

General Paper

# Environment



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# Lazy Sheets



Going green is a luxury only developed countries can afford. Comment.

Argument		Evidence
Proponents of the view that going green is only for the richer, more developed nations rest their case on two primary arguments. Firstly, developed countries by definition have already industrialised and are more likely to have the financial resources and technological infrastructure to go green.	A luxury	For developing countries, the existing priority is to industrialise the economy and raise output and efficiency. Implementing such green technology would hamper their efforts to develop economically. Also, such green technologies tap upon relatively advanced infrastructure, such as solar panels or hydro-electric dams. Not only do developing nations lack the financial ability to sustain such practices, the prerequisite infrastructure and trained manpower are sorely lacking as well.  In stark contrast are nations like the USA, France and Japan, the original inventors of such green technologies. The USA has already demonstrated its ability to go green by investing in a billion-dollar biofuel programme, in addition to existing research on nuclear power.
However, it would be reductionist to expect developed countries to adopt green policies while developing nations release billowing columns of soot into the atmosphere.	Not a luxury	In a world where the CFC levels rise anyway, regardless of where the incineration plant is, where global temperature rises a notch regardless of whether the polluting factory is in Antarctica or Zambia, a concerted approach is necessary.  Although the implementation of green technologies like recyclable paper bags and automobiles that run on Compressed Natural Gas (CNG) goes a long way in reducing a nation's carbon emissions, rapidly industrialising giants like China and Brazil account for a whopping 37% of global carbon emissions.

On the other hand, there exists a group of people who advocate that the global environment threat is not as alarming as paranoid “tree huggers” would like us to believe	A luxury	They argue that it is possible for developed nations to implement green policies while developing countries focus on industrialisation and healthy economic growth before going green, all the while avoiding a global environmental calamity. After all, going green is a luxury that is good to have but not critical.
However, such a view ignores recent developments in meteorological studies. The rise in sea levels, arising from the melting of polar ice caps, has threatened many low-lying regions with the possible fate of being submerged.	Not A luxury	<p>In 2019, a record level of ice melted off Greenland’s icy surface. In July 2019 alone, Greenland surface ice declined by 197 gigatonnes – equivalent to about 80 million Olympic swimming pools.</p> <p>The clearing of the Brazilian Amazon – the largest carbon sink on land – has seen a tremendous reduction in nature’s ability to regulate greenhouse gas levels within the atmosphere, resulting in global warming.</p> <p>The need for radical change, as Nobel laureate Al Gore stated, has never been more urgent than in this generation.</p>

#### P1 Lazy Sheet

## Is it possible to protect the environment when many countries require increasing amounts of energy?

Argument	Evidence
The common assumption that environmental protection costs far outrun profitability has long been a primary target by critics.	China has come to the same realisation because decades of long neglect and polluting of the environment is starting to endanger future economic growth. As such, China has incorporated sustainable development ideas into its policy making in a recent General Assembly. It has also turned to the development of clean coal technology. This use of clean combustion technology has seen China’s GNP increase while the emission of pollutants remains at status quo.

<p>Clean forms of energy today have created a niche market for countries. Nuclear energy is cleaner, safer and more cost efficient than ever.</p>	<p>Past nuclear incidents at Chernobyl and Three Mile Island have been studied and nuclear technology and safety greatly improved upon. India has invested in the nuclear industry for decades and China will undoubtedly be joining in the pact in order to power its growing industry. Some may worry about environmental risk but nuclear fallouts are incidences that can be prevented and avoided.</p>
<p>In recent years, the cause of “Saving Mother Earth” has gained traction across the globe.</p>	<p>Non-governmental agencies such as GreenPeace or Friends of the Earth organise activities to help lesson environmental damage and also reach out to others ignorant of the bad state of the environment. Former presidential candidate Al Gore rose to new heights by championing the Green Cause with provocative documentaries such as The Inconvenient Truth as well as receiving the prestigious UNEP Champions of the Earth Award.</p>
<p>Besides finding viable alternatives to traditional sources of energy, there perhaps needs to be greater activity promoting the use of less energy consuming machinery or even less energy wastage.</p>	<p>It is not surprising considering £5 Billion of energy is wasted annually by countries all around the world. Developing countries also have a part to play in adding to the figure. Environmental protection should be enforced on countries to minimise wastage in the world. The constant need for energy cannot be appeased if countries continue to waste resources wilfully – Taxation on wastage and implementation of conservation schemes will go a long way in ensuring greater sustainability.</p>
<p>Leaders are more than ever pressured to be environmentally active.</p>	<p>Global leaders also recognise the significance of being a Greenie or “Green’ political party member, not just to gain brownie points from the public, but also to consolidate their place in the race to be most environmentally advanced.</p>
<p>It is understandable that one questions if it is fair to force developing countries to protect the environmental when social-economic stability is more important.</p>	<p>Developing countries cannot afford to cut down on carbon emission and risk economic retardation for the sake of adhering to international restrictions. Yet the standards in most agreements such as the Montreal Protocol have always given greater leeway for developing countries. The Montreal Protocol has been deemed on of the “the single most successful agreements to date” and the parties</p>

involved included countries such as Bolivia and Bhutan.

