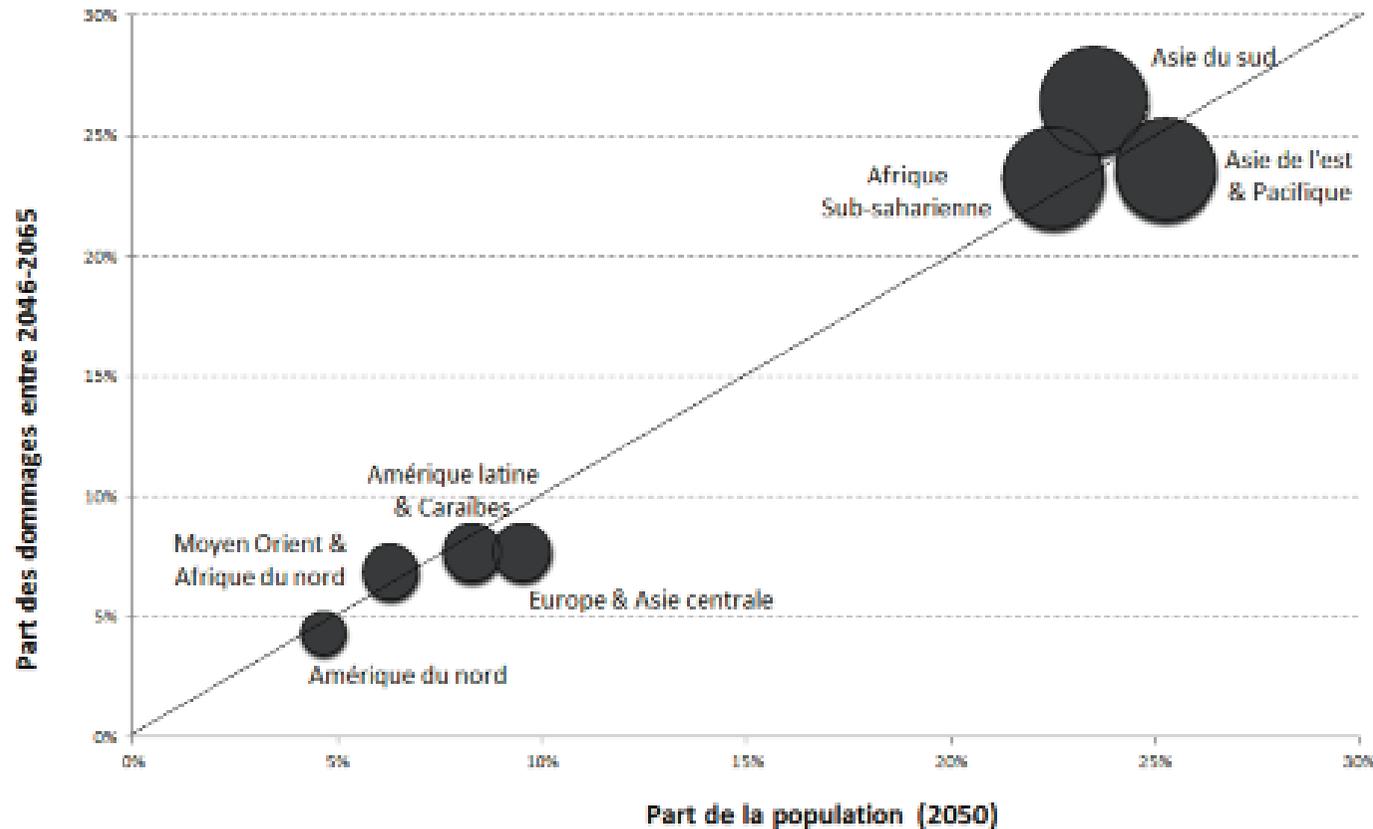


Source : Indicateurs du développement dans le monde, Banque Mondiale

Corneille, A. and J. de Melo (2016)

- Bubbles proportional to total CO2 emissions (cement and fossil fuels).
- Regions below the 45 line have below-average per capita emissions.
- If converging CO2 emissions per capita, effort from North America, Europe and East Asia

