ATLANTIC FUTURE

REPORT

01

Changing intra-Atlantic interdependencies: Implications for the EU and its major partners

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ABSTRACT

This report describes the main interdependencies across the Atlantic, how they have been changing over time, and what implications these connections have for the EU and its major partners. It highlights which interactions among the Atlantic continents are accelerating or decelerating; where Atlantic interdependencies are critical and where they are less developed; and compares intra-Atlantic connections and interdependencies with those between the EU and other key Atlantic powers with other parts of the world. The report draws on over 100 datasets, captured in the Atlas of the Atlantic, an interactive online tool linking 100 key indicators tracking political security, economic, environmental and energy connections binding the peoples of the Atlantic Hemisphere – Europe, Africa, North and South America.

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1. Changing Atlantic Interdependencies

This report describes the main connections across the Atlantic, how they have been changing over time, and what implications these connections have for the EU and its major partners. The report draws on over 100 datasets, captured in the Atlas of the Atlantic, an interactive online tool linking 100 key indicators tracking political, security, economic, environmental and energy connections binding the peoples of the Atlantic Hemisphere – Europe, Africa, North and South America.

The Atlas and our related research highlight a number of implications for the European Union.

- **Energy.** The Atlantic Hemisphere¹ is recasting the world's energy future. Three Atlantic energy 'revolutions'- shale, offshore, low carbon could reverse the primary energy flow vector from East-to-West to West-to-East. Growing Atlantic energy wealth could lessen European dependencies on the Great Crescent and be particularly important to tackle energy poverty in Africa.
- **Economy.** More commerce takes place in the Atlantic Basin than any other, although Atlantic-Pacific trade links are altering patterns of trade, investment, services and talent. While for the EU and North America continental-centered merchandise trade is more important than ocean-centered merchandise trade, the reverse is true for South America and Africa. Moreover, on each Atlantic continent inter-continental trade initiatives have become more dynamic than intra-continental initiatives. The EU should consider how to take full advantage of such inter-continental initiatives.
- Security. While challenges of state-to-state security are greatest in the Pacific, security challenges within societies are most relevant for the Atlantic. Networks engaged in trafficking of people, arms, drugs and money are not only forging their own pan-Atlantic interdependencies, some are intertwining with terrorist networks to become concerns of pan-Atlantic scope. As Atlantic maritime trade grows, so does maritime insecurity. Piracy and threats to maritime trade, energy infrastructures, and other Atlantic arteries are challenges of pan-Atlantic concern. The EU will be challenged to forge broader Atlantic coalitions to address these challenges.
- **People, values and culture.** The Asian Hemisphere is the hemisphere of contested norms and principles among and between open and closed societies. The Atlantic Hemisphere, in contrast, is -- admittedly with fits and starts -- coalescing around basic aspirations regarding domestic governance. There is opportunity for the EU to draw on values to address common challenges. Democracy is the prevalent form of government across the Atlantic, but with major regional variations. The Atlantic Space is extremely uneven in terms of poverty levels, human development and gender balance. Africa's rapidly growing population and Europe's aging pose challenges of social balance, cohesion and economic sustainability in both regions, although for opposite reasons. South-North migration patterns remain emblematic of continuing social divides. While refugees traditionally account for a small portion of migrants worldwide, the greatest influx of refugees into Europe since WWII in 2015 showcases deep interlinkages among neighboring regions, in this case the broader Middle East.
- **Resources and environment.** Five environment and resource issues exhibit interdependencies particularly relevant to the Atlantic Space: energy flows; climate mitigation; food security; wildlife trafficking and biodiversity loss; and challenges of the

¹ Kishore Mahbubani's assertion (Mahbubani 2008) that there is an "Asian Hemisphere" means by definition that there is also an Atlantic Hemisphere. In the Atlantic Future project we use the term **Atlantic Hemisphere** and **Atlantic Space** to include the entire expanse of all four Atlantic continents. Our definition of the **Atlantic Basin** is limited to those countries along the Atlantic Ocean littoral.

Atlantic Ocean itself. Underlying these dynamics are regional and global drivers of resource consumption and production. The Atlantic is a diverse region in terms of real income and consumption levels, yet it also possesses capacity to address common resource and environmental challenges, and thus could act as a seedbed for cooperative approaches by established and emerging democratic powers. The EU could play an important coalition-building role in this regard.

2. Economy and Finance

2.1 Atlantic Trade Interdependencies

Atlantic trade is significant for each Atlantic continent, yet these interdependencies are uneven. The thickest merchandise trade links within the Atlantic Space are those among the developed regions of the Atlantic North.² North America and Europe remain each other's most important and profitable market and largest source of onshored jobs. No other inter-regional commercial artery in the world is as integrated. Should the EU-Canada CETA deal, the EU-US TTIP, and an upgraded EU-Mexico free trade agreement go forward over the next number of years, these linkages will be even further enhanced.

Central and South America have extremely concentrated trade interdependencies with North America and maintain substantial trade links with Europe. Brazil, for instance, is the single largest exporter of agricultural products to the EU. While Africa's trade ties with Central and South America are relatively thin, over the past twenty years they have also been the most dynamic and have grown most quickly in terms of inter-continental connections within the Atlantic space (Atlas 2015; Ruano 2015; Hamilton and Quinlan 2015a).

Merchandise trade among the four Atlantic continents more than doubled over the last decade and accounts for more than half the global total. While the Atlantic's share of global goods trade has declined, global goods trade itself has been growing considerably, so while the Atlantic may have a smaller piece of the pie, the pie itself has grown much larger. Moreover, this relative decline does not apply to all Atlantic countries. Brazil and Mexico, for instance, have actually increased their share of world merchandise trade in the last four decades (Atlas 2015; Ruano 2015).

Atlantic-Pacific trade interdependencies are becoming thicker. China in particular has become an important trading partner for all Atlantic continents, and China's trade with Africa and Latin America has grown faster than with North America and Europe. Yet the trade interdependencies of both southern Atlantic continents with China resemble traditional colonial patterns. South-North Atlantic trade, in contrast, is far more complementary. Booming Atlantic-Pacific sea trade is recasting port infrastructures all along the Atlantic Basin to accommodate larger vessels, greater trade, and new shipping patterns. The Panama Canal is doubling its capacity, expanding ocean-to-ocean connections (Atlantic Basin Initiative 2014; Kaplan 2012; Ruano 2015). Melting ice in the Arctic Ocean is opening new and shorter shipping routes from East Asia to and from Eastern North America and Europe (Petterson 2014; Wilson 2013).

² In the Atlantic Future project we use the term "Atlantic North" to encompass North America and Europe, and "Atlantic South" to encompass South and Central America and Africa. We do this to avoid geographic confusion, since parts of South and Central America and Africa are part of the North Atlantic Ocean littoral.

2.1.1 Intra-Continental vs. Inter-Continental Trade Interdependencies

Figure 1 presents intra-continental trade (as a percentage share of total trade) for the world's principal 'continental' regions. It highlights the differing importance for each Atlantic continent of land-based intra-continental trade vs. maritime-based inter-continental trade.





Source: Atlas 2015, Isbell and Nolan Garcia 2015, WTO 2013.

