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This article enables students to analyse, describe and explain the nature of significant population issues and challenges in selected locations and evaluate responses (VCE Geography Study Design, p.25). It describes a major, contemporary migration event – the influx of undocumented migrants into Europe over the last decade. This involves the application of key geographical concepts, in particular Distance, Distribution, Movement, Place and Change.

**People and Movement**

Ever since humans first appeared on the plains of Ethiopia some 200,000 years ago, people have moved from place to place. This movement is generally motivated by a desire to improve an individual’s or group’s quality of life – to gain access to improved social, economic, political or cultural resources. As summarised in Figure 1, a migration chain involves many factors which change over time and are distorted by distance.

People migrate for a mix of reasons and over different time frames. Their final goal may be unreachable in the short term due to lack of money, documentation and environmental hazards. Migrants from Mali found work in Libya before the First Libyan Civil War in 2011. However, with extended unrest and conflict, many were forced to flee to adjacent Tunisia (along with thousands of Libyan nationals) or to attempt to cross the sea to Italy. Those reaching Italy spent time in detention centres being fingerprinted and registered before undertaking the arduous trip to Germany.

**Status**

The quality of the migration experience and quality of life afterwards depends on the status of the migrant. Distinguishing migrants from asylum seekers and refugees is not always a clear-cut process, yet it is a crucial designation because these groups are entitled to different levels of assistance and protection under international law:

- An asylum seeker is defined as a person fleeing persecution or conflict, and therefore seeking international protection under the 1951 Refugee Convention, Undocumented.
- A refugee is an asylum seeker whose claim has been approved. However, the UN considers migrants fleeing war or persecution to be refugees, even before they officially receive asylum - Syrian and Eritrean migrants are awarded immediate refugee status. Documented.
- An economic migrant, by contrast, is a person whose primary motivation for leaving his or her home country is economic gain. May be documented.

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Transit Country</th>
<th>Host Country</th>
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<tbody>
<tr>
<td>Mali</td>
<td>Libya</td>
<td>Germany</td>
</tr>
<tr>
<td>Syria</td>
<td>Turkey</td>
<td>Sweden</td>
</tr>
</tbody>
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PUSH factors
- unemployment
- persecution
- war
- environmental hazard
- little opportunity

PULL factors
- jobs
- human rights
- security
- infrastructure
- education

*Figure 1: Migration Chain.*
The term “migrant” serves as an umbrella term for all three groups. It should be emphasised that not all migrants are irregular, i.e. without documents such as a passport and visa. In 2014, The foreign-born population residing in the European Union was 33 million people, or 7% of the total population of the 28 EU countries. From 2010 -2013, around 1.4 million non-EU nationals, excluding asylum seekers and refugees, immigrated into the EU each year using regular, immigration procedures.

**Background to the European Migration Crisis**

Between 2007 and 2011, large numbers of undocumented migrants crossed the Mediterranean Sea from Africa to Europe’s southern coastline. The numbers were so great that in 2008 the Italian and Libyan governments signed a treaty aimed at stopping irregular migration to Italy. Cooperation collapsed following the outbreak of the Libyan Civil War in 2011 amid the growing unrest of the Arab Spring. Since 2014, instability in West Africa and the Second Civil War in Libya made departures northwards to Italy easier, as no central authority controlled Libya’s ports. The top three nationalities arriving in Italy in 2015 were Eritrea (25%), Nigeria (10%) and Somalia (10%). Most migrants are refugees, fleeing war and persecution in Syria, Afghanistan, Iraq and Eritrea. One outcome of the surge has been the proliferation of migrant smuggling networks. As Figure 2 shows, six of the top ten countries of origin of undocumented migrants are African.

In 2015, more than a million people reached Europe through irregular means (International Organisation for Migration), which is the continent’s biggest wave of mass migration since the aftermath of the second world war. The huge increase in arrivals was caused by the deepening conflict in Syria where the civil war has displaced 11 million people since 2011. In 2015, Greece overtook Italy as the primary point of arrival in Europe, mainly for Syrians (56%) and Afghans (22%).

Out of a total of 1,005,504 arrivals by 21 December, the vast majority – 816,752 – arrived by sea in Greece, the IOM reported. A further 150,317 arrived by sea in Italy, with much smaller figures for Spain, Malta and Cyprus. A disturbing aspect of the violent uprooting and mass movement of this group of displaced people is that it includes 90,000 unaccompanied minors, i.e. children under 18 years. The top three nationalities of the arrivals were Syria (49%), Afghanistan (21%) and Iraq (8%). A total of 34,215 crossed by land routes, such as over the Turkish-Bulgarian border. Sweden received 150,000 asylum seekers in 2015 mainly comprising Afghans, Syrians and Iraqis. Some well-funded refugees, mainly Syrians, flew from Middle Eastern cities to the Russian city of Murmansk from where they took a taxi to Storskog and walked over the border into Norway, 400 kms north of the Arctic Circle.