P1 Lazy Sheet

## Should the responsibility for environmental conservation be shouldered solely by developed nations?

Argument	Evidence
There are those who say that developed nations should be solely responsible for environmental conservation due to historical reasons.	Developed countries started industrialising at the turn of the 20th century, and have been spewing massive amounts of pollutants and carbon emissions into the atmosphere for over a century. In fact, pollution was so bad during the initial industrialisation stage of the UK and USA that Clean Air Acts had to be passed to curb the situation.
However, while I concede that developed countries are much to be blamed for most of the environmental damage seen today, this does not mean that developing countries can shirk their responsibility for environmental conservation.	<p>On the other hand, developing countries did not contribute much to the global environmental degradation for most of modern world history. It is only in recent years, when they started industrialising, that they can be said to contribute to environmental problems. The United States had been the world's largest carbon emitter until recent years when China replaced it.</p> <p>It should be noted that developing countries have also contributed to environmental degradation and pollution over the past century or so, although not as much as developed countries.</p> <p>The former's share increases when it comes to non-atmospheric pollution, such as discharge of toxic chemicals into rivers and massive deforestation. India has been dumping toxic waste into the Ganges River for decades on end, while Indonesia has destroyed much of Sumatra's rainforests since the 1950s.</p>

<p>Others point out that developed countries should be solely responsible for environmental conservation, simply because they have the finances to carry out the necessary steps. Developing countries are generally poorer, and this is compounded by the fact that much of a developing country's resources are needed to improve the living conditions of its people. However, I do not agree with this viewpoint. Having fewer resources does not imply that a country is less responsible for protecting the environment.</p>	<p>Financial aid could be granted by developed countries or international organisations like the IMF to help fund environmentally-friendly initiatives in developing countries. The latter would be responsible for having the political will to make sure that aid resources actually go to what they are intended for. Financial aid has actually been implemented in the world today, such as during the recent Copenhagen summit on climate change, where a fund was set up to help developing countries take environmentally-friendly measures.</p>
<p>One of the strongest reasons put forth by developed countries regarding why developing countries should help protect the environment is the fact that many of the latter are increasingly bigger polluters and carbon emitters.</p>	<p>We should consider this point alongside the nature of international agreements on environmental conservation. Such agreements and treaties typically last for decades after signing and ratifying, such as the Kyoto Protocol. The carbon footprint and pollutant emissions of developing countries like China, India, and Mexico are expected to rise over the next few decades as they press on with industrialisation. Although their pollutant emissions per capita are generally lower than those of developed countries, these figures are expected to rise tremendously in the future.</p>
<p>Finally, any action on the developed countries' part to conserve the environment is unlikely to take place at all, should they be the only ones being held responsible for it. This is typically in the arena of international politics, in which no country wants to be disadvantaged against another.</p>	<p>President Donald Trump withdrew from the Paris Agreement in 2017, citing claims that the climate change agreement would hinder economic priorities and place America in a permanently disadvantaged position. Additionally, points of agreements are generally non-binding, which may render the agreement powerless and without "political teeth" should countries choose not to fully commit to their plans.</p>

There is no lack of policy in environmental conservation; it is people who lack conscience and sensitivity. How far is this true?

Argument
Indeed, there are many governmental policies for environmental conservation.
Of course, some might argue that despite the above government policies, people do not realise the seriousness of environmental destruction and still misuse our scarce natural resources.

Evidence
In Singapore, there is conservation of natural habitats like Cheek Jawa and mangrove forests to protect these habitats from exploitation. Furthermore, the National Environmental Agency (NEA) sets strict rules and monitors the possible negative impact firms' major activities have on the environment.
In Singapore, Zero Waste SG started the Bring Your Own (BYO) Singapore movement in 2017 where retailers offered incentives to customers who bring their own reusable bags, bottles or containers. despite the launching of "Bring Your Own Bag" day, and numerous recycling campaigns, people still consume at unsustainable levels. A survey carried out by the NEA showed that over 40% of shoppers did not bring their own bags when shopping. This is evident in many cases where shoppers use countless plastic bags when doing grocery shopping.
Furthermore, despite the high price of oil, taxes on cars and subsidies for public transport fares, people still drive their cars whenever and wherever they can, as they deem the convenience provided by cars more important than saving the environment via reducing car usage to reduce carbon emissions. In addition, profit-maximising firms made up of "money-minded" businessmen and managers have little concern about the environment, allowing their factories to emit large volumes of greenhouse gases, such as sulphur dioxide and carbon monoxide, which give rise to ozone depletion and acid rain.

