

# The Environment

## Background information

### Milestones

1896 : The chemist Svante Arrhenius realized the imminence of global warming but he considered that it would be beneficial for humanity

1975 : The world population reached four billion. First appearance of the term "global warming"

1989 : Margaret Thatcher called for a global agreement on climate change

1995 : It was officially acknowledged that temperature increase is related to anthropogenic warming

1997 : The Kyoto Protocol in which developed nations promised to reduce emissions by 5% over the next 15 years was ratified but the US Senate refused to sign the treaty

2009 : China overtook the US as the worst greenhouse gas emitter, but the US still surpasses China in per capita emissions.

2016 : The signatory countries of the Paris agreement have agreed to limit global warming to 2 degrees below its pre-industrial level.

2016 : The first 'negative emissions' plant opened in Iceland

2017 : The US withdrew from the Paris agreement

### What can be done to fight climate change ?

Even though climate change denying exists, the fact that humanity has to act now is not questionable anymore. Three main scales of action can be distinguished.

The larger and most important scale concerns international action. Since the Kyoto protocol has been ratified in 1997, many summits took place in order to establish a global strategy and set common goals in the fight against climate change. Nevertheless, the lack of involvement from the US as well as the absence of true sanctions weaken the impact of such summits. However, those meetings aim at finding long-term solutions, and a more local and direct action is needed.

Indeed, national and regional measures can be taken to reduce local carbon emissions: hard taxes on fossil fuels, investment on renewable resources and more generally promoting of an ecofriendly lifestyle. Those measures have to be progressive though, in order to avoid social issues .

Eventually, all of those measures rely on the cooperation of every citizen, and individual involvement is necessary for short-term change. A general change of habits could be far more efficient than any policy, and even minor actions could be determining: using public transport, sorting out garbage, recycling, saving water, or even boycotting big brands and turning to more eco-friendly products.

## Vocabulary :

### Environmental issues :

eco-friendly	qui respecte l'environnement
wildlife	la faune et la flore
green activist	militant écologiste
conservationist	défenseur de l'environnement
natural reserve	parc naturel
to harm the environment	nuire à l'environnement
to endanger	mettre en danger
to be at risk / in danger	être en danger
to declare a state of emergency	déclarer l'état d'urgence
a disaster victim	un sinistré
sustainable development	développement durable
scarcity	la rareté
the depletion of ressources	l'épuisement des ressources
raw materials	matières premières
a species	une espèce
an endangered species	une espèce en voie de disparition
to be threatened with extinction	être menacé d'extinction
to become extinct	disparaître
rainforest	forêt tropicale
to fell / cut down trees	abattre des arbres
to reforest	reboiser
overfishing	la surpêche
whaling	la pêche à la baleine
natural disaster	catastrophe naturelle
to affect a region	toucher une région
to wreak havoc	faire des ravages
to avert a disaster	éviter / prévenir une catastrophe
the scope / the extent of the disaster	l'étendue / l'ampleur du sinistre
severe / extreme weather	très mauvais temps
to predict / forecast the weather	prévoir le temps
the weather forecast	les prévisions météorologiques
drought	sécheresse
hunger	la faim
to starve to death	mourir de faim
to die of thirst	mourir de soif
to be malnourished / undernourished	souffrir de malnutrition
a cold spell / cold wave	une vague de froid
heat wave	vague de chaleur
storm	tempête / orage
tornado / twister	tornade
hurricane	ouragan
typhoon	typhon
torrential rain	pluies torrentielles / diluviennes
flood	inondation
flash flood	crue subite
flood risk area	zone inondable
earthquake	tremblement de terre
a fault	une faille
a fault line	une ligne de failles

rubble  
to be reported missing  
tidal wave  
landslide  
mudslide  
snowstorm  
volcano  
lava  
ash  
to rescue  
a rescuer / rescue worker  
rescue party  
fireman / firefighter  
to evacuate  
to be safe  
a survivor  
relief agency  
relief worker  
humanitarian aid  
emergency aid / relief  
insurance company  
compensation