The overall figure is a four-fold increase from 2014’s figures, and has largely been driven by Syrians fleeing their country’s civil war. Afghans, Iraqis and Eritreans fleeing conflict and repression are the other significant national groups.

**Migration routes**

The major migration routes were northwards from Africa to Italy, Spain and Malta and westwards from the Middle East to the islands of Greece and Bulgaria (Figure 3).

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**Top Ten nationalities of Mediterranean sea arrivals, Europe 2015 (%UNCHR)**

<table>
<thead>
<tr>
<th>Nationality</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syria</td>
<td>49</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>21</td>
</tr>
<tr>
<td>Iraq</td>
<td>8</td>
</tr>
<tr>
<td>Eritrea</td>
<td>4</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2</td>
</tr>
<tr>
<td>Nigeria</td>
<td>2</td>
</tr>
<tr>
<td>Somalia</td>
<td>2</td>
</tr>
<tr>
<td>Sudan</td>
<td>1</td>
</tr>
<tr>
<td>The Gambia</td>
<td>1</td>
</tr>
<tr>
<td>Mali</td>
<td>1</td>
</tr>
</tbody>
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**Figure 2:** Top Ten countries of origin of economic migrants and refugees.
The number of people following the Eastern Mediterranean and Western Balkan routes ballooned massively in 2015, compared to 2014.

Figure 4: Migrant numbers, 2014/2015.

In 2015, a larger migrant stream resulted in a higher death toll compared to the previous year. In 2014, 219,000 people reached European shores and 3,279 died in the attempt; in 2015, the figures were 1,004,356 with 3,770 deaths. Before 2015, 77% of deaths occurred in the Central Mediterranean route used by people smugglers operating from Libya’s coast. The Eastern Mediterranean route claimed 1% of deaths in 2014, but this escalated to 21% in 2015.

Europe’s response

In 2013, a migrant shipwreck off the island of Lampedusa, which drowned over 300 undocumented passengers, prompted the Italian government to establish Operation Mare Nostrum. This was a large scale naval operation that involved search and rescue objectives. However, it was discontinued in 2014 as the Italian government said that the cost was too great for a single EU state to bear. A new EU operation - Triton – replaced it. In April, 2015 the European Commission (executive arm of the EU) proposed a 10-point plan to respond to the crisis, which included:

• Expand Triton with more money and planes
• Destroy the vessels used by smugglers
• EU members to fingerprint all migrants
• An EU-wide pilot project on migrant relocation
• Establish a rapid return programme of irregular migrants.

In September 2015, the Commission president proposed a distribution scheme of 160,000 asylum seekers among EU states on a quota basis. This received a mixed reaction: Czech Republic, Hungary, Poland and Slovakia met in Prague and refused to accept a quota system; the UK announced plans for resettling 20,000 refugees but ONLY from the camps in Jordan, Lebanon and Turkey; France said it would accept 24,000 over two years. The frontline states of Italy, Greece and Hungary were straining financially and administratively and desperately needed support and funds from the EU. Instead, member states reacted unilaterally, rejecting continent-wide emergency and resettlement options. By December 2015, Germany registered its one millionth asylum seeker.

Closing the back door to Europe

The construction of fences along national borders provides stark evidence of the unilateral and short term view of those member states along the roads and railways of the Western Balkans, Hungary, Slovakia and Austria. These fences were mostly made of razor wire and were clearly intended to halt the flow of people headed for Germany and Sweden.

Greece built a razor wire fence in 2012 along its short border with Turkey that diverted the flow of migrants from Turkey into Bulgaria. Bulgaria responded by constructing its own fence on its border with Turkey in 2014, which forced most migrants to take sea routes to the Greek islands.
Figure 6: Migrants cross illegally into Hungary under the unfinished fence along the border with Serbia, August 2015 (Gemes Sandor).

Fences along national borders created instant refugee camps with no provision for food, bedding and sanitation facilities. This response did little to address the wider questions of long term resettlement and the need to form a united, well resourced plan by the centralized institutions of the EU.

Regional issues

Meanwhile the Middle East is aflame - fighting around Aleppo in Syria in early 2016 created a fresh stream of refugees. Desperate to stop the Kurds from expanding their territory along border, Turkey has been shelling their positions. Russia’s intervention at the end of September, 2015 bolstered the Syrian regime which strives to regain more territory from IS and other non-IS groups. Pro-Assad forces encircled Aleppo on February 2016, and Russian missiles hit 2 hospitals and a school in rebel-held Azaz, a town on the northern border with Turkey. The UN condemned the attacks and Turkey’s foreign ministry accused Russia of “an obvious war crime”.