<p>However, as I mentioned earlier, it is an over-generalisation to claim that all individuals “lack conscience” about saving the environment, as there have been many individual efforts to conserve the environment.</p>	<p>For instance, many environmentalists, such as James Lovelock and Frank Furedi, who are concerned about the severity of environmental destruction, have written articles and books and have organised campaigns to raise awareness about environmental issues among the public.</p> <p>In addition, schools and educational institutions have organised activities that create awareness about the importance of environmental conservation, allowing students to take up co-curricular activities such as One Earth and The Life Club to take action to save the Earth at a young age. Lastly, more individuals have taken small steps in conserving the environment by switching off the lights when not in use, and using less water, electricity and other resources in their everyday lives.</p>
<p>Many firms and industries that engage in technical and mechanical processes which emit greenhouse gases have switched to environmentally-friendly methods of production.</p>	<p>For instance, DuPont, an international firm, has recently adopted biotechnology in its production methods to reduce carbon emissions by a large amount.</p> <p>Furthermore, there are a growing number of scientists who are exploring and experimenting with green technology, applying environmental science to bring about nature conservation and to curb the negative impact human action has on the environment.</p>
<p>Furthermore, it is, after all, the people who influence the government to make policies regarding environmental conservation. Also, the ministers and policy-makers in the government are “people” who care enough about the environment to set policies to curb the effects of environmental destruction.</p>	<p>For example, the Kyoto Protocol would not have been ratified by so many countries if not for protests by the international audience that pressured many countries like Russia to sign. Closer to home, policies set by the NEA and the government protect some of Singapore’s key natural habitats like mangroves and Check Jawa. However, such policies were made because of the general public’s concern over destruction of these habitats and the public’s appeal to the government to conserve these areas.</p>
<p>However, although I have disagreed with the statement and pointed out that there are policies and individual actions to bring about environmental conservation, this does not</p>	<p>Firstly, there should be further improvement in governmental efforts to conserve the environment. For instance, governments of each country can set more laws and regulations to minimise environmental destruction. This includes employing more efficient regulatory</p>



mean that there is enough action taken by the government and individuals. There should be more government policies and more people taking action to save the environment.	bodies to monitor factories' emission of greenhouse gases and make sure that there is no illegal logging.
	Furthermore, the fact that many developed nations have increased their efforts to save the Earth does not mean that all countries have implemented enough policies in environmental conservation. For example, the United States, one of the countries with the highest carbon emissions, has yet to ratify the Kyoto Protocol. China and Hong Kong should also set stricter rules to prevent further pollution in the city areas of these countries.
	Secondly, further educational measures should be adopted to educate the public about the importance of saving the Earth so that more people can play their part in environmental conservation. Small individual actions like reducing the consumption of water and electricity should be encouraged.

#### P1 Lazy Sheet

Why are countries so reluctant to cooperate in tackling global environmental problems and what can be done to solve this problem?

Argument	Evidence
Bang	In the past five years, the world has seen a number of rare phenomena arising from the changing climate – with the USA's Niagara Falls freezing and the deadly heat wave that hit Pakistan during the fasting period that left hundreds dead on the streets leaving the morgues packed.
For most part of the developing world, economic advancement trumps environmental preservation.	These two goals are often seen as competing with the former taking precedence.  China, after opening her economy in a move to a more market-orientated economy under Deng Xiaoping's leadership has become a pollution haven attracting multi-national corporations.

	<p>The lack of stringent pollution laws threatens the health of many of her citizens. A normal day in cities like Beijing and Shanghai means smog-filled skies and a lack of fresh air, such that it has become normal to wear a mask daily out on the streets.</p> <p>The same goes for India. The growing divide between the upper class and the poor, the thinning cities and the struggling countryside, coupled with Prime Minister Modi's goal of providing electricity access to millions around India means that coal production is at an all-time high.</p>
<p>Furthermore, the immense challenge of coming to a global consensus in dealing with global environmental problems, notwithstanding the difficulties of decarbonising an economy has proved to be a major hindrance in a global pursuit of environmental issues.</p>	<p>One only needs to look at the failing of the Kyoto Protocol in ensuring any sustainability environmental preservation. The countries pledged to decrease carbon emission from 1990 levels by less than 10%, but only ended up increasing the output by a whopping 58% - a major embarrassment for the governments involved.</p> <p>Additionally, the agreement was met with much resistance from many countries, most notably the US (the largest polluter in the world at that time) who refused to rectify it due to the lack of participation from developing nations, as well as Canada who pulled out after recognising that enormous challenge of decarbonising her country.</p>
	<p>Certainly, countries around the world are beginning to realise the mounting significance of coming up with more environmentally-conscious policies and the Paris Climate Change Conference held in December last year is testament to that. Many developing countries, including the sinking Marshall Islands, have made desperate appeals to their northern counterparts to provide financial aid to fund better infrastructure to mitigate the impending global threat. Even then, the outcome of the climate change talks is largely questionable in the ability of individual countries to adhere to the agreed standards.</p>