Pollution :

to pollute  
noise pollution  
polluter  
pollutant  
to curb pollution  
to waste  
air pollution  
pollution peak  
smog  
factory smokes / fumes  
car exhausts / fumes  
to monitor air quality  
asthma  
water pollution  
fertilizers  
groundwater  
to poison rivers  
a contaminant  
a toxic chemical  
sewer  
sewage / waste water  
a sewage works  
asbestos  
ozone layer  
ozone depletion  
acid rains  
lead poisoning  
oil slick

les décombres  
être porté disparu  
raz-de-marée  
glissement de terrain  
coulée de boue  
tempête de neige  
volcan  
lave  
cendres  
sauver  
secouriste  
équipe de secours  
pompier  
évacuer  
être en sécurité / hors de danger  
survivant / rescapé  
organisation humanitaire  
travailleur humanitaire  
aide humanitaire  
secours / aide d'urgence  
compagnie d'assurance  
indemnité

polluer  
pollution sonore  
pollueur  
polluant  
diminuer la pollution  
gaspiller  
pollution atmosphérique  
pic de pollution  
smoke + fog  
fumées d'usine  
gaz d'échappement  
surveiller la qualité de l'air  
asthme  
la pollution de l'eau  
engrais  
nappe phréatique  
contaminer les rivières  
un polluant / une substance polluante  
un produit chimique toxique  
égout  
les eaux usées  
une station d'épuration des eaux  
amiante  
couche d'ozone  
la diminution de la couche d'ozone  
pluies acides  
saturnisme  
marée noire

oil spill  
oil-covered birds  
to empty one's tanks / to flush out  
waste / rubbish / garbage  
toxic waste  
hazardous waste  
household refuse / rubbish  
to collect waste  
waste collection center  
dustman / garbage man  
litter  
to dispose of waste  
disposable  
bin lorry / garbage truck  
rubbish dump  
illicit rubbish dump  
landfill  
nuclear waste  
carcinogenic  
a leak  
recycling  
recycling plant  
sorting / waste separation

Climate change and energy :

climate scientist / climatologist  
global warming  
greenhouse effect  
greenhouse gas emissions  
a rise in temperatures  
a rise in sea level  
polar icecap  
icefield / ice floe  
to thaw  
to melt  
freshwater  
carbon tax  
low-energy lightbulbs  
insulation  
carbon trading  
cap and trade  
energy policy  
energy gap / energy shortage  
oil crisis / oil shock  
to save energy  
a gas-guzzler  
fuel  
the exhaustion of oil supplies  
fossil fuels  
crude oil  
coal  
oil well

déversement accidentel de pétrole  
oiseaux mazoutés  
dégaze  
ordures / détritrus  
déchets toxiques  
déchets dangereux  
ordures ménagères  
ramasser les déchets  
déchetterie  
éboueur  
détritus  
éliminer les déchets  
jetable  
camion poubelle  
décharge / dépotoir  
décharge sauvage  
site d'enfouissement des ordures  
déchets nucléaires  
cancérigène  
une fuite  
recyclage  
usine de recyclage  
tri sélectif

climatologue  
réchauffement planétaire  
effet de serre  
émissions / rejets de gaz à effet de serre  
une augmentation des températures  
une élévation du niveau de la mer  
calotte glaciaire  
banquise  
dégeler / fondre  
fondre  
eau douce  
taxe carbone  
ampoules basse consommation  
isolation (thermique)  
le commerce des droits d'émission du carbone  
plafonner et échanger (les quotas d'émissions)  
politique énergétique  
pénurie d'énergie  
choc pétrolier  
économiser l'énergie  
une voiture qui consomme beaucoup  
combustible / carburant  
l'épuisement des réserves de pétrole  
les énergies fossiles  
le pétrole brut  
le charbon  
puits de pétrole

oil rig / oil platform  
oil pipeline  
gas pipeline  
petrol / gas  
renewable  
windpower  
wind turbine  
windfarm  
to go nuclear  
a meltdown  
hydropower  
dam  
tidal power  
electric grid  
a smart meter

plateforme pétrolière  
oléoduc  
gazoduc  
l'essence  
renouvelable  
énergie éolienne  
éolienne  
parc éolien  
se convertir au nucléaire  
fusion (du cœur d'un réacteur nucléaire)  
hydroélectricité  
barrage  
énergie marémotrice  
réseau électrique  
un compteur intelligent

## Climate migrations

**Step 1 : Describe and analyze the message of the following cartoon.**



## **Step 2 : Read the article and answer the following questions.**

### ***Climate Change Is Already a Major Factor in Migration to the U.S.***

By Nancy LeTourneau  
April 9, 2019  
washingtonmonthtly.com

One thing we know with some certainty about the situation on our southern border is that pretty much everything Trump says is a lie. Given that, it is important for all of us to get the facts straight in order to be able to evaluate various policy proposals on what would constitute a rational approach to immigration reform.