For South and Central America and for Africa, ocean-centered merchandise trade with both Atlantic and Pacific partners is more important than their respective continental-centered merchandise trade. While this is not true for Europe and North America -- intra-regional, continental-centered merchandise trade accounts for 62% of Europe's overall trade and 49% for NAFTA's overall trade -- the most dynamic trade initiatives undertaken by each Atlantic North continent in recent years have also been maritime-centered rather than continental-centered (Isbell and Nolan Garcia 2015).

The EU remains the most prominent example of dense continental-wide regional integration. Most EU member states are more deeply connected to each other than to non-EU member states. As the EU's appetite to deepen or expand its integrated market has slowed, however, its efforts to intensify its inter-regional trade links have accelerated via the EU-Korea free trade agreement, the EU-Canada CETA, EU-US TTIP, efforts to upgrade the EU's free trade agreement with Mexico, and other initiatives. The EU's intra-regional trade share has fallen by six percentage points from its level (68%) in 2008 (Eurostat 2014).

NAFTA in North America has never aspired to the type of deep regional integration embodied by the EU, and greater dynamism is apparent in efforts to forge new inter-regional arrangements across the Pacific through TPP and across the Atlantic through CETA, TTIP, and efforts to upgrade the EU-Mexico free trade agreement.

The relative importance of maritime- vs. continental-based trade interdepencies is particularly apparent, however, when one looks at the continents of the Atlantic South.

Of the four Atlantic continents, Africa registers the lowest degree of intra-regional, continentialcentered merchandise trade (7%) and is the region most dependent on Atlantic trade -- 53% of its merchandise exports go to Atlantic partners, particularly Europe. It is also the most dependent on trade with the rest of the world -- notably Asia, which absorbs 34% of its goods exports. African countries are far more connected commercially with partners across the Atlantic, Pacific and Indian Ocean basins than they are to each other, and this is likely to remain the case over the coming decade and more, perhaps with the exception of North American -African trade interdependencies. Those trade ties, which have been based largely on African energy exports to the United States, are weakening due to the US energy revolution. The US share of Africa's exports more than halved from 22% to 10% from 2000 to 2013 (Atlas 2015; Ruano 2015). The question for Africa is whether the continent can complement its maritimebased commerical connections with greater intra-regional connections on the continent itself (Isbell and Nolan Garcia 2015; Schmieg 2015).

In South and Central America, intra-continental integration arrangements have done far less to stimulate trade than more dynamic maritime-based inter-continental links. Most South and Central American countries are more connected through trade to their Atlantic and Pacific partners than they are to each other. For instance, nearly 60% of Argentina's merchandise trade is within the Atlantic Basin, compared to only one third of its trade that takes place with countries of the 'continentally-constructed' Western Hemisphere. Uruguay registers 15% more trade with the Atlantic Basin than with 'the continental region' of the Americas. Even land-locked Paraguay and Bolivia are more connected with the Atlantic than with either the Pacific Basin or their respective land-based regions.

The Pacific Alliance joining Mexico with the Andean states of Colombia, Peru, and Chile is particularly innovative because it is simultaneously intra-regional and inter-regional. The four partners not only seek to eliminate 92% of tariffs among them; their participation in the TPP is extending this vector of open inter-regionalism across the Pacific Basin, perhaps setting the stage for new types of maritime-centered, ocean-basin regionalism (Isbell and Nolan Garcia 2015).

Brazil's trade interdependencies are particularly notable. Maritime-based Atlantic trade accounted for 49% of Brazil's total trade in 2013. This is 34 percentage points higher than Brazil's trade with its South American partners, 28 percentage points higher than with its other BRIC partners, and 11 percentage points higher than its trade with its Pacific partners -- and is growing faster than its Pacific trade. (Atlas 2015; Isbell and Nolan Garcia 2015; Kaltenthaler and Mora 2002).

In short, there is potential across all Atlantic continents for countries to pursue 'maritimecentered, ocean basin-based 'inter-regionalism' in both the Atlantic or Pacific Basins as either complements or alternatives to the traditional, land-based, sub-continental and continental regionalisms of the past. Figure 2 presents each basin's intra-regional trade in relation to its total trade. Both the Atlantic Basin and Pacific Basin exhibit very high shares of intra-basin trade -72% and 65%, respectively. The highest growth has been exhibited within the Indian Ocean Basin, albeit from a much lower base.

Figure 2.



Note: The 'Great Crescent' encompasses the Middle East and the countries of the former Soviet Union. Source: UNCOMTRADE database on total global (bilateral) trade and own elaboration, via development and application of the Alternative Regional-Data Mapping Model (ARM) to the entire UNCOMTRADE database. Atlas 2015; Isbell and Nolan Garcia 2015.

2.3 Investment Links

Investment links among Atlantic economies are far more dense than those anywhere else in the world. In fact, the dynamic interaction between investment and trade distinguishes the pan-Atlantic economy from all others. Foreign investment and affiliate sales³ power pan-Atlantic commerce and provide millions of jobs. Affiliate sales on either side of the Atlantic are more than double comparable sales in the entire Asia/Pacific. Much of this is driven by foreign direct investment (FDI) ties between the United States and Europe which, with combined annual sales exceeding \$4 trillion, dwarf any other bilateral trade or trade/investment relationship in the world. Across the Atlantic North, affiliate sales, not trade, are the primary means by which European and American companies firms deliver goods and services to consumers across the ocean. For instance, in 2013 European affiliate sales in the United States of \$2.3 trillion were more than triple European exports to the United States (Hamilton and Quinlan 2015b).

While trade drives Europe's commerce with Asia, investment drives Europe's commerce with North America. Europe is the most important source of foreign investment and onshored jobs in the United States. Europe accounted for 70% of the \$2.8 trillion invested in the United States in 2013 on a historic cost basis, and US-based European companies accounted for two-thirds of the \$830 billion contributed by all foreign firms to U.S. aggregate production in 2013. European affiliates earned an estimated \$110 billion in the United States in 2014, making the United States the most important market in the world in terms of earnings for many European multinationals.

³ An 'affiliate sale' is a sale made by a foreign-based subsidiary of an international company.

Investment also powers North America's deep commercial integration with Europe. US companies are and will continue to be the most important source of investment and onshored jobs across the EU. On a historic cost basis, US investment in Europe was nearly 15 times larger than in the BRICs and nearly 4 times larger than in all of Asia at the end of 2013. US affiliate output in Europe (\$700 billion) in 2013 was double affiliate output in Asia (\$355 billion). Sales of U.S. affiliates in Europe in 2013 were 75% more than in the entire Asia/Pacific. Since 2000 Europe has attracted over 55% of total U.S. global investment -- more than in any previous decade -- whereas China has accounted for just 1.4% of total global US investment during this period (Hamilton and Quinlan 2015a and b).

European and North American companies are active investors throughout the Atlantic South. While US companies currently invest more in South and Central America than in Asia, over the next decade those investment levels are likely to become more balanced. EU companies invest slightly more in Asia than in South and Central America, and the trend favoring Asia is likely to continue. US investments in Africa seem unlikely to increase significantly from their relatively low levels, in large part because North America's own energy dynamics are turning attention away from Africa. EU investments in Africa are likely to remain significant, but the more dynamic investors in Africa are likely to come from Asia unless the EU embarks on new commercial overtures to its southern neighbor.