<p>What we need is for developed countries, having achieved significant economic affluence to pave the way for a concerted effort in dealing with environmental problems that plague our planet today.</p>	<p>Indeed, the US and China, arguably the most politically influential players on the global stage have come forth to galvanise countries to follow their lead in adopting more environmentally-friendly policies.</p> <p>Obama has pledged that the US will decrease carbon emissions by 32% by 2020 as he focuses on targeting the main source of pollution – eliminating the carbon power plants found around the country.</p> <p>China has pledged to peak carbon emissions by 2030. As the two top polluters in the world, both countries have established partnerships that focus on the development of green and sustainable sources of energy through research.</p> <p>Meanwhile, France has unanimously passed a national law to reduce food wastage, legislating supermarkets to donate the unsold food to charities. Greenhouse gas Methane is produced when food is wasted and is 50 times more polluting than carbon dioxide.</p>
<p>It is also imperative that countries, whether developed or developing realise that both economic growth and environmental concerns can come in tandem. This is especially in the area of eco-tourism, where profits come with preservation. This then serves as an incentive for countries to place both economic affluence and environmental preservation as the twin goals in managing the country.</p>	<p>Australia has designated the Great Barrier Reef, a major tourist attraction, a sanctuary for preservation, restricting the fishing rights there. Home to a rich marine life, destructive fishing practices have severely damaged the intricate ecosystem there with 90% of the corals that once decorated the seabed of Australia bleached and damaged.</p> <p>On the other hand, Bhutan prides itself on the rich exotic landscape and wildlife that reside in the landlocked country. The government had consciously restricted tourism by stipulating a fixed number of tourist who can enter the country's borders, in a bid to reduce the amount of economic and environmental objectives.</p>
<p>Technology can also serve as a means to deal with global environmental problems, in light of the difficulty of coming to a global compromise on</p>	<p>For instance, both NASA and Boeing have come together to develop more environmental-friendly aircraft that emit less carbon dioxide.</p>

environmental affairs  
concerning the world.

Scientists have also developed a new technique to grow meat in labs by extracting from the stem cells of a cow.

### P1 Lazy Sheet

‘We have little control over the environment we live in.’ To what extent is this true?

Argument		Evidence
Some of the damages we have inflicted upon the environment could be irreversible. Even if human beings stop all of their economic activities, it is possible that the environment cannot be restored to its previous state.	Yes, little control	Some environmental changes undergo the positive feedback loops where some degradation can lead to even more degradation. Take global warming for instance. The rise in temperature can melt permafrost in colder regions, releasing even more greenhouse gases into the atmosphere that warms up the planet even further.
		The Intergovernmental Panel on Climate Change (IPCC) states that anthropogenic warming could have irreversible effects on the planet.
The powerful forces of nature are beyond human control.	Yes, little control	According to the U.S. Geological Survey (USGS), the world's volcanoes, both on land and undersea, generate about 200 million tonnes of carbon dioxide (CO <sub>2</sub> ) annually, leading to warming of the planet.
		Swamps and bogs naturally release large amounts of methane into the atmosphere.
		Natural geological processes can also result in earthquakes such as those seen in Nepal in 2015 (with about 9000 people killed). An earthquake followed by a tsunami in Sulawesi, Indonesia in 2018 killed over 4000 people.



		Hydrological changes can result in unusually severe hurricanes and flooding as seen in the 2017 hurricanes in the Caribbean and the United State, and floods in Bangladesh.
However, as powerful as these natural forces may seem, they are partially attributable to human activities.	Rebuttal	According to the Netherlands Environmental Assessment Agency, the world the world emitted 36billion tonnes of CO2 in 2015 through human activities, dwarfing that released naturally by volcanic activities.
		Incidences of earthquakes have also increased in the central region of America such as Oklahoma due to hydraulic fracturing and underground water disposal. Human activities are contributing to what we traditionally perceive as 'natural disasters'.
We have reasonable control over the environment because of human ingenuity in solving problems.	No, we have significant control	Pollution can be effectively controlled with the right technologies. Wastewater treatment plants and air scrubbers can mitigate industrial pollution on the environment.
		Carbon sequestration technologies can segregate carbon emissions from our combustion of fossil fuels and store the greenhouse gases underground.
		Development has also been made to address large-scale environmental problems. Geoengineering (or climate engineering) has been studied extensively in recent years to mitigate the effects of the sun on global warming. By spraying sulphuric acids on the upper atmosphere, we could partially block out sunrays that heat up the planet.
With enough political will, we could drastically alter the fate of the planet.	No, we have significant control	With the ratification of the Paris Agreement in 2017, almost all countries have agreed to limit global temperature rise to within 2 degree Celsius above pre-industrial levels. The world can look forward to more collective effort in addressing climate change.

‘Environmental degradation is the biggest threat facing the world today.’ To what extent do you agree?

Argument		Evidence
Environmental degradation is indeed worrying as it has shown no sign of abating amidst humanity's economic expansion.	is a major threat	Since the start of the Industrial Revolution in 1750s, global annual mean CO <sub>2</sub> concentration has increased steadily. For the last 800,000 years, studies of ice cores show that CO <sub>2</sub> concentrations stayed between 180 and 290 ppm. As the global economy keeps growing, the CO <sub>2</sub> level is now at a new high of 400ppm, the highest in several million years.
		Our obsession with cheap fuel has pushed companies to explore all sources of fuel. An example of this is hydraulic fracturing where water and chemicals are injected into oil and gas wells at incredibly high pressures to fracture rocks and shale. This has led to changes in geologic faults and been linked to increased seismic activities such as earthquakes in Texas and Oklahoma in 2018 and 2019.
Perhaps the strongest argument is that environmental problems are a threat to humanity as it gravely threatens our survival.	is a major threat	The falling populations of tuna and sea turtles (from overfishing and destruction of marine habitat) that prey on jellyfish have led to an increase in jellyfish populations in the oceans. As jellyfish consume fish eggs and compete for food with fish that we eat, the world is gradually running out of supply of fish.
		Global warming and rising sea levels may wipe out island countries and affect coastal or low-lying cities. About 30 per cent of Singapore land is less than 5m above the mean sea level. According to the National Climate Change Secretariat (NCCS), sea levels will rise by 0.25m to 0.76m by the end of the century. Parts of Singapore may disappear under water if climate change shows no sign of abating.