Lawfare's Stephanie Leutert and Sarah Spalding have provided us with some credible data as a starting point. First of all, over the last three years, the number of Central American migrants arriving here has hovered at around 250,000 per year. As is often mentioned, the big change has been in the number of families (rather than individual adults) who are migrating. They have gone from about 10 percent of the total to almost two thirds. Finally, close to half of the migrants come from Guatemala, with Hondurans representing 35 percent and Salvadorans 16 percent.

In terms of what is driving these migrants to leave their homes, a 2015 survey found that almost 40 percent cited "attacks or threats to themselves or family as the reason for leaving." We often hear about high murder rates, gang violence, and political corruption in these Northern Triangle countries as the force behind attempts to seek asylum in the U.S.

Jonathan Blitzer actually travelled to the country that produces most of the migrants, Guatemala, and found another major contributor: climate change.

"There are always a lot of reasons why people migrate," Yarsinio Palacios, an expert on forestry in Guatemala, told me. "Maybe a family member is sick. Maybe they are trying to make up for losses from the previous year. But in every situation, it has something to do with climate change."

Blitzer found that the majority of migrants from Guatemala come from the country's western highlands region, which extends from Antigua to the Mexican border.

"The population in the highlands is mostly indigenous, and people's livelihoods are almost exclusively agrarian. The malnutrition rate, which hovers around sixty-five per cent, is among the highest in the Western Hemisphere. In 2014, a group of agronomists and scientists, working on an initiative called Climate, Nature, and Communities of Guatemala, produced a report that cautioned lawmakers about the region's susceptibility to a new threat. The highlands region, they wrote, "was the most vulnerable area in the country to climate change."

Back in 2015, the Asociación de Cooperación para el Desarrollo Rural de Occidente (C.D.R.O.) began a pilot project with the village of Paraje León to combat the effects of climate change. Among other things, they showed the community how to diversify their crops, conserve water, and reforest some of the surrounding areas. Blitzer documented that, within three years, the people of Paraje León who participated were doing well enough to survive.

Then a climate science-denying idiot became president of the United States and, “in July, 2017, the Trump Administration ended funding for the Climate, Nature, and Communities program that covered the project in Paraje León.” While the residents of that village could carry on, it “was one of only a few that had the chance to join the regional initiative before the funding disappeared.”

Last November, John Kerry told an audience in Europe that we must all tackle climate change or face migration chaos. Contrary to what you are hearing these days, the latter is already beginning to happen. For any immigration policy to be credible, it must take into account the need for aid to assist countries like Guatemala in gearing up efforts to address climate change.

Question 1 : In your own words, explain what the profile of asylum seekers coming from Southern America to the US is.

Question 2 : Global warming is not only an environmental issue, but a question of climate justice. Discuss.\*

\* Climate justice is a term used for framing global warming as an ethical and political issue, rather than one that is purely environmental or physical in nature.

**Step 3 : Watch the following videos and summarize in your own words the stakes of climate change.**

1: <https://www.youtube.com/watch?v=mrHBPpG3uYI>

2: [https://www.youtube.com/watch?v=\\_cD-1hzE9Lk](https://www.youtube.com/watch?v=_cD-1hzE9Lk)

3: <https://www.youtube.com/watch?v=izRNN6JxHbk>

**Step 4 : Read the following article, summarize in your own words what is happening then argue your opinion about this new phenomenon.**

***Climate gentrification: Is sea rise turning Miami high ground into a hot commodity?***

By Alex Harris, December 18, 2018  
The Miami Herald

When Paulette Richards answered the door of her Liberty City home a year ago, she found two men standing there.

“Someone filed foreclosure on your property today and we’re here to see if you’re interested in selling,” they told her.

“I was blown away,” said the 58-year-old great grandma, who’d been struggling to pay her mortgage after an uninsured bout with cancer left her deep in medical debt. “They knew before I did.”