FDI ties between South and Central America and Africa are weak. Multinationals from the Atlantic South prefer to invest in major developed economies, primarily in the Atlantic North, athough such investment is likely to remain marginal over the foreseeable future. Africa invests relatively little in South and Central America. The most important African investor in the region is South Africa, especially in Brazil. South and Central America invested \$37 billion in Africa in 2012, a relatively low amount, yet approaching the levels invested by North America in Africa. While South American investments in Africa are also marginal, with the exception of those by Brazilian firms. Unlike resource-hungry Chinese companies, resource-rich Brazilian companies are investing billions in Africa to diversify their export markets and internationalize their production (Hamilton and Quinlan 2015a and b).

2.3 Portfolio Flows

The Atlantic economies are connected in substantial, if uneven, ways with regard to portfolio flows and assets. As capital flows have slowly revived and adapted following the 2008 global financial crisis, new patterns have been developing.

First, over the next decade Asia could emerge as the largest holder of portfolio assets in Africa. Currently, Asia and the EU are roughly equal as portfolio asset holders in Africa, each accounting for roughly 3 times greater assets than those held by North America in Africa. Yet Asian portfolio holdings in Africa are growing much faster than European holdings (Hamilton and Quinlan 2015a; Atlas 2015).

Second, North America is likely to retain its role as the most significant external holder of portfolio assets in both Europe and South and Central America, even as its role as a holder of portfolio assets in Africa is likely to decline. North America accounts for about one-third of portfolio assets within the EU; Asia accounts for less than one-sixth. South and Central American and African portfolio assets in the EU have each grown rapidly over the past decade, but from a low base.

Third, the EU is likely to remain the largest holder of portfolio assets in North America, in fact the EU holds twice the value of North American portfolio assets that North Americans hold of

each other's assets. South and Central American portfolio assets in North America have also grown rapidly so that they now roughly equal North American cross-border portfolio assets in North America.

Fourth, portfolio flows across the Atlantic South are likely to move primarily from South and Central America to Africa. South and Central American portfolio assets in Africa have grown to about half of North American assets held in Africa.

2.4 Services

The Atlantic is home to the world's major services economies, Atlantic economies are each other's most important services markets, and Atlantic economies are poised to be major beneficiaries and drivers of the growth in global services.

The United States is the largest single country trader in services, while the EU is the largest trader in services among all world regions. Over half of US and EU services exports go to Atlantic Basin countries, and each is seeing an increasing share of its services trade conducted with South America and Africa (Hamilton and Quinlan 2015b).

Services are not just a North Atlantic story. Services are far more important to Atlantic economies such as Brazil, South Africa, Mexico and Colombia than to non-Atlantic economies such as Russia, India or China. Brazil's expanding services industry contributes about two-thirds of its total GDP and employs about 70% of its labor force. Services account for more than 50% of GDP in Africa's 36 non-resource-rich economies and for more than 40% of GDP -- more than industry's share -- in the continent's resource-rich economies (African Economic Outlook 2015).

As income per capita grows in the Atlantic South, and as governments seek to diversify their economies away from commodity production, demand will grow for such services as health care, education, entertainment, insurance, telecommunications and finance. Moreover, services is a growing area of commercial activity among Southern Atlantic countries, particularly in energy-related services; engineering and construction services; and education and managerial services (Dardush and Shaw 2012).

A related factor is the high and still-growing importance of services in global foreign direct investment flows. The delivery of services by foreign affiliates -- driven by pan-Atlantic investments -- has exploded over the past decade and is far more significant than services trade (Hamilton 2011; Atlas 2015; Hamilton and Quinlan 2015b). Services have come to dominate global foreign direct investment over the past decade, and Europe is driving this process. Today, services represent nearly two-thirds of global FDI stock, up from a 49% share in 1990. Whereas services FDI used to be strongly related to trade and trade-supporting services for manufacturing multinationals, over the past decade more services. Electricity, water, telecommunications and other infrastructure-related activities have also been receiving more foreign direct investment. This trend is likely to continue and to be particularly visible within the Atlantic Hemisphere.

3. Security

3.1 Intra-societal vs. inter-state security

Of all the ocean basins, the Atlantic is the most pacific when it comes to conflicts between states. It remains a region of great violence, however, when it comes to conflict within societies

(Atlas 2015, Lété 2015, Atlantic Basin Initiative 2014). While challenges of state-to-state security are greatest in the Pacific, challenges to societal security -- protecting people from violence or disruption -- are most relevant for the Atlantic. Networks engaged in trafficking of people, arms, drugs and money are forging their own pan-Atlantic interdependencies. Some are intertwining with terrorist networks to become concerns of pan-Atlantic scope.

The drug trade is the most lucrative branch of organized crime, cocaine is the most profitable drug within the drug trade, and cocaine is very much an Atlantic scourge. Almost all the world's cocaine is produced in Colombia, Peru and Bolivia. The United States is the biggest consumer and Europe is the most lucrative market. The routes to these markets crisscross Central America as a corridor and operational base for North America and a launching pad for shipments via the Azores to Europe. They also flow from Venezuela, which accounts for half of the cocaine being supplied to Europe, via Cape Verde, Madeira and the Canary Islands; and they traverse Brazil and other parts of South America to at least two distinct trans-shipment hubs to Europe and beyond that have emerged in West Africa: one centred on Guinea-Bissau and Guinea, and one centered in the Bight of Benin which spans from Ghana to Nigeria. These drugs operations are now spreading to East, Central and South Africa as well. In addition, the conventional wisdom that the North consumes drugs and the South produces them has dissolved; consumption is growing throughout the South Atlantic -- Brazil is now the world's second largest cocaine consumer -- and trafficking is growing across the North Atlantic. (UNODC 2014; OAS 2013; Atlantic Basin Initiative 2014).

3.2 The Intersection of crime and conflict

The intersection of crime and conflict is not a new phenomenon, but globalization and communications technology have provided insurgent and terror networks with the capacity to expand their operations and connections far beyond the boundaries of their original conflict zones. For years small arms and light weapons flowed illicitly across the Atlantic from Africa to South America and up to the FARC or other insurgent groups. Now flows of drugs, arms and cash flow across the full Atlantic space. Latin American gun runners and narco-cartels have leapfrogged the Atlantic, using weakly governed spaces in west Africa as logistics hubs and transshipment points for destinations in Europe and beyond (Jacobson and Guedes 2014; Hamilton 2015b; Aning 2011; Lacher 2012).

Moreover, not only have crime cartels intruded on states; governments such as Guinea-Bissau have themselves become organized criminal enterprises bent on facilitating illicit pan-Atlantic flows. As a consequence, west Africa is in danger of becoming a black hole of intermingled trafficking, terrorism and corruption.