However, there are signs that the trends of environmental degradation are reversing.	Rebuttal. Is not the biggest threat	In 2016, almost all governments ratified the Paris Climate Agreement, committing to keep global temperature below 2 degree Celsius above pre-industrial levels.
		China, commonly viewed as the biggest polluter due to its rapid economic expansion, has shown great willingness to tackle an array of environmental problems. The Chinese government is taking the lead in the Paris Climate Deal.
		In its latest Five-Year Plan, China has also indicated that the government will limit factory emissions of tiny harmful particulate matter (PM2.5) – a deadly air pollutant – down by 25%.
		In 2020, amidst the COVID-19 pandemic, NASA satellite measurements revealed significant reductions in air pollution over the major metropolitan areas around New York. In fact, in that area the nitrogen dioxide (NO2) levels in March 2020 are about 30% lower than the average NO2 levels in Mar of previous years.
Despite the multi-faceted threat of environmental destruction, there still remain other equally pressing issues that one should not ignore. The foremost among them is perhaps man's ability – and alias, eagerness – to harm one another.	There are other serious threats	The civil war in Yemen has been ongoing since 2015 and numerous airstrikes have been carried out in Yemen. In 2018, a Saudi-led coalition airstrike killed at least 26 children in a school bus in a busy market.
		The recent rise in terrorist attacks also lend credence to the claim that the world has become increasingly trigger-happy. The seemingly endless list of attacks is worrying: Barcelona, London, Nice, Berlin, Stockholm, Manchester, Baghdad, Charlottesville, New York, Orlando...
In addition, some underdeveloped parts of the	There are other serious threats	In 2017, Somalia faced one of its worst draughts, leaving 6million Somalians with food shortages. Somalia's Prime

world are still beset by abject poverty.

Minister announced that over 100 people had died from hunger in a short span of 48 hours. Thousands more died from Cholera, a disease that mainly affect malnourished children.
Every day, 22,000 children in developing countries die from poverty-related diseases. While this is nothing new, our inability to eradicate such crises is disheartening.

### P1 Lazy Sheet

'Everyone should be involved.' How practical is this approach in tackling environmental issues?

Argument
It would be inaccurate to say that the mentality that everyone should have in tackling environmental issues is completely impractical.
However, this approach has a serious flaw that will burden attempts at tackling environmental issues.
It needs to be noted that even those who acknowledge that everyone has a part to play in

Evidence
Simple things can be changed in our lives to help tackle environmental issues.
For example, if every single member of the Singaporean public were to recycle a sheet of paper every day, in a year, the amount of paper recycle would be enough to amount to several acres of rainforest that would have been destroyed to satisfy the needs of our country.
This view that everyone should be involved may be somewhat impractical due to the very fact that it relies on whether everyone will want to be involved in protecting the environment.
In Singapore, even though the government has made it such that recycling bins are commonplace, and recycling drives no longer require no more out of an individual than to place what they wish to recycle in a plastic to leave outside the door, the recycle bins are still largely unused and the recycling drive have seen abysmal participation rates.
A large majority of people that make up the 'everyone' in the question are just mere civilians. Even though they possess great collective power,



tackling environmental issues and want to do so are often times unable to do so or simply lack the power to do so.	it still does not suffice to be able to tackle certain environmental issues.
Despite the majority of the population being unable to do much in the case of such large-scale damage, there exists several groups of people who can affect the changes necessary to tackle such environmental issues.	For example, the British Petroleum oil spill off the Gulf of Mexico, which posed a great environmental problem, polluting the area around the spill and harming the ecosystem as a result. Though it is acknowledged that the onus is on everyone to tackle the environmental issues, it would be simply impractical and unfeasible in this situation where 'everyone' would not have been able to do much about the situation at all.
	The government holds power over the judicial and legislative systems and is able to set down laws to prevent groups of people from creating environmental problems, effectively nipping the issue in the bud.
	The Paris Climate Agreement saw close to 200 governments ratifying the commitment to keep global temperature rise below 2 degree Celsius from pre-industrial levels.
	China has begun to crack down on power plants and vehicle manufacturers with poor emission standards.

#### P1 Lazy Sheet

'The solution to our environmental problems lie with the people, not with governments.' Do you agree?

Argument	Evidence
The masses contribute to environmental problems today by wasting resources through their day to day actions, such as refusing to turn off lights and fans when not using a room in their house, turn the air conditioner to the lowest	A brief example to show this wastage of resources is how in Singapore, the National Environmental Agency found that Singaporeans generated 763 million kg of food waste in 2018 – the weight of more than 54,000 double decker buses. Considering the fact that Singapore is a small country, the scale of food wastage in bigger