Russia’s escalation and alliance of convenience with the Kurds threatens Turkey domestic security. The US, a NATO ally, rejected Turkey’s demands that it disown the Syrian Kurds who are effective in fighting Islamic State (IS). The EU wants Turkey’s help to reduce migrant flows, but in return Turkey wants Turks to enjoy visa-free travel in Europe. In February 2016, the EU promised Turkey €3 bn to manage 2.7 mn Syrian refugees on Turkish soil. Under the deal, unregistered migrants in Greece and Turkey would be forcibly deported to their home countries. However, the UN (ie. UNCHR) is not party to this deal and will not support returns or detention. Turkey demanded a further €3 bn and Italy blocked the funding to Turkey which was to help Turkey crack down on people smugglers. Germany is critical of Italy for not registering refugees, instead hurrying them on to other EU states. Brussels (EU government) is fearful that Germany may be forced to reverse its generous policy towards asylum seekers (“welcome culture”) that saw a million reach there in 2015.

Figure 7: Syrian and Iraqi refugees arrive in Lesbos, Greece, October 2015 (Ggia).

Still, 1600 refugees arrive in Greece daily and the number is likely to increase as summer approaches. As well, a growing number of Moroccans and Algerians are making their way to Germany, exploiting the trail blazed by Syrians and Afghans. Economic migrants from the Balkans, especially Kosovo are also taking advantage of the free flow of people.
Increasingly, the EU and especially Germany, aim to strike deals with countries in the Maghreb and Asia with money and other concessions to stem the flow of migrants. The EU set up an Emergency Trust Fund to promote development in Africa in return for Africa's help in reducing the flow of people. The EU planned to register asylum seekers arriving in Italy and Greece and to relocate them around the EU with national quotas calculated in Brussels. However, the relocation scheme flopped as many countries want nothing to do with refugees – UK, Poland, Hungary Denmark. Economic pressure on social services, “austerity politics” and xenophobic reaction mean that many countries sign up to continent-wide plans and then simply ignore them.

Despite claims and counter claims about who should be allowed entry or where the new arrivals should live, European governments are still faced with an humanitarian emergency. As late as February 2016, EU Interior ministers were unable to agree on a pan-Europe response to the crisis as “the meeting was clouded by a ferocious row between Greece and Austria to quarantine Greece and throttle the flow of migrants up the Balkans by partially sealing its border with Macedonia” (The Guardian, 26/2/16). Yet this squabbling was focused on entry and movement of future undocumented migrants, not on the looming humanitarian crisis of over a million homeless, penniless people within Europe.

**Realpolitics**

The migrant question has significantly affected political systems in most European countries. People on the far right of the political spectrum have strenuously voiced their opposition to the integration of refugees and resisted the imposition of relocation quotas. Political support has grown for small political parties which have gained traction in the UK, France, Greece, Czech Republic and The Netherlands. These so-called “Euroskeptics” are anti-EU, anti-immigration and in some cases anti-Islam. However, millions of citizens and many organizations such as Save the Children, Amnesty International and Medecins sans Frontiers actively campaign for the rights of refugees and provide clothing and essential services.

Germany continues to knit together the geopolitics of the crisis from Iraq to Turkey and Russia whilst other EU members pursue nationalist, ad hoc goals. In the wake of the November 2015 Paris terrorist attacks many countries, including Germany, have re-evaluated their stance on EU policy towards refugees. Countries like Poland have stated that they will consider relocation only if security can be guaranteed. Once again, unilateral, xenophobic and short term plans characterise the individual and diverse responses of Europe’s national governments. The spirit and objectives of Europe’s federal project (The EU) is so far proving unable to address the scale and urgency of the migrant influx which has become a humanitarian emergency. Between January and May 2016, 189,378 migrants and refugees arrived in Europe by land and sea routes, the majority entered by sea through Greece (155,090) and Italy (28,563).

**Mapping the movement of people**

The spatial dimensions of the great challenge facing Europe can be summarized by recording information on a map. Figure 9 describes different factors over time and space that have contributed to the development of the refugee crisis in Europe. Key geographical concepts such as Distance, Distribution, Movement, Place and Change can be applied to analyse and evaluate the issue.
Figure 9: European Migrant Crisis, 2015
Source: Maximilian Dorrbecker, based on statistics from Eurodata.

Student Activities
1. Use an atlas and an outline map that includes North Africa, Europe and Western Asia to identify, shade and name the countries mentioned in the text. Use arrows to mark in the directions of the movement of people.
2. Find examples of social, historical, economic and political factors that have given rise to the “biggest wave of mass migration since the aftermath of the second world war” (1939-1945).
3. Construct a vertical time line from 2007 to the present day. Annotate it with the successive political crises in the Maghreb and Asia that have caused the movement of people, the numbers of people involved and the changing responses of the different countries of the European Union.
4. Select ONE or more of the geographic concepts of Distance, Distribution, Movement and Place and Change to analyse the factors causing the turmoil in Greece.
5. Use
   (a) a map of the border area between Russia and Norway to calculate the road distance from Murmansk to Kirkenes.
   (b) a map of Europe and the Middle East to calculate the distance as the crow flies between Aleppo, Syria and Frankfurt, Germany.
6. “Unilateral, xenophobic and short-term plans (have) characterised the individual and diverse responses of Europe’s national governments” to the numbers of people seeking refuge. Identify some of the different responses of individual European governments.