As Atlantic maritime trade grows, so does maritime insecurity. Piracy is the biggest threat against open and secure maritime transportation routes in the Atlantic Ocean, and in West Africa in particular. Acts of piracy and armed robbery in the Gulf of Guinea represent more than a quarter of worldwide reported attacks (Atlas 2015; Vircoulon and Tournier, 2014). Maritime insecurity in this region affects the trade of 455 million people. It also affects the more than half of Africa's energy exports (UNOWA, 2013). The Caribbean and waters off of northern South America are a second hotspot for piracy and acts of robbery, although these are less prevalent than those off the coast of West Africa (Richardson et. al, 2012).

Atlantic Basin countries are also bound by the consequences of other security challenges, including illegal exploitation and illicit trade of natural resources; corporate bribery; illicit diversion of assistance expenditures; the channelling of illicit flows to secrecy jurisdictions; tax

evasion; cybercrime; oil bunkering (illegal tapping of pipelines or oil tankers); exploitation of labor; and manipulation of export (or import) prices in order to reduce the in-country tax burden and maximize externalized income, usually through a secrecy jurisdiction and a process often known as 'mispricing.' Between 2001-2010 illicit flows from Latin America were estimated at \$877 billion and those from Africa at \$357 billion (Atlas 2015; Hamilton 2015b; Global Financial Integrity 2012; Richardson et. al, 2012).

3.3 Generating resilience to disruption

The potency of these networks of crime, corruption and terror is enhanced by rippling traffic in goods, services, people, drugs, money and arms that is lashing the four Atlantic continents tighter together. As the new Atlantic economy grows ever more connected, complex flows of capital, goods, information and people are creating new interlinked networks. Yet this dynamism also creates vulnerabilities that can lead to disruption of such critical functions as transportation, energy flows, medical services, food supply chains and business systems, communications, cyber links and financial networks. Governments accustomed to protecting their territories must now protect their society's critical functions, the networks that sustain them, and the connections those networks bring with other societies. Yet on the whole efforts in the Atlantic to generate resilience are fragmented, limited and uneven. (Vircoulon, Tournier, 2014; Richardson et. al, 2012; IMF 2014; Hamilton 2015b).

4. People, Values and Culture

The Atlantic Hemisphere is a highly diverse social and cultural space. Shared values contrast with distinct, and sometimes distant, identities. Some trends are common, such as sustained migration flows from the South to the North via Mexico towards the US and via the Mediterranean towards Europe, but implications vary from region to region and policies are mostly implemented at the national level.

4.1 Values in a diverse hemisphere

The Asian Hemisphere is the hemisphere of contested norms and principles among and between open and closed societies. The Atlantic Hemisphere, in contrast, is -- admittedly with fits and starts -- coalescing around basic aspirations regarding domestic governance. Across the Atlantic space there is commitment to promote liberty, improve the efficiency of markets, and to respect human dignity. Of course, across the full Atlantic Space achievement does not always match aspiration. Setbacks abound and challenges remain. Democratic disenchantment, repudiation of politics and politicians, illiberal populism, and extreme societal violence affect countries across the entire Hemisphere.

Democracy is the prevalent form of government across the Atlantic, but with major regional variations. Liberal democracies are predominant in North America and Europe. Most countries in Central and South America are also democracies, but the majority of Atlantic Africa features hybrid or authoritarian regimes. The Atlantic Hemisphere does offer diverse models of democratic practice, however, that can be relevant to broader global debates about effective and responsive governance.

4.2 Four cultural spaces

Although the Atlantic remains highly diverse culturally, four spaces rooted in shared linguistic, cultural and historical experiences span otherwise disparate communities. The Atlantic Hemisphere includes four of the world's most important languages: English is widely spoken or understood in the entire Atlantic; French is one of the most important languages in Africa and in Canada; Portuguese is spoken in Brazil and in some African countries; and Spanish is predominant in Latin America and increasingly spoken in the United States. Nearly all Atlantic societies identify in some way with at least one of four related cultural communities: the Commonwealth, the Francophonie, Ibero-American and Lusophone community. Nonetheless, cultural diversity is also central to identity on each Atlantic continent (Gratius 2015; Rodrigues Sanches 2014; Udeani 2004).

4.3 Religious bonds

Christianity and Islam connect communities across the Atlantic Basin, but with significant divergences within and among continents.

Christianity is the dominant religion in Europe, North and South America and is significant in Africa. Christians accounted for 77.4% of North America's population and for 72% of believers in Europe in 2010. In Latin America, 90% of the population is Christian, primarily Catholic. In 2010, 39% of Catholics around the globe lived in Latin America. The balance between Catholics and Protestants is shifting, however, particularly in Central America and Brazil. For instance, over 50% of Guatemalans and 22% of Brazilians belonged to Protestant groups such as Pentecostalism in 2010. Africa accounted for about 24% of the world's Christians in 2010, and its share could increase to 38% by 2050. 16% of Catholics lived in Africa in 2010 (Atlas 2015; Mascis 2015; Gratius 2015; Pew Research Center 2013a).

While six out of every ten Muslims (62%) reside in the Asia-Pacific region, many Muslims also live in the Middle East and North Africa (20%) and sub-Saharan Africa (16%). The remainder of the world's Muslim population is in Europe (3%), North America (less than 1%) and Latin America and the Caribbean (also less than 1%). In 2010 Muslims made up 93% of the population of North Africa and the Middle East and 30% of the population of sub-Saharan Africa, but only 6% of Europe's total population (44 million), 1% of North America's population, and only 0.1% of the population of Latin America and the Caribbean. Muslims will remain relatively small minorities in Europe and the Americas, but they are expected to constitute a growing share of the total population in these regions (Atlas 2015; Gratius 2015; Pew Research Center 2013, 2011).

4.4 Migration and Mobility

Human mobility is growing in scope, complexity and impact. Traditionally, Europe and North America have been the primary magnets for world migration, receiving the dominant share of the world's economic migrants as well as being the major source of global remittances. Overall, more skilled than unskilled migrants have gravitated towards North America and more unskilled than skilled migrants toward Europe.

Changing patterns of global economic growth and the diffusion of economic power, however, are leading to new patterns of human migration and mobility, as more migrants also flow to South Asia and to some oil-rich countries of the Middle East.

Large numbers of migrants correlate with high remittances. A number of Atlantic basin countries are among the world's most important recipients of remittances. Mexico receives the largest amount of remittances, followed by Morocco and other Latin American countries. Sub-Saharan Africa receives only a limited amount of official remittances, despite being an important source of migrants in Europe.

Over a long-term perspective, refugees form only a minority of migrants and had been decreasing as a percentage of international migration in the Atlantic basin. According to UN statistics, refugees stay disproportionately in less wealthy and less politically stable regions when they migrate internationally. In 2015, however, Europe experienced its largest influx of migrants since the World War II, mainly from Syria (but also Afghanistan and Iraq, as well as economic migrants from the Balkans).

4.5 Demographic trends

Demography will be a critical factor for the future of the Atlantic, with Africa being the only region where high population growth rates are projected and Europe being the fastest ageing region (Atlas 2015). This will pose challenges in terms of social balance, cohesion and economic growth in both regions, although for opposite reasons. It could lead to growing tensions around sustained migration flows and the further rise of populism and xenophobia in Europe. And continued high population growth in Africa, if accompanied by state fragility and political instability in many countries, risks increasing the number of Africans living in non-democratic countries.