temperature possible, and wasting food and water.	nations like China and America would undoubtedly be proportionally bigger.
However, this is not necessarily the case.	The scale and impact of our current environmental problems is so great that changing societal habits of the masses is no longer sufficient to counter environmental degradation if they can even be changed in the first place, given man's natural tendency to be resistant to change which is evident in how we choose to shape our environment to fit us rather than adapt our habits to fit nature.
Governments potentially wield a significant amount of power to cut down on this usage.	For example, in the 2009 Copenhagen Summit, USA and China met and pledged to prevent the world temperature from increasing 2 degree Celsius. In the USA, President Obama also pledged to cut down on carbon emission by 17% by 2020.
However, the truth is far from it. There is no incentive for their governments to cut down or even remain at their current level of pollution.	While governments do have the power to make a huge change and cut down on their energy usage, it is unlikely they will do so. Politically, they maintain a front by appearing to strive towards solving the Earth's environmental problems. Realistically, they do not for many reasons.  Firstly, China and USA are engaged in a power struggle. China is a rising superpower and in order to overtake the USA economically, it has to continue and even increase its usage of resources to generate more energy for factories and other industrial developments.  Secondary, developing countries themselves are in the midst of achieving a better standard of living for their people and breaking out of the poverty cycle.
The solution to our environmental problems lies with the conglomerates. Big private conglomerates use a lot of resources, some even more than governments of small countries.	For example, an Indonesian tycoon who owns one of the biggest logging companies in Indonesia recently partnered with global environment organisation Greenpeace, pledging to cut down 50% of the logging activities of his company, with Greenpeace present to ensure that he held true to the pledge.

Consumers can make purchase decisions that influence business operations.

Labels such as the iconic green frog by Rainforest Alliance help consumers purchase products that are sourced from sustainable and eco-friendly suppliers which do not harm the rainforests.

### P1 Lazy Sheet

## Should developed countries be expected to do more to solve the water crisis?

### Argument

The first reason why developed countries should take the lead lies with their wasteful lifestyles.

Despite the responsibility that developed nations should claim, this task to ameliorate the water crisis remains one that is fraught with difficulty. This is due to the sheer costs and magnitude to the issue.

### Evidence

Many consumers in developed countries often take the availability of water for granted, using it as if it runs from an endless tap. Excessive amount of water is needed to operate facilities such as water theme parks, aquariums, and personal swimming pools.

In contrast, there are people in other parts of the world suffering due to the lack of rainwater to water their crops and a lack of potable water to quench their thirst.

While in France, wine is cheaper than water indicating a surplus of the former, young girls in Tibet have to travel many miles each day to dried-up wells, only to end up scraping the bottom of the wells for a meagre of water.

In Singapore, we acknowledge our lack of water resources, and turn to neighbour Malaysia to obtain half our water supply. However, due to the recent developments in technology, we have been able to desalinate seawater and purify water to supplement our water supply. However, we must not forget that Singapore is a wealthy country with the budget to sustain these water reclamation methods.

Even with the success of Hyflux, the company which runs Singapore's desalination and reverse osmosis plants, we only have 2 of such plants on the island to increase our water supply.

	<p>Furthermore, this model may only work well in small countries like Singapore. Using such methods of water reclamation in large countries like California would be an ambitious task.</p>
<p>However, we can still see that it is within the ability of the developed countries to make changes, despite being unable to solve the crisis with technology alone.</p>	<p>The problem can still be solved by the collective effort of the people.</p> <p>In China, it was emphasised by Greenpeace- an environmental advocacy group – that many factories producing clothing continue to pollute rivers with the dye used in manufacturing. These factories belong to large fashion brands, such as H&amp;M, Zara and Uniqlo. Due to our changing fashion preferences, we as consumers fuel the demand for clothing and indirectly caused the continued pollution of water sources. This pollution is also prevalent in other supply chains such as the rearing of farm animals for food and agriculture, where animal waste and insecticide go into and pollute the rivers and water bodies in developing regions. By exercising a conscious decisions to cut down our consumption of material goods and keeping such consumption to a minimum such that we do not consume in excess, we can indirectly help to reduce the pressures on water supply in places suffering from a lack of clean water.</p> <p>Even in the energy market, the controversial practice of fracking, pumping chemicals into shale rock to release the trapped oil and natural gases has also polluted aquifers and water basins in the United States. There is no doubt that our excessive consumption patterns are toxic and unsustainable. Thus, we, as citizens of the developed world can actually play a part to reduce the extend of the water crisis by reducing or changing our consumption patterns.</p>
<p>Developed countries continue to have the ability and potential to make quicker and more efficient change, and they should keep this in mind.</p>	<p>Despite the lack of sustainable resources and technologies at present to solve this volatile crisis quickly, developed countries, empowered with knowledge and ability should continue to put in extra effort to ensure that the problem can be solved quickly.</p>



The life straw and back-washing are cheap and effective filtration solutions to help residents of poorer countries cope with the pollution of their water sources.



# Questions on Environment

## Priorities

'Environmental concerns and economic growth cannot co-exist.' Do you agree? 2011

In your society, how well are the demands of the economy and the environment balanced? 2015

In your opinion, is your country doing enough to protect the environment?

'Environmental degradation is the biggest threat to the world today.'  
Going green is a luxury only developed countries can afford.  
Comment.

## Responsibility

'Everyone should be involved.' How practical is this approach in tackling environmental issues?

'People Power is the key to solving environmental problems.' Discuss.  
'The environment should be the responsibility of the individual, not the government.' Comment.

'The solution to our environmental problems lie with the people, not with governments.' Do you agree?