Links
- Contemporary information can be obtained by browsing “Europe, migrant crisis” on most news sites, especially Al Jazeera, BBC, The Economist, The Guardian and NY Times.
- Statistics, maps and Sitreps (situation reports) can be obtained from government and organisational web sites such as Council for Foreign Relations, European Commission, Eurostat, Frontex, International Organization for Migration, UNCHR.
- Andrew Higgins: “Avoiding risky seas, migrants reach Europe on Arctic bike ride” (The NY Times, 9 October 2015).
On the morning of April 7th 1994, orders went out across Rwanda. Roadblocks were set up around Kigali, opposition leaders were murdered and soldiers and militia were sent throughout the country to carry out a wave of killings.

Thousands of ordinary people - shopkeepers, teachers and farmers - were encouraged or harassed into joining the killing. The fact that violence was officially sanctioned, that it was happening all around with impunity, made it seem more possible.

Where people resisted, the Rwandan army was trucked in with machine guns and grenades. Within two weeks, perhaps 250,000 people had been killed. By the end of the 100 days, the death toll was close to one million people.

Restoring wellbeing after conflict

In theory, post-conflict countries have great opportunities for change.

During the conflict, life had been anything but normal. Homes, workplaces, shops and schools damaged or destroyed. People had fled to other parts of the country - or across borders. Supplies of power, petrol and water may have been cut off.

Friends and family may have been involved in the fighting; some will have been killed. Adults and children are likely to have seen or experienced violent attacks. Most people will have regularly felt afraid.

Then the violence stopped, and life was supposed to return to normal. But there is no normal - just a jumble of wreckage and relief, anger, hope, confusion and sadness and a long list of things that are no longer working.

Re-imagining a society

The transition from conflict to relative peace is usually very difficult. People need safety, justice needs to be done for genocide crimes. The physical infrastructure has to be brought back to working order and the shocked population needs ongoing help to restore intangible things like damaged relationships, cultural attitudes, trust and good mental health.

Rwanda has tackled many of these things very well. They are creatively and comprehensively re-imagining their society in a uniquely Rwandan way.

But economically Rwanda is still very poor. Less than 1% of Rwandan households have a car or a fridge. (See Figure 4b) What’s remarkable is that, across Rwanda, large segments of the population have taken up the challenge and are running with it. And in a tiny country, so recently littered with the bodies of almost a million people, that is quite an achievement.

Physical and human geography

Geographically, there are four important characteristics about Rwanda that you need to know: it’s a very small country (26,338 km2 cf Tasmania 68,401 km2); it’s one of the most densely populated countries in Africa (480/ km2); twenty-two years ago the country was almost destroyed by violent conflict; most Rwandans are still poor and rely on small-scale farming for their livelihoods.
In this article, we’ll briefly look at how those four characteristics have shaped the environment in which Rwandans live: their farms, open spaces, rural settlements and urban centres.

Rwanda is a small, land-locked country just south of the equator with a distinctive environment. The northern and western areas are covered in steep terraced hills, while the south and east are generally drier with a more open landscape.

The range of hills located along the western edge of Rwanda form the Congo-Nile watershed. It’s a relatively high altitude country (950-4,500m) with the highest parts being the Virungas - a chain of volcanoes that run along the north-west border and are home to the mountain gorillas.

Poverty and food insecurity are highest in the Western Province. It is remote, the soil is less fertile, farms are subject to more erosion and the social disruption caused by the genocide continues to have a greater impact here than in other parts of the country.

### Poverty and health

Rwanda can be confusing for visitors. You can find a hotel with a pool, great food, iced drinks and wi-fi. You can also, five minutes from the airport, wind your way through a labyrinth of pot-holed tracks, banana palms and mud-brick houses.

One standard measure of poverty is the percentage of the population living on less than $1.25 a day. By that measure, Rwanda is the seventh poorest country in the world.

The variations in Rwanda’s physical geography, climate patterns and social history mean that the experience of poverty varies a lot over this tiny country. It’s becoming harder for households to have access to enough productive land. About 60% of farming households cultivate plots of land smaller than 0.5ha.

Poverty is proving hard to ameliorate, but there are improvements in health care. Most Rwandans now have access to safe drinking water and the average life expectancy has doubled over the last twenty years. (63 years 2013)
Rwanda has developed a network of community health clinics and recruited 45,000 volunteer health workers. They are trained in preventative health care and in diagnosing and treating common diseases like malaria. The incidence of malaria has declined by 70% over the last ten years.

About 70 per cent of the population is covered by health insurance. Unlike many countries where the best medical facilities are in major cities, in Rwanda, large medical centres have been built in poorer, remote areas.

On 28th April, three weeks after the start of the genocide, about 250,000 Hutu refugees fled south-east and crossed a small bridge over the Rusomo River into Tanzania. Over time, more than 500,000 Rwandans found themselves in refugee camps within Tanzania.