4.6 Inequalities

The Atlantic Hemisphere is extremely unequal in terms of poverty levels, human development and gender balance. The UN) Human Development Index divides Atlantic countries into four major groups: 1) very highly developed (US, Canada and the EU); 2) highly developed (Argentina); 3) middle level of development (most of Latin America and the Caribbean); and 4) low development levels (most African states). There is a large development gap between the Atlantic North and the Atlantic South, as well as between Latin America and Atlantic Africa, and within each region. Although inequality among countries in the Atlantic Space has generally been declining, inequalities within many countries has been rising (Atlas 2015).

In 2009, around 66% of the world's middle class lived in the Atlantic space: 36% in Europe, 18% in North America, 10% in Latin America and 2% in Africa. By 2030, however, two-thirds of the world's middle class is projected to be at home in Asia, 14% in Europe, 7% in North America, 6% in Latin America and 2% in Africa. Given demographic trends, however, the middle class is expected to double in Latin America and more than triple in Africa (Gratius 2015; Kharas & Gertz 2010).

5. **Resources and Environment**

Five environment and resource issue areas exhibit interdependencies particularly relevant to the Atlantic Space: energy flows; climate mitigation; food security; wildlife trafficking and biodiversity loss; and challenges of the Atlantic Ocean itself. Underlying all of these challenges and dynamics are regional and global drivers of resource consumption and production (Atlas 2015; Tedsen et. al, 2015).

The environmental challenges faced by countries in the Atlantic Space are manifold and mutually reinforcing. For example, deforestation caused by unsustainable food production leads to the decimation of wildlife, which in turn results in even higher prices for illicitly traded wildlife. Deforestation accelerates climate change by destroying critical carbon stocks. Climate change in turn puts additional stress on oceans already facing fisheries overexploitation and threatens agricultural yields. While these problems are not unique to the Atlantic, they arguably have a pronounced impact in and relation to the region.

5.1 Energy

The Atlantic Hemisphere is recasting the world's energy future and setting the global pace for energy innovation and redrawing global maps for oil, gas, and renewables. This Atlantic energy renaissance is emanating from both the Atlantic North and the Atlantic South. The Atlantic Hemisphere now engages about half of the broad global supply of conventional and unconventional oil resources, including the key categories of 'proven reserves' and daily production. Most fossil fuels discovered in the last two decades have been found in the Atlantic Basin. More than 45% of both proven oil reserves and daily oil production are Atlantic, and these shares are rising. Nearly three-quarters of projected growth in daily oil production to 2035 is set to take place within the Atlantic Basin. The Atlantic Basin accounts for two-thirds of all global maritime energy stocks and flows. The world's sea, ground and air transportation rely nearly completely on oil and gas and will depend increasingly on the efficiency, productivity and security of the Atlantic energy seascape (Isbell 2014a, 2014b).

Three simultaneous Atlantic energy 'revolutions'– shale, offshore, low carbon -- are redrawing the global energy map. In the Atlantic North, the 'shale revolution' is radiating out from an increasingly less import-dependent North America. In the Atlantic South, the deep-water offshore boom has embraced nearly all of Africa and most of Atlantic Latin America. The Atlantic South could become a key new region for increases in global oil production, as well as the most critical regional supplier of oil at the margin to the Asian Hemisphere. The low carbon revolution has also unfolded primarily within the Atlantic Basin, where two-thirds of renewable energy generation now takes place. Europe in particular has been charting new ground and is likely to continue to set the global pace with regard to low-carbon energy innovation (Richardson 2015, Isbell 2014 a, 2014b).

The Atlantic's energy dawn is likely to continue despite falling global oil prices. In fact, the Atlantic Energy Renaissance has been the single most important factor behind the price drop on the supply side.

These shifts in global energy flows could herald a transformation from what could be called the 'Traditional-Cold War' global energy map into the 'newly emerging global energy flow map' of the 21st century. The bottom line is that seaborne oil and gas flows will increasingly reverse their overall net direction – from 'Cold War East-to-West flows' to new '21st century West-to-East flows.' As a result, the 'Atlantic Basin' (with the Atlantic South potentially playing a key role) is likely to become the strategic hydrocarbons supplier-region at the margin for growing energy consumption in Asia-Pacific. Only a decade ago, nearly all projections of global energy supply and demand (whether from the IEA, the EIA, OPEC or the World Energy Council) foresaw increasing global energy demand at the margin being met entirely by the Middle East (and, in particular, by Saudi Arabia). Yet today, in stark contrast, the Atlantic Basin already supplies nearly one-third of that same total, global 'energy demand call' at the margin, now increasingly concentrated in the Asia-Pacific region – and by 2030 the Atlantic Basin is projected to provide nearly half. Nothing could more synthetically and emblematically reflect the reality of the

'Atlantic energy renaissance' – both its causes and its effects – than this singular and dramatic shift in the global energy flow map (Pelegry and Isbell, 2015).

Growing Atlantic energy wealth could have a particularly dramatic impact in Africa, which is still characterized by deep pockets of energy poverty. Africa has the lowest electrification rate of all the world's regions—only 26% of households— leaving as many as 547 million people without access to electricity, nearly half of the world's energy have-nots. Meanwhile, some 75% of Africans still depend on traditional biomass for cooking and heating, with devastating consequences for people and the environment (Atlantic Basin Initiative 2014; IEA and World Bank 2015). Infrastructure to provide renewable-generated electricity in Africa and Latin America is underdeveloped, and today produces only 2.5% and 16.5% respectively of the world's share of renewable energy production (U.S. EIA 2015). The \$10 billion African Renewable Energy Initiative, launched by African and Atlantic leaders in late 2015, may be seen as an effort to harness the Atlantic renewables revolution to tackle Africa's energy poverty.

5.2 Climate change in the Atlantic space

The Atlantic Basin is home to some of the world's largest emitters of greenhouse gases (GHG) as well as some of its most vulnerable populations and ecosystems. The world's top ten GHG emitters account for 72% of global emissions. The lowest emitters contribute less than 3% of global emissions (excluding land use change and forestry). From an Atlantic perspective, the top ten includes states from industrialized regions such as the U.S. and Europe (14% and 10% of global GHG emissions respectively) as well as emerging economies such as Brazil and Mexico (2.3% and 1.7% respectively) (WRI 2012).

Developing Atlantic states such as Ghana, Morocco and Colombia contribute 0.06%, 0.16% and 0.36% respectively to global GHG emissions (WRI 2012). Yet energy demand in developing countries is growing and with it the potential for increased GHG emissions. Emissions trajectories will also depend on international climate obligations and the energy pathways individual countries choose to follow.

The Atlantic countries also have significant capacity to mitigate the impacts of climate change. Unique Atlantic ecosystems have extensive capacity to absorb carbon and mitigate the climatic impacts of industrial activity at the regional and global level. New research suggests that the Atlantic Ocean may be playing a role in absorbing heat, with deep waters serving as a "sink," and thereby delaying rising temperatures resulting from climate change (Chen and Tung 2014. The Amazon contains roughly one third of the world's remaining tropical rainforest, storing approximately 120 billion tons of carbon. The Congo Basin is the world's second largest contiguous block of tropical forest and covers 400 million hectares, storing an estimated 60 billion metric tons of carbon (Megevand 2013).