Discuss the view that the environment can only be saved through the efforts of developed nations.

Do you agree that we deserve the environmental problems we have today?

The developed world should bear the burden of climate change.' Discuss.

Should developed countries be expected to do more to solve the water crisis?

Should the responsibility for environmental conservation be shouldered solely by developed nations?



## Conservation / Biodiversity

How important is it to save plant and animal species which are in danger of extinction? 2013

'Too little, too little.' Does this describe our efforts at environmental conservation?

Are the concerns about the need for us to conserve our environment exaggerated?

Is there any value in conserving biodiversity?

## Energy / Climate Change

Assess the view that attempts to control climate change can never be truly effective. 2017

Examine the claim that the world is too dependent on oil. 2005

Should there be any controls over the production of energy when the need for it is so great? 2015

Discuss the view that, with an increasing global need for energy, every possible source should be exploited to the full. 2014

Is it possible to protect the environment when countries require increasing amounts of energy to progress? 2007

Is it possible to protect the environment when many countries require increasing amount of energy to progress?

Renewable energy brings more harm than good. Comment.

## Others

Assess the view that most natural disasters are the result of human activity. 2016

Can the transport of food over vast distances be justified? 2009

How far is recycling the answer to the problem of waste? 2004

How far is modern consumerism a threat to the environment?

There is no lack of policy in environmental conservation; it is people who lack conscience and sensitivity. How far is this true?



'We have little control over the environment we live in.' To what extent is this true.





# Glossary

<b>ANTHROPOCENTRIC</b>	The belief that humans hold a special place in nature; being centred primarily on humans and human affairs.
<b>AQUIFERS</b>	Porous, water-bearing layers of sand, gravel, and rock below the earth's surface; reservoirs for groundwater.
<b>GROUNDWATER</b>	Water held in gravel deposits or porous rock below the earth's surface; does not include water or crystallization held by chemical bonds in rocks or moisture in upper soil layers.
<b>BIODIVERSITY</b>	The genetic, species, and ecological diversity of the organisms in a given area.
<b>BIOMASS</b>	The total mass or weight of all the living organisms in a given population or area.
<b>CAPTIVE BREEDING</b>	Raising plants or animals in zoos or other controlled conditions to produce stock for subsequent release into the wild.
<b>CARCINOGENS</b>	Substances that cause cancer.
<b>CASH CROPS</b>	Crops that are sold rather than consumed or bartered.
<b>CHLOROFLUORO-CARBONS</b>	Chemical compounds with a carbon skeleton and one or more attached chlorine and fluorine atoms. Commonly used as refrigerants,

	solvents, fire retardants, and blowing agents.
<b>CORNUCOPIAN FALLACY</b>	The belief that nature is limitless in its abundance and that perpetual growth is not only possible but essential.
<b>DEBT-FOR-NATURE SWAP</b>	Forgiveness of international debt in exchange for nature protection in developing countries.
<b>DECLINE SPIRAL</b>	A catastrophic deterioration of a species, community, or whole ecosystem; accelerates as functions are disrupted or lost in a downward cascade.
<b>DESERTIFICATION</b>	Denuding and degrading a once-fertile land, initiating a desert-producing cycle that feeds on itself and causes long-term changes in soil, climate, and biota of an area.
<b>DRIP IRRIGATION</b>	Uses pipe or tubing perforated with very small holes to deliver water one drop at a time directly to the soil around each plant.
<b>ECOTOURISM</b>	A combination of adventure travel, cultural exploration, and nature appreciation in wild settings.
<b>ENERGY RECOVERY</b>	Incineration of solid waste to produce useful energy.
<b>ENVIRONMENTAL HORMONES</b>	Chemical pollutants that substitute for, or interfere with, naturally occurring hormones in our bodies; these chemicals may trigger reproductive failure, developmental abnormalities, or tumour promotion.



<b>ENERGY EFFICIENCY</b>	A measure of energy produced compared to energy consumed.
<b>GAIA HYPOTHESIS</b>	A theory that the living organisms of the biosphere form a single, complex interacting system that creates and maintains a habitable Earth; named after Gaia, the Greek Earth mother goddess.
<b>GLOBAL ENVIRONMENTALISM</b>	A concern for, and action to help solve, global environmental problems.
<b>GREEN REVOLUTION</b>	Dramatically increased agricultural production brought about by "miracle" strains of grain; usually requires high inputs of water, plant nutrients, and pesticides.
<b>INDUSTRIAL REVOLUTION</b>	Advances in science and technology that have given us power to understand and change our world.
<b>LIFE-CYCLE ANALYSIS</b>	Evaluation of material and energy inputs and outputs at each stage of manufacture, use, and disposal of a product.
<b>ENVIRONMENTAL MITIGATION</b>	Repairing or rehabilitating a damaged ecosystem or compensating for