At Goma in the north west, 12,000 people per hour crossed the border into Zaire (DR Congo). In total, nearly one million people fled into Zaire. By the end of August, about 46,000 had died of cholera, dysentery and other diseases.
The refugee camps became overcrowded temporary ‘cities’ of blue plastic sheeting. International aid agencies set up food and medical centres, but faced dangerous conditions. Among the refugees there were around 30,000 soldiers and militia fleeing after their role in the genocide killings. They ruled the camps, particularly in Zaire, with intimidation and violence.

Coming home after conflict

Guilty or innocent, many refugees were afraid to return to Rwanda. When they did go home, they often found their properties occupied by strangers.

The new government was determined that Rwanda should be a home for everyone, but the house and land shortages meant that there was the potential for serious disputes. In communities so recently divided, this had to be prevented.

With the help of international organisations, Rwanda launched a major program of home building. Over the next few years, hundreds of thousands of simple new homes were built, usually in clusters. These mini-villages are known as imidugudu.

Safe, functional and fair

After the genocide, everyone was fearful and nobody trusted the authorities. The country urgently needed stability and people needed to feel safe. Genocide suspects were rounded up. By 1999, about 120,000 alleged genocide criminals were being held in Rwanda’s prisons. The court system was swamped - it was going to take over 100 years to process the cases.

In 1998 the government began looking at reviving Rwanda’s traditional community justice process called gacaca. 250,000 local judges were chosen across 11,000 communities. 35% were women. There was no road map for this initiative. “Gacaca is unique in the world. No country has tried to do justice at this scale. We’ve seen 400,000 suspects go through this process in the space of nine years”. (Phil Clark interview 2010)
Growing and learning

When the genocide began in April 1994, schools were abandoned. For some people, the schools represented everything that was unfair in society and many were ransacked, burned or destroyed. Teachers in general symbolised the educated elite of Rwanda and many were killed.

In 2014, over 90% of Rwanda’s children were attending primary school. A remarkable achievement.

Women and Rwanda’s reconstruction

Women and children suffered badly during the genocide. It’s estimated that more than 250,000 women and girls aged between 13 and 35 were victims of rape and sexual violence. The effects for those women included social isolation, unwanted pregnancies and sexually transmitted diseases. Perhaps around 5,000 pregnancies resulted from those rapes, and about 66% of the victims tested positive for HIV/AIDS.

Fig.10: Primary school students, Kigali, 2013

Fig.11: Statistics showing growth in education 1978 - 2012

Fig.12: Rebuilding after the conflict

Historically, Rwanda had a patriarchal social structure. Women had less access to education and rarely had important roles at higher administrative levels. But war and genocide often has the effect of changing gender roles. The post-genocide period found women performing non-traditional roles such as decision-making, managing financial resources, building houses and roads. They became the driving force of social and economic development. A huge grassroots network of women’s associations led the way in rebuilding communities, in peace-building and reconciliation, and in initiatives towards sustainable economic development.

All of the above have made a noticeable change in community perceptions of women. For many, and especially for younger women, it has redefined their roles, responsibilities and opportunities.
Social cohesion

Since the genocide, Rwandans have looked for ways to bring the different elements of their deeply divided society closer together; ways to build a shared identity and purpose. To many people that seemed ambitious and even absurd. But their programs have been practical, creative and extraordinary, reaching into the areas of justice, education, citizenship, poverty reduction and grassroots public administration.

They are attempting to de-centralise some aspects of government and give local people the ability to deal with local issues. Umuganda is a Rwanda-wide community working bee, held on the last Saturday of each month. The whole country turns out to take care of practical things like road repairs or the construction and maintenance of local community facilities.

Population

Like many developing countries, children and young people make up the majority of Rwanda’s population (42% < 15, 19% 15 – 24). So, for Rwanda the challenge is to quickly provide education and employment opportunities for these age cohorts. Failure to do so could lead to ongoing poverty and social unrest.
Rwanda's population is expected to reach 14 million by 2020. This will put a strain on the environment and on human services, however Rwanda is tackling the challenge through education and the increasing use of modern technologies. Strategies such as re-forestation, the use of solar and bio-mass energy and public education in the better treatment of waste are helping to minimise the impact of population growth on the environment.

The natural and built environment

In 2016, agriculture is still the backbone of Rwanda's economy. Over 90% of households cultivate at least one plot of land. Farmers are becoming more efficient by forming co-operatives and building terraces to control soil erosion. But, as in other parts of the world, it’s becoming harder to make a living from a small farm.

In some areas the environment has been degraded over many years by conflict, population displacement and the clearing of forests and grazing lands for the re-settlement of returning refugees. Rwanda recognises the impact of both environmental degradation and climate change. It has implemented policies that aim to conserve the environment and ‘green’ the economy. Plastic bags are banned, 86% of Rwanda’s energy is produced from bio-mass materials - plant and animal products. 50% of its electricity comes from hydro-power, and solar panels are widely used on public buildings in rural areas. They are planting millions of seedlings each year and are on target to achieve 30% forest cover by 2017.
Urbanisation

Before the 20th century there were no cities in Rwanda. Its farming communities were scattered across the hills.