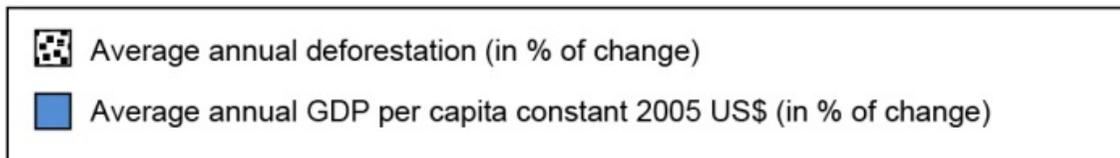
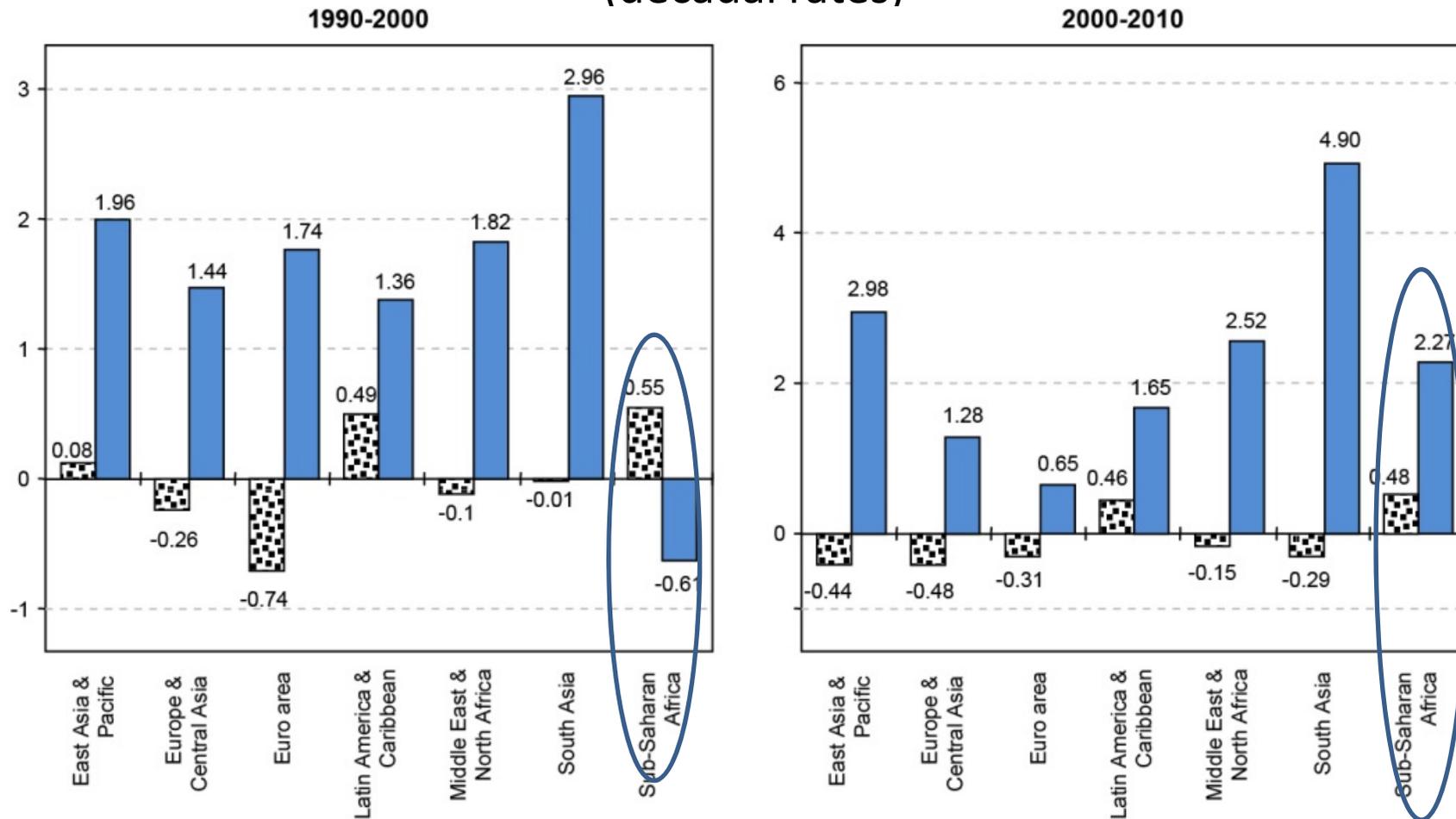
# Projected damages by region (in 2050)



Source: Corneille, A. and J. de Melo (2016)

- **Strongest damages in SSA and SA (above population shares)**
- **In absence of migration large redistribution of population across regions**
- **Strong migratory pressures is SA, SSA, EA if adaptation fails**

# Deforestation rates vs. Per capita growth (decadal rates)



**Increase funding  
for both adaptation & mitigation**

# Funding for adaptation (CBDR)

## Funding for mitigation (cities and forest conservation)

### Other factors leading to increased migratory pressures

- If SSA fails to converge in productivity towards US while EU does, then wage differential migration (if not impeded) would raise share of highly qualified migrants from SSA to increase from 16% of population to 20% by 2030 and 23% by 2050 (Docquier (2012))
- Add IPCC climate change projections: with +2 deg. → agricultural lands displaced by 1000 km. from equator + sea level rise of 1.20m.
- Strong causal evidence that human conflict is positively correlated with sustained increases in temperature.