That door knock wasn't the start — or the end — of the campaign to buy the four-bedroom bungalow Richards had lived in since just before Thanksgiving in 2001. Her family had to take the house phone off the hook after repeated calls from prospective buyers. She said she gets about five letters a day from people offering to buy her home; one even included a Google Maps picture of the house.

Like Richards, many inner city Miami residents say they are feeling the pressure to abandon their community to developers in the race to get rich in Miami's historically black and minority neighborhoods, some of the last cheap land left in the booming coastal city.

Gentrification isn't new in Miami, where developers routinely turn poor neighborhoods into the newest real estate hot commodity. But some neighborhood advocates believe there is a new accelerant at work in communities like Liberty City.

"We're what you call prime real estate. We're on high ground," Richards said.

Low-lying Miami faces anywhere from 14 to 34 inches of sea rise by 2060, and some believe developers see the scarce high ground (much of it in the city occupied by low-income communities of color) as a safe investment. They call it climate gentrification.

Miami's two existential issues — a scarcity of affordable housing and rising sea levels — intersect with climate gentrification. There is no doubt developers are snapping up property and pushing out longtime residents. People living in these targeted areas, bolstered by data analysis from some outside researchers, firmly believe elevation is driving the rush for real estate in their neighborhoods. But many developers and industry experts say sea-rise concerns are overblown, pointing to similar upscaling waves in once-affordable waterfront neighborhoods like Edgewater.

But even with data, it's difficult to pinpoint climate as a driver of a South Florida real estate market that has a long history of building homes or neighborhoods, then knocking them down to start over again.

That's why the city of Miami recently decided to study the issue and come up with solutions, as well as dedicate \$4 million from the Miami Forever Bond toward helping residents at risk from these forces fix up their homes. Miami appears to be the first city in the U.S. to formally consider the topic.

Jane Gilbert, the city's Chief Resilience Officer, said there's no firm timeline or plan on how the research will be conducted, but the first step is to identify the areas at risk. The commonly identified low-income, high-elevation areas are Liberty City, Overtown, Allapattah, Little Havana and Little Haiti. Next is figuring out which of the city's policies already help those areas and what gaps still exist.

Residents of the city of Miami's highest ground, the coral ridge that stretches from north Miami-Dade County to the upper Florida Keys, are mostly people of color forced decades ago into what were once less attractive areas by racist "red lining" mortgage lending practices, segregation and other social policies. Other more-elevated places in the city include sections of Coconut Grove that already have pricey homes that are more immune to gentrification led by land flippers.

The city's decision is a victory for activists who have been warning about the problem for years, including New Florida Majority's Valencia Gunder, a Liberty City resident.



"A few years ago no one believed it was real. People thought it was something we were just making up," she said. "Residents have been trying to fight this battle by themselves; it's finally now we have government on our side."

Yoca Ardití-Rocha of the CLEO Institute, a Miami climate action advocacy group, said the decision is a validation of the fears community members have been expressing in CLEO's listening sessions in these communities for years.

Residents are worried that "predatory" developers are trying to push them out of their homes because they want the high ground that will be safe when the seas invade.

"I didn't buy a house for investment. I bought this to live in, to die in," said Richards. "It's my legacy, my home, my worth. Without that what else do I have?"

Richards' home, which she bought for \$90,000 less than two decades ago, is now worth more than \$250,000, according to Zillow.

Little Haiti, which is often pointed to as the poster child for this phenomena, has seen a 1,121 percent increase in owner-occupied units worth more than \$150,000 from 2000 to 2014, according to Florida International University's Neighborhood Changes project.

Local business owners in Little Haiti staged a protest this spring after a developer bought a strip mall that was home to a tuxedo shop in business for 30 years, a dressmaker and immigration services, evicted all the tenants immediately and started construction on ebb + flow, an upscale shopping center with the tagline "stay rooted."

While the gentrification part of the equation is easy to prove, the climate part is more complicated.

The real estate industry that Miami's economy depends on has pushed back hard on the concept that higher land is a more popular product. One luxury broker called it "fake news." They argue it's just regular gentrification happening in areas adjacent to development hot spots.

Jorge Perez, a developer known as the "condo king of South Florida," said while location is the number one factor in real estate, elevation is just a "topic of interest" for now, with more of a focus on proximity to transportation and entertainment.