However, economic development and land-use change are threatening some of these ecosystems and reducing their capacity to provide ecosystem services. Brazil has been the site of 80% of Amazonian deforestation over the last decade, leading to the release of an estimated 2.7 billion tons of CO2 -- 30% of global carbon emissions associated with deforestation (Malhi 2008; Karstensen et al. 2013). Although deforestation rates in the Congo Basin have been relatively low, pressures are increasing through rising population density and demand for land and timber (Angelsen and Rudel 2013).

Continued GHG emissions will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems (IPCC, 2014). Key climate change impacts on natural and human systems of the Atlantic Basin include risks to coastal zones, forests, freshwater systems, biodiversity and human health, as well as changes in agricultural productivity (Stefes et al. 2014).

5.3 Food security and interdependence

Food security is another issue of special relevance for the Atlantic Space, which is home to a significant number of the world's hungry and the world's obese. Africa is home to over 40% of those suffering from food insecurity and famines and food crisis have been most pronounced on this continent (World Food Programme 2015; Tedsen et. al 2015). Latin American countries in the last decade have made significant strides in eradicating hunger through social and agricultural development programs, though obesity is now increasingly a problem in urban areas (Reuters 2015). Obesity rates are also on the rise in major food producing and wealthy countries, such as the United States, and obesity has become a shared challenge faced by developing and developed countries alike. Since both hunger and obesity are issues related to a lack of access, particularly by the poor, to nutritious food, understandings of food security must consider nutrition as well as the availability of affordable food (Patel 2007; Tedsen et. al 2015).

Agricultural systems in the US and Europe have played a role in favoring cheap, processed foods and have shaped production and consumption habits worldwide, particularly in Latin America. The influence of the US and Europe on industrial agricultural production systems and the emergence of Brazil as a major agricultural player make the Atlantic Space particularly interesting in relation to future food production and consumption. The overarching challenge over the next decades in the Atlantic Space is to increase agricultural productivity, particularly in Africa and Latin America, while maintaining and preserving the significant biodiversity that exists in those continents' extensive and undeveloped rainforests, grasslands, and ecosystems. Brazil has become increasingly active in providing development aid and economic investment in Africa, particularly in tropical agriculture. Recognizing shared environmental and socioeconomic chal-lenges as well as similar environmental geographies, Brazil and various African nations are en-gaging in bilateral cooperation, particularly on issues of agricultural production in the face of in-creased vulnerability to climate change (Tedsen et. al 2015).

5.4 Illicit wildlife trade

Illegal wildlife trade is a global issue; however, certain patterns of trade, as well as shared interest in fighting environmental crime, exist in the Atlantic Space. The illicit wildlife trade has become a highly lucrative and professionalized criminal activity that is particularly dense among the four continents of the Atlantic Space (Haken 2011). Endangered species from Africa and Latin America supply a significant trade of which the United States and the EU are important transit countries and consumer destinations. The Atlantic financial system is complicit in moving and laundering these goods and money.⁴ Illicit wildlife trade adversely affects biodiversity, sustainable development, good governance, regional security, and is also fueling violent activities including terrorism. Illegal poaching of elephants has been tied to funding Al Qaeda's Al Shabab, Joseph Kony's Lord's Resistance Army, and Sudan's Janjaweed (Tedsen et. al 2015; Lawson and Vines 2014; Agger and Hutson 2013).

Pan-Atlantic cooperative frameworks between governments and NGOs are emerging to deal with the issue. Both the US and the European Union have exhibited strong political will to address illegal wildlife trade on the basis of both the environmental impacts on source countries, the economic losses to legitimate business and trade, and the human security threats it posed,

⁴ Demand by Asian consumers significantly propels illegal wildlife trade as well (Milliken and Shaw 2014; The Atlantic 2013).

in terms of contributing to global insecurity, conflict, and thwarted economic development in developing countries. In 2014, the US launched its National Strategy for Combating Wildlife Trafficking (USTR 2014) and certain countries in the EU have taken a proactive role in addressing illegal wildlife crime, with, for instance, the UK hosting the international London Conference on combating illegal wildlife trafficking. There is also a growing awareness among Latin American and African communities and governments that the illegal wildlife trade unsustainably exploits public resources for the benefit of illegal criminal individuals. There is, therefore, a budding consensus within the Atlantic to work cooperatively to address wildlife crime. US and European NGOs are training African local enforcement officials to detect smuggling, and European and US officials are providing financial resources to help African governments prosecute poaching. De-spite these efforts, the trade in species such as elephant and rhino has continued to increase and is expected to become more severe.

5.5 Challenges to the Atlantic Ocean

The peoples of the Atlantic Hemisphere are bound by distinct issues related to the Atlantic Ocean. The Atlantic plays an integral role in global climate regulation as the locus of the planet's thermohaline system. This system drives the Atlantic meridional overturning circulation (AMOC) (often referred to as the Gulf Stream) which provides a critical net transfer of heat from the south to north Atlantic. The AMOC also produces cyclical variations in sea surface temperatures in the North Atlantic, affects atmospheric circulation and causes climatic variations over northern Europe.

A large portion of climate variability in the Atlantic is also associated with the North Atlantic Oscillation (NAO), which influences oceanic circulation and temperatures, wind patterns, weather, and climate in the Atlantic. The NAO influences winter and spring climates in Europe, but its influence over winter climates extends from Florida to Greenland.

The Atlantic plays a particularly important role in carbon storage. While this process takes place everywhere across the ocean surface, cold salty water in the North Atlantic and in an ocean belt between 30 and 50 degrees south latitude absorb enormous amounts of gases before it sinks, and then transports them to much greater ocean depths, primarily at four polar convection points, three of which are in the Atlantic. Unfortunately, the oceans are not absorbing carbon dioxide as fast as humans are emitting it, and the high levels that are being absorbed by the Atlantic are raising acidity levels, with potentially cascading effects throughout the marine food chain and the overall structure of marine ecosystems (Bates et. al 2012).

The interconnectivity of the Atlantic Ocean's ecosystems is particularly evident in the migratory patterns of species such as the Atlantic bluefin tuna. The bluefin is highly migratory, moving from the northern Atlantic off the coast of Iceland and Newfoundland as far south as the Gulf of Mexico and the Mediterranean Sea.

The Atlantic was once considered an infinite body of water with inexhaustible resources. Today, however, its health and the regulatory functions of its unique ecosystems and services are threatened by a variety of human-induced pressures. Foremost, overfishing and the insatiable demand for seafood have resulted in the overexploitation of many Atlantic fish stocks (Holthus et al. 2012). The fishing gear and techniques used to meet this demand have also led to increased catch of non-target species and have done untold damage to marine habitats and biodiversity, jeopardizing the Atlantic's future capacity to provide marine resources.

High levels of pollution from chemicals and solid waste have accumulated in the Atlantic. Manmade chemical pollutants such as pesticides, herbicides, chemical fertilizers, detergents, oil, sewage, plastics are consumed by small marine organisms and introduced into the food chain. Solid waste or marine litter from both land- and sea-based sources is accumulating, and in recent years, two extensive garbage patch gyres have been identified in the North and South Atlantic. These consist mainly of non biodegradable plastics among other garbage such as discarded fishing gear and non degradable cigarette butts (Law 2010; Ryan 2014).