In 2015, about 20% of Rwandans live in urban centres - half of those in Kigali, the capital. In the aftermath of genocide, many people moved to the capital, hoping to be closer to jobs, schools and health services. Infrastructure and town planning controls were almost non-existent, and so large unplanned and unserviced neighbourhoods quickly grew up. Currently, about 90% of the buildings in Kigali were constructed during that time of unplanned development.

Rwanda's hilly terrain makes town planning and urban development difficult. Building construction and the provision of roads, water, energy and sanitation services is both complex and expensive.

For decades, Rwanda has been making adjustments as it opens up to the rest of the world: its cultures and values, its telecommunications and its cheaply-made products - good enough for Africa. Local crafts and industries like textile weavers, tailors and dressmakers have had to compete with dumped surplus western clothing.

But the pace is increasing and it's going to be interesting to follow the current generation of young Rwandans over the next couple of decades. How will they see themselves and their country in a rapidly globalising world?

It’s easy to stereotype Africans on the basis of an Oxfam advert, a news report about Somali pirates and a Wild Africa nature documentary. In the same way, it’s almost inevitable that many Rwandans have particular images of the rest of the world. Over the last fifty years there has been an almost entirely one-way flow of technology and western cultural products into developing countries like Rwanda.

So it’s not surprising, given Hollywood’s mass distribution of ‘californication’, that ‘The West’ conjures up two sets of images which sit uncomfortably side by side. On one hand there’s wealth, confidence, education, sophistication and an enticing collection of shiny gadgets; on the other there are ‘bad values’, drugs, violent crime and a preoccupation with sex. What’s an African supposed to think?

In the 21st century, urban Rwandans have to deal with people from many parts of the world: American agriculturalists, Chinese businessmen, Australian academics, Indian IT specialists and a growing number of international tourists. Many Rwandans are fluent in several languages and have almost learned to have multiple identities; one language, mindset and personality for locals, and another for internationals. Then there are the many Rwandans who have lived abroad and returned home with a new world view.

How will these influences and these perceptions shape today’s young Rwandans, and their culture? At the moment, it’s a work in progress.
WEB LINKS

The origins of the conflict in Rwanda: http://www.rwandanstories.org/origins.html

Detailed information on the Rwandan genocide: http://www.rwandanstories.org/genocide.html

The role of the West in Rwanda’s genocide: http://www.rwandanstories.org/genocide/role_of_the_west.html

Gacaca: Rwanda’s innovative community justice (video): http://www.rwandanstories.org/recovery/overloaded_system.html

Building peace in Rwanda (video): http://www.rwandanstories.org/recovery/building_peace.html

Teacher resources on conflict and peace: http://education.rwandanstories.org/conflict-and-peace/


www.cia.gov  most recent statistics on Rwanda

Student Activities

1. Use your atlas to find Rwanda on a map of Africa. Note its size and location. What does “landlocked” mean?

2. Use a search engine and/or www.rwandanstories.org to research the 1994 Rwandan genocide. Write a brief account of the background to the genocide in the context of the Rwandan Civil War.

3. Select 4 indicators of living conditions from Figures 4, 5 and 6 and/or CIA Factbook. Write an objective report supported by quantitative evidence in which you outline life in Rwanda for the majority of the people.

4. Using an atlas and Figures 7 and 8, describe the movement of refugees between 1995 and 2002. Use compass points and distance travelled in your answer.

5. After Nelson Mandela was released from gaol and his party formed a government in 1995, Truth and Reconciliation commissions were established to deal with the cycles of vengeance that resulted from the human rights violations that occurred under the former apartheid regime. How did Rwanda try to mend its broken society? Conduct further research to compare Truth and Reconciliation commissions with gacacas.

6. Look at the changes in consumption patterns in Rwanda between 2006 and 2011. What overall conclusions may be drawn about the changes in lifestyle priorities, economic development and cost-of-living pressures over that time?

7.1 How important do you think the involvement of women in Rwanda’s reconstruction has been?

7.2 What positive and practical changes may have resulted from women’s participation in the rebuilding of the society?
7.3. Does greater gender equality have positive impacts on the human wellbeing of a society. Suggest some outcomes. Why might this be a more accurate indicator of social and economic wellbeing than GDP?

8. Using Figure 11, www.rwandanstories.org and the CIA Factbook, describe the advances in education in Rwanda.

9. Examine the population structure of Rwanda in Figure 11 and describe its shape. Identify the differences between it and Australia’s population structure? What challenges does this pose for Rwanda in the short and long terms?

10. Thinking about things like film and TV, music, food and fashion...

10.1. Compile a list of non-Australian cultural ‘products’ which you and your family or friends regularly consume. Make a note of their country of origin.

10.2. Compile a list of Australian cultural products you regularly consume. What impact do you think these non-Australian cultural products are having on Australian culture?

10.3. What is your opinion of the impact that global culture is having on Rwandan culture?

List of illustrations/captions

The black and white image in Fig.01 is © Thomas Haley, and used with permission. All other photographs and graphics © David Fullerton.