"It's hard to say for sure if the threat of sea level rise really is quickening the gentrification of high-lying areas like Little Haiti, especially when you consider Little Haiti and other nearby areas have been targeted by savvy real estate investors for years," he said.

The edges of Miami's hottest neighborhoods, like Wynwood and the Design District, are already bleeding into Little Haiti, which only earned an official city neighborhood designation in 2016 after a decade of activism from residents.

David Martin, a Miami developer who often talks about the impact of climate change in his work, said Miami is experiencing development pressure because of the growing number of people who want to live in the city.

"Obviously people believe the discovery of certain new neighborhoods in our city is

allowing people to discover new neighborhoods that people haven't discovered before," he said. "I do think neighborhood elevation is part of a discussion, but it's not the only thing."

There are also low-elevation areas vulnerable to sea level rise seeing a flood of investment, like Edgewater and Brickell.

"Gentrification is happening. No question about that. Is it driven by increased sea levels in low-lying areas in the county? That remains to be seen," Arditi-Rocha said.

The one study that claims to have proven that climate gentrification exists is from Harvard University's Jesse Keenan. His research found that low-elevation single-family homes in Miami-Dade gained value slower than their high-elevation companions, conclusions that other studies have also reached.

Keenan said it shows that climate gentrification is about demand, not supply, as Miami activists have characterized it. Home buyers throughout the county are looking for houses on elevated land, and it's plentiful and cheap in Miami's inland communities.

"It's more than one or two developers taking over a neighborhood. It's about a shift in consumer preferences," he said. "You can't stop a change in consumer preferences."

Keenan sees climate gentrification in the mass exodus from Puerto Rico after Hurricane Maria, when hundreds of thousands of Puerto Ricans decided it wasn't feasible to live in such a risky region, and in Golden Beach, where the cost of living in a vulnerable community has risen so high only the ultrawealthy can remain.

Whether it's regular gentrification or climate-related displacement, the effect in Miami's already vulnerable communities is the same. And once they've sold out (or been kicked out), there are not many affordable options left in city limits.

"This is the refrain we hear over and over in Little Haiti. 'Where am I going to go?'" said Marlene Bastien, executive director of the Haitian advocacy group Family Action Network Movement.

Kilan Bishop, the Miami Sea Level Rise Committee member who spearheaded the push for the resolution, said displaced residents could head to another low-income neighborhood of comparable elevation, like inland Broward, or they could move to a flood-prone neighborhood, like Sweetwater.

"Since we can't necessarily track them to a place and help them there, it's really crucial we keep the lifeblood of our city, our working class, in their neighborhood, in places they are comfortable," she said. "We could be setting ourselves up for a clusterf\*\*\* by displacing people into more vulnerable areas."

One potential solution is to pack more people into bigger buildings in these high-elevation areas, like some of the major developments in Little Haiti plan to do and developers like Perez support. Miami just passed legislation that mandated more workforce housing allowances in Overtown, a solution several climate gentrification activists are pushing for in other neighborhoods.

If that density doesn't include affordable and workplace housing for the residents it's displacing, Bishop said this solution could leave the city with the same disparity issues with

just slightly more flood protection.

“We only have so much room in this city, and it has to accommodate a lot more people as we lose ground to water,” she said. “How do we ensure that though we’re building affordable housing and we’re saying we want everybody there, how do we ensure those people are there 20 years down the line?”

Martin, the developer, has been pushing for zoning in gentrifying areas that would allow slightly larger buildings that still fit with the character of the community, like a three-story garden style apartment building with no parking.

“The long term solutions are density next to transit and schools and amenities, and that’s where higher ground is,” he said.

Other possible answers include a freeze on property taxes for homeowners facing pressures to sell. The taxes would still add up, and the homeowner would owe them as a lump sum if the property was sold. Advocates are also interested in community land trusts, where a nonprofit buys a chunk of land, builds multiple houses on it and leases them to low-income residents.

More ideas are on the way. The University of Miami’s Housing Solutions Lab recently received a \$300,000 grant from JPMorgan to study the impact of sea level rise on affordable housing in South Florida and suggest solutions. Robin Faith Bachin, a UM history professor, said they expect to present policy solutions in late 2020.

“For a long time these issues have been dealt with in parallel but not in concert,” she said. “We need to look at them in a cohesive way to see how our most vulnerable properties, our most under-resourced communities are going to respond to sea level rise and be resilient.”