In some ocean areas, deep water quality is degraded and oxygen levels are so low that marine life cannot be supported. Over 400 of these so-called 'dead zones' exist in the world's oceans, the majority of which are in the Atlantic (Diaz and Rosenberg, 2008; Karstensen et al. 2015). Dead zones are now a key stressor on marine ecosystems and rank with overfishing, habitat loss, and harmful algal blooms as global environmental problems (National Geographic, 2008).

Climate change has also brought about a range of negative impacts on the Atlantic Ocean:

Human emissions of carbon dioxide currently exceed the carrying capacity of the planet's oceans. The high levels of carbon dioxide being absorbed by the Atlantic are raising water acidity levels, with potentially cascading effects throughout the marine food chain and the overall structure of marine ecosystems (IPCC, 2013).

North Atlantic surface waters are becoming warmer and "fresher," i.e. less salty, and thus less dense, possibly altering the trajectory and force of the AMOC (Gulf Stream), the NAO (North Atlantic Current), and overall global thermohaline circulation. These changes can have serious impacts on marine ecosystems, fishing grounds, coastal water quality and nutrient cycling, sea levels and surface climate.

Rising water temperatures from climate change are shifting the ranges and variations of migratory marine organisms and species such as fin and humpback whales in the North Atlantic (Ramp, 2015).

In turn, warmer ocean water and rising sea levels are interacting to enhance the destructive potential of more powerful Atlantic storms. Their impact may be greatest at particular 'hot-spot' areas experiencing greater than average sea level rise -- such as the U.S. East Coast (Sallenger, Doran and Howd, 2012) and low lying island states such as those in the Caribbean. However, other coastal areas of the Atlantic where the impacts of sea level rise are not expected to be as severe, but where adaptive capacity is much lower, such as the West Coast of Africa, are also vulnerable (Brown, Kebede and Nicholls 2011).

References

AFRICAN ECONOMIC OUTLOOK 2015. African Development Bank, OECD Development Centre and United Nations Development Programme. Issy les Moulineaux, France 2014.

AGGER, Kasper, and Jonathon HUTSON. Kony's Ivory: How Elephant Poaching in Congo Helps Support the Lord's Resistance Army. Enough Project, 2013.

ALCARO, Riccardo and Patrick REILLY. Regional and Interregional interactions in Europe, North America and across the North Atlantic. *ATLANTIC FUTURE Scientific Paper 22*, 2015.

AMAOKO, K.Y., HAMILTON, Daniel and HERFKENS, Eveline. "A Transatlantic Deal for Africa," *New York Times*, May 8, 2013.

ANGELSEN, Arild and RUDEL, Thomas, K., 2013. Symposium: The Economics of Reducing Deforestation and Forest Degradation (REDD): Designing and Implementing Effective REDD + Policies: A Forest Transition Approach. Rev Environ Econ Policy (Winter 2013) 7 (1): 91-113 doi:10.1093/reep/res022.

ANING, Kwesi. *Security Links between Trafficking and Terrorism in the Sahel in Africa South of the Sahara*. London: Routledge, 2011.

ATLANTIC BASIN INITIATIVE. Eminent Persons Group. A New Atlantic Community: Generating Growth, Human Development and Security in the Atlantic Hemisphere. Washington, DC: Center for Transatlantic Relations, 2014.

ATLANTIC ENERGY FORUM. Summary of 2015 Forum, Mexico City, November 4-6, 2015, http://transatlanticrelations.org/content/atlantic-energy-forum.

ATLAS OF THE ATLANTIC. Atlantic Future 2015. www.atlasoftheatlantic.eu

BATES, N. R., BEST M. H. P., NEELY K., GARLEY R., DICKSON A. G., and JOHNSON, R. J. Detecting anthropogenic carbon dioxide uptake and oceanacidification in the North Atlantic Ocean. *Biogeosciences*, 9, 2509–2522, 2012.

CHEN, Xianyao and Ka-Kit TUNG. Varying planetary heat sink led to global-warming slowdown and acceleration. *Science*, 2014, 897-903.

DARDUSH, Uri and William SHAW, *Juggernaut - How Emerging Markets are Shaping Globalization*. Washington DC: Carnegie Endowment for International Peace, 2012.

FREEDOM HOUSE. The State of Freedom in the World, 2015.

GLOBAL FINANCIAL INTEGRITY. Illicit Financial Flows from Developing Countries 2001-10.

GRATIUS, Susanne. Political, social and cultural trends in the Atlantic. Atlantic Future Scientific Paper 35, 2015.

http://www.atlanticfuture.eu/files/1114-

WP9_FRIDE_Political,%20social%20and%20cultural%20trends%20in%20the%20Atlantic.pdf.

HAKEN, Jeremy. Transnational Crime in the Developing World. Global Financial Integrity, 2011.

HAMILTON, Daniel S., ed. *Atlantic Rising. Changing Commercial Dynamics in the Atlantic Basin.* Washington, DC: Center for Transatlantic Relations, 2015.

HAMILTON, Daniel S., ed. *Dark Networks in the Atlantic Basin: Emerging Trends and Implications for Human Security.* Washington, DC: Center for Transatlantic Relations, 2015.

HAMILTON, Daniel S. *Europe 2020 -- Competitive or Complacent?* Washington, DC: Center for Transatlantic Relations, 2011.

HAMILTON, Daniel S. and Joseph P. QUINLAN. "Commercial Ties in the Atlantic Basin: The Evolving Role of Services and Investment," in Daniel S. HAMILTON, ed., *Atlantic Rising: Changing Commercial Dynamics in the Atlantic Basin.* Washington, DC: Center for Transatlantic Relations, 2015.

HAMILTON, Daniel S. and Joseph P. QUINLAN. *The Transatlantic Economy 2015*. Washington, DC: Center for Transatlantic Relations, 2015.

HERFKENS, Eveline. "Harmonized Trade Preferences for Low Income African Countries: A Transatlantic Initiative," in Daniel S. Hamilton, ed., *Atlantic Rising: Changing Commercial Dynamics in the Atlantic Basin.* Washington, DC: Center for Transatlantic Relations, 2015.

INTERNATIONAL ENERGY AGENCY (IEA) and WORLD BANK. *Progress toward Sustainable Energy. Global Tracking Framework 2015.* Paris, 2015.

IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.

ISBELL, Paul. "An Introduction to the Future of Energy in the Atlantic Basin." Working Paper for the 2014 Atlantic Energy Forum, Quintano Roo, Mexico. Washington, DC: Center for Transatlantic Relations, 2014.

ISBELL, Paul. "Atlantic Energy and the Changing Global Energy Flow Map." Atlantic Future Scientific Paper 17, September 2014.

ISBELL, Paul and Kimberly NOLAN GARCIA, "Regionalism and Interregionalism in Latin America: The Beginning or the End of Latin America's 'Continental Integration'?" Draft Paper prepared for Atlantic Future Plenary, Lisbon, Portugal, April 2015.