The high resolution images can be downloaded from here: https://www.dropbox.com/sh/xna8r5vl5fzf68t/AABmuQxHxVrnxcGHRwUDxza?dl=0
November 1971: from the Gladesville Bridge that spans the Parramatta River west of central Sydney the city's first photochemical smog was all too apparent. White petunias growing in Dundas valley, 20km NNW from the bridge, were damaged. Four years later students playing school sport at Sylvania High School, 30 km S of the bridge, suffered pains in their chest and lungs with thirteen students taken to hospital for observation. By the end of the decade photochemical smog laden air had travelled southwards from the city to Mittagong in the Southern Highlands, some 110 km away.

Almost ten years earlier, in 1962, the effects of the last severe London fog were also very apparent. A north London schoolboy walked home because it was easy to outpace the red double-decker buses. The prime minister failed to get his dinner at the Savoy, and, a water bird, the Slavonian grebe, was so disoriented that it could no longer navigate by the stars so it made a forced landing in Regents Street in the heart of the West End. 750 deaths were attributed to this ‘killer fog’ but the ‘Great Fog’ of 1952 was supposed to have killed more than 4000 Londoners in a single week.

The Indian Express newspaper referred to tragic consequences of the fogs suspended over Indian cities, in an extended 2015-16 campaign, as ‘Death by Breath’. The following headlines give some impression of the problem: ‘US astronaut shows what death by breath looks like from space’, ‘Delhi may need stay-at-home warnings for kids & elderly’ and ‘My grandson looks like a ninja because he’s forced to wear a mask.’

According the World Health Organisation (WHO) Delhi is the most polluted city in the world when measured by particle pollution, also referred to as particulate matter or PM. Particles less than or equal to 10 micrometres in diameter are so small that they can get into the lungs, potentially causing serious health problems, and, 10 micrometres is less than the width of a single human hair. Even finer particles (PM2.5) that are 2.5 micrometres in diameter or smaller, and can only be seen with an electron microscope, are used to rank air pollution in the WHO report.

Delhi’s air, full of PM2.5 pollution, a product of many types of combustion, including motor vehicles, small-scale diesel electricity generators and coal power plants, residential wood burning, tandoori ovens burning solid waste, agricultural burning, and some industrial processes, reached an annual mean of 153 \( \mu g/m^3 \), or micrograms per cubic metre. Following Delhi on the WHO ranking were three other Indian cities: Patna, 144 \( \mu g/m^3 \), Gwalior, 144 and Raipur 134; then came Karachi, 117, Peshawar, 111 and Rawalpindi, 107 – all in Pakistan. Khorramabad, in Iran, 102, was eighth on the list followed by Ahmedabad, 100, and Lucknow, 96 – both in India.

Beijing’s concentration of particulate matter was 56 \( \mu g/m^3 \), Moscow’s 22, Los Angeles 20, London 16 and New York 14. In Australia reading varied from Busselton at 9, Bunbury, Adelaide and Launceston, 8, Canberra and Perth 7, Brisbane, Casuarina and Hobart 6, and Melbourne, Lower Hunter, Traralgon, Sydney, Geelong and Illawarra at 5 \( \mu g/m^3 \) as an annual mean.
In Victoria the following air quality categories have been developed, largely in response to the dangers posed by bushfire smoke as ‘community smoke standards’. Over a 24 hour period: PM2.5 readings were ‘good’ at 0-8 μg/m3, ‘moderate’ at 9-25, ‘unhealthy for sensitive people’, 26-39, ‘unhealthy for all’, 40-106, ‘very unhealthy for all’, 107-177, and ‘hazardous’ at 177-353 μg/m3. Of course, worldwide, there can be individual instances of very high readings. London's ‘Great Fog’ reached 3000 micrograms per cubic metre; in December 2015, a 300-μg/m3 reading in Beijing signalled a 'red alert' where half the city’s cars were pulled off the roads, schools and nurseries closed and teaching materials were posted online for the students. On another occasion Beijing’s reading was as high as 900 μg/m3.

It is important to distinguish between standards that are set averaged over a 24-hour period and those averaged over a year. The Australian National Protection Ambient Air Quality Measure reporting standard for PM2.5 is set nationally at 25 μg/m3 averaged over a period of 24 hours and 8 μg/m3 averaged over a year. The WHO report’s data related to readings averaged over a year. Although the WHO report says that no PM2.5 reading is safe it would be preferable to live in cities at the cleaner end of the WHO table. Thirty-two cities reported a PM2.5 reading of less than 5. Three-quarters of these cities were in Canada, including Vancouver, one was Hafnarfjörður in Iceland and the other seven were small cities in the United States of America.

If one had a choice it would be preferable not to live in many Chinese cities. A scientific report published in August 2015 revealed that as many as 1.6 million Chinese people are killed through breathing polluted air. Beijing typifies the problem. Although, average annual readings in the WHO table revealed that only one Chinese city, Lanzhou (71 μg/m3) appeared in the ranking of the most polluted fifty cities. It would be much worse to live in Delhi, or other cities in the sub-continent, where air in the Indian capital is close to three times more polluted than Beijing’s mean and far exceeds the Australian standard of 8 μg/m3 averaged over a year, or the WHO standard of 10 μg/m3. It is instructive that, according to the Indian Express, in April 2015, Delhi's Chief Minister had to spend some time in the southern city of Bangalore in a rehabilitation clinic to allow his lungs to recover from air pollution.

It may be very unwise, if one had a choice, to live in many more cities worldwide. The WHO database is based on voluntary government monitoring. Thus there are huge holes and distortions in the data. There are 1500 PM25 monitoring stations in 900 Chinese cities and towns whereas there only 13 stations in all of India. Of the 1622 cities included in the WHO database only 16 are in Africa (and half of these are in relatively more wealthy South Africa and Egypt). It is important therefore to examine satellite data to examine possible correlations between densely settled areas and high air pollution. Satellite data has revealed that Lagos, in Nigeria, suffers from persistent smog problems. A short-term study revealed that in five out of eight sites monitored in the city PM2.5 readings exceeded Delhi's annual PM2.5 reading. At a much finer scale, a very poor neighbourhood in Ulaanbaatar, Mongolia where yurt dwellers burn coal to keep warm, pollution averages between 200 to 350 μg/m3 annually.

Pressure on politicians and citizens to act on curbing air pollution has been strengthened by the availability of PM25 data. In China, a recent poll found 98% of adults believe air pollution is either a ‘very much’ or ‘somewhat’ a problem that the government should prioritise. So they should, it was estimated that breathing Beijing’s air in January 2013 was equivalent to breathing the air in an airport smoking lounge and one hospital in east Beijing treated more than 900 children for respiratory problems. Genuine efforts have been made to shut down the most polluting industries in China’s capital city. NASA satellite data shows China’s air quality worsening from 2005 to 2011, then improved from 2011 to 2015. However, the air quality over Indian cities has steadily worsened. The satellite images showed that the levels of PM2.5 particles decreased by 17% in China from 2010 to 2015, 20% in the European Union and 15% in the United States, while rising 13% in India.

The notorious Los Angeles smog that geography teachers have been describing to students for half a century has also abated. In LA children’s lung capacities have steadily improved as PM2.5 readings have fallen by approximately 40% from the 1990s to the period 2007-11. In 1998, according to the New England Journal of Medicine, 8% of 15 year-olds had significant lung deficits; by 2011 3.5% had significant lung deficits. There is no room for complacency though. Between 91 and 96 per cent of Europeans living in cities are exposed to levels of PM2.5 that are higher than the European guidelines – which themselves are not as strict as those recommended by the World Health Organisation, let alone Australia’s.
Some nations remain in a state of denial. PM2.5 pollution generated by South Korean coal plants kill as many as 1,600 people each year, according to a March 2015 study reported in The Korean Times, and premature deaths could reach up to 2,800 per year by 2021 if the pollution is not curbed. There are 53 coal power plants operating across the country with government plans to build 13 more by 2021.

Citizens in other countries are ill informed. Australian students may be shocked to find out that more than 3,000 Australians die each year because of urban air pollution. According to a 2014 report produced by Environmental Justice Australia, air pollution is inadequately regulated, monitored and enforced in Australia. The main sources of PM2.5 pollution in Australia come from coal burning for power generation, mining, vehicle emissions, farming, wood burning, bushfires, dust storms, and various diverse industrial activities. The effects on the young are particularly striking: impaired lung growth in children, increased asthma, coughs and bronchitis, impairment of brain development in babies and small children, low birth weight and adverse birth outcomes.

In Tudor England Queen Elizabeth I declared herself ‘greatly grieved and annoyed with the taste and smoke of sea-coales’ and London was nicknamed ‘The Smoke’ as early as the 18thc. Coal has long been acknowledged as the source of the problem. Nevertheless, people thought that Beijing’s pollution came from many sources including motor vehicles, agricultural dust, dust from their extensive loess deposits, as well as from coal. Recent analysis reveals that the air pollution comes primarily from coal used for electric power, for industrial energy, and for heating. The key to this discovery is that the sources of the PM2.5 pollution closely match the sources of sulphur. Sulphur is found in coal not in car exhaust pipes. When a fire burned for 45 days in February-March 2014 in the Hazelwood coal mine in Morwell Victoria an academic from QUT in Brisbane observed that if he lived in the area he would move his family away until the fire was under control. PM2.5 pollution easily enters inside homes and penetrates all too readily the gauze of those wearing facemasks.

Possible illustrations and/or weblinks
http://earth.nullschool.net/#current/chem/surface/level/overlay=cosc/orthographic
http://earthobservatory.nasa.gov/IOTD/view.php?id=77495
http://www.nasa.gov/topics/earth/features/health-sapping.html

Endnote
NASA’s aerosol optical depth measurements, based on the fact that the particles change the way the atmosphere reflects and absorbs visible and infrared light, are used as a proxy for PM2.5 levels.

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