	damage by providing a substitute or replacement area.
<b>MORAL AGENTS</b>	Beings capable of making distinctions between right and wrong and acting accordingly. Those whom we hold responsible for their actions.
<b>NIMBY</b>	Not In My BackYard: the NIMBY syndrome or mindset consists of people who are apathetic towards problems that affect people elsewhere.
<b>NUCLEAR FISSION</b>	The radioactive decay process in which isotopes split apart to create two smaller atoms.
<b>NUCLEAR FUSION</b>	A process in which two smaller atomic nuclei fuse into one larger nucleus and release energy; the source of power in a hydrogen bomb.
<b>PARTICULATE MATERIAL</b>	Atmospheric aerosols, such as dust, ash, soot, lint, smoke, pollen, spores, algal cells, and other suspended materials; originally applied only to solid particles but now extended to droplets of liquid. Eg. PM2.5
<b>PERMAFROST</b>	A permanently frozen layer of soil that underlies the arctic tundra.
<b>PHOTOVOLTAIC CELL</b>	An energy-conversion device that captures solar energy and directly converts it to electrical current.
<b>REGENERATIVE FARMING</b>	Farming techniques and land stewardship that restore the health and productivity of the soil by rotating crops, planting ground cover,



	protecting the surface with crop residue, and reducing synthetic chemical inputs and mechanical compaction.
<b>STEWARDSHIP</b>	A philosophy that holds that humans have a unique responsibility to manage, care for, and improve nature.
<b>STRIP FARMING</b>	Planting different kinds of crops in alternating strips along land contours; when one crop is harvested, the other crop remains to protect the soil and prevent water from running straight down a hill.
<b>STRIP CUTTING</b>	Harvesting trees in strips narrow enough to minimize edge effects and to allow natural regeneration of the forest.
<b>SUPERFUND</b>	A fund established by Congress to pay for containment, clean-up, or remediation of abandoned toxic waste sites. The fund is financed by fees paid by toxic waste generators and by cost-recovery from clean-up projects.
<b>TECHNOLOGICAL OPTIMISTS</b>	Those who believe that technology and human enterprise will find cures for all our problems. Also called Promethean environmentalism. Prometheanism prioritises human interests and needs over those of ecosystems; and believes that environmental problems can be resolved through human innovation.



<b>UTILITARIAN CONSERVATION</b>	A philosophy that resources should be used for the greatest good for the greatest number for the longest time.
<b>TOPSOIL</b>	The first true layer of soil; layer in which organic material is mixed with mineral particles; thickness ranges from a meter or more under virgin prairie to zero in some deserts.
<b>CARBON SINK</b>	Places of carbon accumulation, such as in large forests (organic compounds) or ocean sediments (calcium carbonate); carbon is thus removed from the carbon cycle for moderately long to very long periods of time.
<b>CARBON TAX</b>	A carbon tax is a tax levied on the carbon content of fuels.
<b>DEPLETION</b>	The result of the extraction of abiotic resources (non-renewable) from the environment or the extraction of biotic resources (renewable) faster than they can be renewed.
<b>EFFLUENT</b>	Liquid industrial wastes, or sewage discharged into a river or the sea.
<b>WASTE MANAGEMENT</b>	The management of waste collection, handling, processing, storage and



	transport from where it is produced to where it is finally disposed
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# ENVIRONMENT QUOTES

"As stewards of God's creation, we are called to make the earth a beautiful garden for the human family." - Pope Francis, in Manila in 2015.

"A clean environment is a human right like any other." - Dalai Lama

'It is our collective and individual responsibility to preserve and tend to the environment in which we all live.' - Dalai Lama

"Good environmental policy is good economic policy." - Bernie Sanders, US Congressman and Presidential hopeful in the 2016 presidential election.

"Sadly, it's much easier to create a desert than a forest." - James Lovelock, a scientist who is known for proposing the Gaia hypothesis.

"Raising awareness on the most pressing environmental issues of our time is more important than ever." - Leonardo DiCaprio, Oscar-winning actor.

"We only get one planet." - Leonardo DiCaprio, at the UN Climate Summit.

"We won't have a society if we destroy the environment." - Margaret Mead, renowned American author and anthropologist.

"The Earth is what we all have in common." - Wendell Berry

"What's the use of a fine house if you haven't got a tolerable planet to put it on?" - Henry David Thoreau



## Final Note

*You keep forgetting what you've read. Your essays are always out of point. There's so much to study for GP that you can't fit it all in your head. You don't even know how to start revising. Honestly, I get your frustrations.*

*We have spent years trying to make GP a painless subject for everyone. It hasn't been an easy journey. We spent weeks refining notes and resources, and we still do it over and over again, to get to knowledge out. I didn't care that much about the financial reward. At one point I was even broke as shit. Success sure didn't come overnight. We failed many times. "Cher, there's damn a lot to remember for GP man," one of our past students was reeling from the untouched resources sitting in front of him, right before his mid-year.*

*But we persevered. We stick to our goals: to inspire curiosity in the younger generation, to illuminate as many minds as possible, to make knowledge fun, to help students save time so they have time for other subjects. We stay up till 3am, reading, distilling and*

redesigning useful resources for everyone out there. So that now you can enjoy the fruits of our labour.

Beyond useful info, this booklet also contains the hard work of many many people. So use it well. If you'd like to share it, be my guest. Pay it forward!

“Cher” the same student texted me one afternoon. “I got B! First time.”

We live for moments like this.

KP

First Class

PS don't stop here. This booklet is a great introduction, but you will need more to do well for GP and in life :) To find out more useful content and tips about how to write stunning essays, follow us

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