JACOBSON M. and GUEDES A., Significant Trends in Illicit Trafficking: A Macro View of the Problem and Potential Means to Address It, Atlantic Future, September 2014.

KALTENTHALER, Karl and Frank O. MORA, "Explaining Latin American Economic Integration: The Case of Mercosur," *Review of International Political Economy* 9 (1) (March 1 2002), pp. 72–97.

KAPLAN, Robert D. The Revenge of Geography. New York: Random House 2012.

KARSTENSEN, Jonas, Glen P. PETERS, and Robbie M. ANDREW. Attribution of CO2 Emissions from Brazilian Deforestation to Consumers Between 1990 and 2010. *Environmental Research Letters*, 2013.

KHARAS, Homi and Geoffrey GERTZ. The New Global Middle Class: a cross-over from West to East. Center for Development at Brookings, 2010. Draft version of Chapter 2 in LI Cheng, ed., *China's Emerging Middle Class: Beyond Economic Transformation*. Washington, DC: Brookings Institution Press, 2010.

LACHER, Wolfram. "Organized Crime and Conflict in the Sahel-Sahara Region." Washington, DC: Carnegie Endowment for International Peace, September 2012.

LAWSON, Katherine, and Alex VINES. Global Impacts of the Illegal Wildlife Trade: The Costs of Crime, Insecurity and Institutional Erosion. London: Chatham House, 2014.

LÉTÉ, Bruno. "Addressing the Atlantic's Emerging Security Challenges." Atlantic Future Scientific Paper 34, 2015,

http://www.atlanticfuture.eu/files/1115-

WP9_GMF_Addressing%20the%20Atlantic's%20Emerging%20Security%20Challenges.pdf

MASCIS, David. Christianity poised to continue its shift from Europe to Africa. Report. Pew Research Center, 2015.

MAHBUBANI, Kishore. *The New Asian Hemisphere: The Irresistible Shift of Global Power to the East.* New York: PublicAffairs, 2008.

MALHI, Yadvinder. Climate Change, Deforestation, and the Fate of the Amazon. *Science* 2008, 319.

MAWDSLEY, Emma. From Recipients to Donors - Emerging Powers and the ChangingDevelopment Landscape. London: Zed Books Ltd, 2012.

MEGEVAND, Carole. Deforestation Trends in the Congo Basin Reconciling Economic Growth and Forest Protection. The World Bank, 2013.

MOREIRA, Mauricio Mesquita, and Eduardo MENDOZA, Stephen MEARDON, and Irene BRAMBILLA, "Regional Integration: What Is in It for CARICOM? [with Comments]." *Economía* 8 (1) (October 1 2007), pp. 97–142.

NELLEMANN, C., S. HAIN, and J. ALDER, eds. *In Dead Water – Merging of climate change with pollution, over-harvest, and infestations in the world's fishing grounds.* United Nations Environment Programme, GRID-Arendal, Norway, February 2008; http://www.pik-potsdam.de/~stefan/Publications/Book_chapters/rahmstorf_eqs_2006.pdf; http://mgg.rsmas.miami.edu/groups/sil/submission.pdf.

ORGANIZATION OF AMERICAN STATES (OAS), General Secretariat. *The Drug Problem in the Americas*, OEA/Ser.D/XXV.4, 2013.

PATEL, Raj. *Stuffed and Starved: The Hidden Battle for the World's Food System*. New York: Portobello Books, 2012.

PELEGRY, Eloy Alaverz and Paul ISBELL, eds, *The Future of Energy in the Atlantic Basin*. Washington, DC: Center for Transatlantic Relations, 2015.

PEREIRA DA COSTA, Katarina. "Continuities and changes in patterns of direct investment flows between South America and Africa," Atlantic Future, Scientific Paper 01, 2014.

PEW RESEARCH CENTER. The Global Catholic Population. 2013.

PEW RESEARCH CENTER. The Future of the Global Muslim Population. 2011.

PETTERSON, Trude. "China Starts Commercial Use of Northern Sea Route," *Barents Observer*, March 14, 2014.

REUTERS. "Obesity Weighs on Latin America after Success in Fight against Hunger." 13 February 2015. http://www.reuters.com/article/2015/02/13/us-latam-obesityidUSKBN0LH13520150213.

RICHARDSON, Bill. "Remarks by former US Secretary of Energy Bill Richardson to the 2015 Atlantic Energy Forum," November 6, 2015, http://transatlanticrelations.org/content/atlantic-energy-forum.

RICHARDSON J., GUEDES A., DE LA GORCE X., DE SAINT SELVY A.F., HOLTUS P., The Fractured Ocean. Current Challenges to Maritime Policy in the Wider Atlantic, German Marshall Fund, December 2012.

RODRIGUES SÁNCHEZ, Edalina. The community of Portuguese speaking countries: the role of language in a globalizing world. Atlantic Future Scientific Paper 14, CIDOB, 2014.

ROSAMOND, Ben. *Theories of European Integration*. Houndsmills, Macmillan, pp. 14-16.

RUANO, Lorena. "Merchandise Trade in the Atlantic Basin, 2000-2012," in Daniel S. HAMILTON, ed., *Atlantic Rising: Changing Commercial Dynamics in the Atlantic Basin.* Washington, DC: Center for Transatlantic Relations, 2015.

SALLENGER, Asbury H., Kara S. Doran and Peter A. Howd, "Hotspot of accelerated sea-level rise on the Atlantic coast of North America," *Nature Climate Change* 2, 884–888 (2012), 24 June 2012.

STEFES, Christoph, Lucy SMITH, Andrew REID, and Elizabeth TEDSEN. Climate change impacts in the Atlantic Basin and coordinated adaptation responses. Berlin: Ecologic Institute, 2014.

TEDSEN, Elizabeth, STEFES, Christoph, SMITH, Lucy, and WEINGARTNER, Katherine. Patterns of Production and Consumption in the Atlantic Space and Future Environment and Resource Scenarios. Atlantic Future Scientific Paper 36, 2015.

UDEANI, Chibueze C. Cultural diversity and globalisation: an intercultural hermeneutical (African) perspective, *International Review of Information Ethics (IRIE)* 7(9), 2007: 1-4.

UNITED NATIONS OFFICE FOR WEST AFRICA (UNOWA), Maritime Security in Gulf of Guinea, 2013, http://unowa.unmissions.org/Default.aspx?tabid=875.

UNITED NATIONS OFFICE OF DRUG CONTROL (UNODC),, http://www.unodc.org/

VIRCOULON T. and TOURNIER V., Gulf of Guinea: A Regional Solution to Piracy?, International Crisis Group, September 2014.

WILSON, Page. "Asia Eyes the Arctic," The Diplomat, August 26, 2013.

WORLD FOOD PROGRAMME, Frequently Asked Questions, https://www.wfp.org/hunger/faqs, 2015.

WORLD RESOURCES INSTITUTE (WRI). Global Top Ten Green House Gas Emitters. Infographic, 2015. Available at: http://www.wri.org/blog/2015/06/infographic-what-do-yourcountrys-emissions-look

ZOELLICK, Robert. "Five questions for the world's next trade chief." *Financial Times*, April 2, 2013.