### **In coming decades, out-migration is the solution to the climate change challenge**

- With 72% of population and 90% of GDP on 10% of land across the world, plenty of room to face up to climate change via migration (low-latitude to high-latitude countries).
- But if no migration is allowed polar regions would become twice as well off as equatorial regions (Desmet and Rossi-Hansberg (2013)).

### **...with increased funding from G7**

- Funding to finance carbon-sober cities in Africa (so the building and running cities does exceed one-third of carbon budget for +2 deg.
- REDD+ funding for SSA (SSA is only region that has continued deforestation in past decade in spite of higher growth)

# References (1)

Barrett, S. C. Carraro, J. de Melo eds (2016) “Towards a workable and effective Climate Regime”, CEPR <http://www.voxeu.org/article/towards-workable-and-effective-climate-regime>

Beine, M. and C. Parsons (2015) “Climactic Factors as Determinants of International Migration”, *Scandinavian Journal of Economics*, 117(2), 723-67,

Brachet, J. et al. (2009), *Migrations trassahariennes, vers un désert cosmopolite morcelé (Niger)*, Editions du Croquant, Paris.

Corneille, A. and J. de Melo (2016) “Quelques défis de l’Afrique Sub-saharienne face au changement climatique” Ferdi, [http://www.ferdi.fr/en/publication/search?authurname=3326&year=&codejel=&programmes=&op=Display&form\\_build\\_id=form-HLfwpzMT3MjofCzLXxeB714iPJeU3O4oDKg9DLja\\_y0&form\\_id=search\\_publication\\_form\\_advanced](http://www.ferdi.fr/en/publication/search?authurname=3326&year=&codejel=&programmes=&op=Display&form_build_id=form-HLfwpzMT3MjofCzLXxeB714iPJeU3O4oDKg9DLja_y0&form_id=search_publication_form_advanced)

Costalli, S. L. Moretti, and C. Pischedda (2016) “The Economic Costs of Civil War: Synthetic Counterfactual Evidence and the Effects of Ethnic Fractionalization”, HICN #184, Sussex

Desmet, K. and E. Rossi-Hansberg (2013) “Moving to Greenland in the Face of Global Warming”, <http://voxeu.org/article/moving-greenland-face-global-warming>

Docquier, F. and J. Machado (2014) “Revenu, Population et Flux Migratoires au 21ème siècle- Un défi Sociétal pour L’Europe”, *Studia Oeconomica Posnaniensa*

## References (2)

Guillaumont Jeanneney S. avec C. Angely, A. Brachet, P. Collier, M. Garenne, P. Guillaumont, B. Joubert, C. Laville, J. de Melo, S. Michailof, B. Miribel, O. Ray et T. Zongo, *Allier sécurité et développement Plaidoyer pour le Sahel*, Ferdi 2016.

<http://www.ferdi.fr/fr/publication/ouv-allier-s%C3%A9curit%C3%A9-et-d%C3%A9veloppement-plaidoyer-pour-le-sahel>

Guillaumont-Jeanneney, S., C. Laville and J. de Melo (2016) " « Sahel faces poverty and conflict traps : A call for international Action »

<http://www.ferdi.fr/en/publication/edito-sahel-faces-poverty-and-conflict-traps-call-international-action>

Melo, J. de (2015) "Climate Change and the Growing Challenge of Migration"

<http://www.brookings.edu/blogs/planetpolicy/posts/2015/08/24-climate-change-migration-challenges-de-melo>

OECD (2017), "International migration database", *OECD International Migration Statistics* (database)

[http://www.oecd-ilibrary.org/social-issues-migration-health/data/oecd-international-migration-statistics/international-migration-database\\_data-00342-en](http://www.oecd-ilibrary.org/social-issues-migration-health/data/oecd-international-migration-statistics/international-migration-database_data-00342-en)

United Nations, Department of Economic and Social Affairs, Population Division (2015).

<http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml>