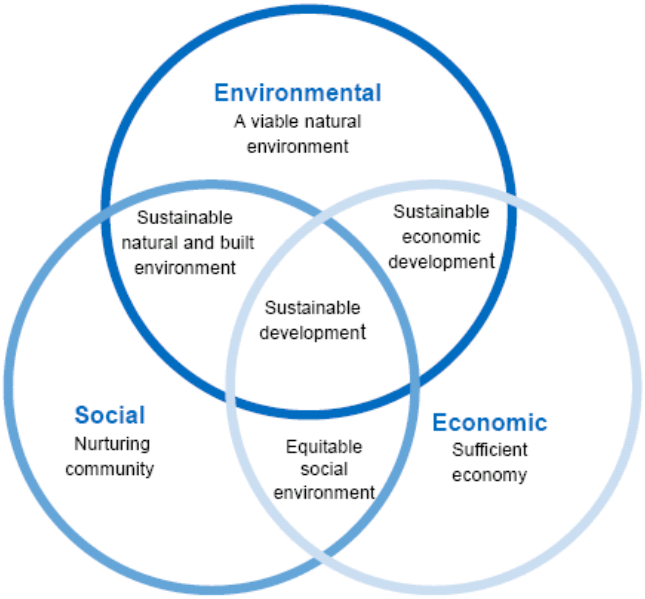
Dear Delegates,

Welcome to the fourth Metro Detroit Model United Nations Conference. Over the past four years we have worked tirelessly to develop an exciting and innovative Model United Nations format that challenges our delegates in a competitive and inclusive environment. We work year-round to ensure that our staff members are as prepared as possible to ensure that all of our delegates can participate in our debates. Moreover, the topics that you will discuss have been carefully selected for their global importance and the larger questions that they ask. When reading through the following background guide, be sure analyze and evaluate what larger questions are being provoked by the topic and what commentary these larger questions make about the current international system. Finally, if you have any questions, be sure to reach out to your chairs on the email address provided on their committee page.

We look forward to welcoming you in January,

Mitchell Dennis
Secretary General of the Metro Detroit Model United Nations IV

Increasing Sustainability of Cities



History of Sustainability in US Cities

Sustainability is a huge focus of city planners and even of entire countries. Not many people, however, know all of what that phrase entails. Sustainability is measured through three main variables, Economic, social and environmental, or profit, people and planet.[1] People mostly means the quality of life for the population such as life expectancy and obesity rates. Planet has to do with how the natural resources and land is used and if it's efficient and renewable if possible. Profit is from a business standpoint, it is the measure of connectivity combined with the ability to start a business and other economic measures such as GDP per capita. Most cities cannot balance all three and will lean more toward one or two of the variables. So with the most "green" city may not be the most sustainable city overall if its businesses and people aren't as well taken care of.

One of the earlier instances of an American city attempting to create a more sustainable layout was in Portland, Oregon in the early 1970s. The newly elected mayor, Neil Goldschmidt, was trying to find ways to lessen the deterioration of Portland, a city where the federal carbon monoxide standards were violated every three days and the effects of urban degradation were becoming more and more prevalent. He did this by improving citizen participation and improving public amenities by creating citizen led subcommittees to get the people themselves involved in their own city's plans.[2] Importantly, this also included programs to revitalize the downtown core and waterfront, building light rail transit as well as increasing the density of downtown.[3]

Chicago also has a long history of sustainable development, however, their older more, proto-sustainable acts were flawed but opened the door for better developments across the country. For example, in the late 19th century, Chicago installed the nation's first extensive underground sewage systems, greatly improving the quality of life for its citizens.[4] However, the system drained into Lake Michigan which polluted the city's primary water supply. This would be resolved in the early 1900s

---

[1] "Sustainable Development." *UN ECOSOC.* https://www.un.org/ecosoc/en/sustainable-development.
[2] "USA - Oregon (Portland) - Sustainable City." *The EcoTipping Points Project.* http://www.ecotippingpoints.org/our-stories/indepth/usa-portland-sustainable-regional-planning.html.
[3] Ibid.
[4] "Sustainable Development." *Chicago Planning History.* http://chicagoplanninghistory.weebly.com/sustainable-development.html.

by draining it into the Mississippi River, which wasn't ideal, but helped the residents of Chicago as it does not draw its water from the Mississippi. Much later, in the 1980s, Mayor Richard M. Daley would improve the development of the city by tearing down high rises near the projects, or concentrated areas of low-income housing, to make way for mixed income housing, created many parks and green areas, pouring more money into education and generally improved Chicagoans quality of life.[5] In 2005 the city started creating more LEED certified buildings. LEED Certification is a commonly used rating system for a building's sustainability, or greenness.[6] It also employed the green roof program that incentivized planting greenery on top of buildings to improve air quality and help combat the heat island effect, it even made the first municipal building with a green roof.[7] The city also, in 2010, started offering rebates to citizens that create environmentally sustainable backyards. The city has continued to help lead the American charge towards a more sustainable world.

The Three Pillars of Sustainability

While the three pillars of sustainability were briefly mentioned in the previous section they deserve to be elaborated upon. One important thing to note is how different people view and prioritize these three pillars. More politically conservative cities and business owners are probably going to value the profit and jobs more than the other two (planet and people). They are more likely to want to go green in a way to help the cities economies than they are to help the environment. Cities in more politically liberal areas are more likely to prioritize the environment than they would maybe the other pillars. Cities struggling with overpopulation such as New York might take a special interest in more efficient ways to organize their people and funnel more energy into efficient housing and better public transportation, such as improved rail, bike lanes, and multimodal transportation stations. People themselves that are just trying to live their lives in an urban environment will also most highly value the people pillar and want more efficient housing and policies that help save them money while improving the quality of life. Though it should be said that most cities that are aiming for sustainability have plans for how they are going to handle all three fields.[8]

What does it mean to "Go Green"?

According to the Middletown Thrall Library in New York City, "going green" means, "to pursue knowledge and practices that can lead to more environmentally friendly and ecologically responsible

---

[5] "Tearing Down Chicago's Public Housing Helped Many Kids in Long Run: Study." *DNA Infor.* https://www.dnainfo.com/chicago/20160327/bronzeville/tearing-down-chicagos-public-housing-helped-many-kids-long-run-study.

[6] "LEED Certification." *US Green Building Council.* https://www.usgbc.org/help/what-leed.

[7] "Sustainable Development." *Chicago Planning History*. http://chicagoplanninghistory.weebly.com/sustainable-development.html.

[8] "These are the world's most sustainable cities." *World Economic Forum*. https://www.weforum.org/agenda/2016/09/these-are-the-world-s-most-sustainable-cities/.

decisions and lifestyles, which can help protect the environment and sustain its natural resources for current and future generations"[9]. What that boils down to is being more responsible and efficient with urban planning so that we do not ruin the world for future generations. So when the phrase "Going Green" is used in this article and in others, keep in mind that it means all three pillars (People, Planet, Profit).

Current State of Sustainability in America Cities

Later, as the effects of climate change were starting to become more and more noticeable, numerous cities in the United States began making significant changes. Portland would once again lead the way by becoming the first North American city to go completely carbon neutral.[10] It did this to follow the protocols set out by the Kyoto Protocols. Additionally, in San Francisco significant efforts were made to reduce waste. By 2012, 80% of its trash was recycled or composted, instead of being put in a landfill, where it will sit for long periods of time.[11] But improvements in sustianability are not limted to the west coast. Minneapolis also took a good step in 2007 by strongly promoting use of the tap water to cut water bottle usage, which eliminates plastic waste which can lay in landfills for 100s of years before decomposing. Austin is becoming one of the greenest cities both literally and metaphorically. For the past 9 years, residents can pay higher electric bills in exchange for energy from sustainable sources. This program has been successful, despite the raised costs to consumers. The city also boasts 30 square miles of parkland. New York has been forced to develop more sustainable infrastructure since the city is so densely populated. Many of these reforms come out of Bloomberg's 2007 & 2011 plaNYC plan, some included reducing emissions by 30%, gaining the best air quality of a large city, and improving clean building codes. Many more major US cities have made similar reforms in the last decade as well.[12]

While some cities are making massive strides in Sustainability, others have just now begun. Recently Detroit, a city which has usually lagged behind other American cities in terms of sustainability, recently created the office of sustainability and has chosen its first director to start bringing it in the right direction.[13] By developing an administrative framework, Detroit can start striving for greater sustainability throughout the city. Before the creation of the office the city had already begun a bike-share program, a light-rail tram as well as the installation of LED streetlights which are more cost efficient, as well as brighter.[14]

---

[9] "Going Green." *Going Green: Sustainable Living and Development Guide - Sustainability, Ecofriendly, Going Green News, Resources, FAQs, Definitions, Technologies, Websites- Middletown Thrall Library Special Coverage Center.*
[10] "Climate Action Plan." *City of Portland.* https://www.portlandoregon.gov/bps/49989.
[11] "12 Cities Leading the Way in Sustainability." *Bill Moyers & Company.* http://billmoyers.com/content/12-cities-leading-the-way-in-sustainability/2/.
[12] Ibid.
[13] "City of Detroit creates Office of Sustainability names first director." *Model D Media.* http://www.modeldmedia.com/inthenews/office-sustainability-052917.aspx.
[14] "Detroit becomes largest city in America completely with LED streetlights." *MLIVE.* http://www.mlive.com/news/detroit/index.ssf/2016/12/detroits_new_led_street_lighti.html.

While there have been recent improvements in sustainability in the United States, Phoenix has proven to be resistant to sustainable initiatives. Having exhausted many of its own natural resources, such as water, it must now take water from the Colorado River.[15] This is particularly dangerous as the Colorado is dependent on snowmelt from the Rocky Mountains for much of its water, and as climate change worsens the reliability of snow and density of snowpack are decreasing. Additionally, its infrastructure is lacking, specifically the city's power grid that often goes down and has inadequate backup systems, which can lead to many complications regarding the heat since the city cannot realistically function without air conditioning. Lack of food refrigeration, communication, and even death by heatstroke all become very likely if power goes out. Another result of unsustainable practices, such as excess water use, the planting of non-indigenous, water needy plants, and unsustainable growth, is that in the uplands, the forested area near Phoenix fires regularly destroy the forest as well as human habitations nearby.[16]

Finally, due to President Trump's decision to leave the Paris Agreement, another question was risen, can cities still follow the agreement even if the federal government is not? Since most cities in the US are Democrat lead it is easy to guess that most cities still highly value sustainability. Mayors from cities such as Austin, Milwaukee, St. Louis, and many more have sworn to honor the Paris Agreement. Austin's mayor tweeted "#Austin will not stop fighting climate change. Worldwide, cities will lead in achieving climate treaty goals because so much of what's required happens at the local level."[17] Pittsburgh's mayor stated, "As the Mayor of Pittsburgh, I can assure you that we will follow the guidelines of the Paris Agreement for our people, our economy & future."[18] Since the federal government has not made any legal action to stop it, we can assume that cities have quite a bit of freedom on the issue. It also makes sense since sustainability is a largely local issue and varies from city to city based on its needs. So thanks to federalism we can assume that cities have plenty of room to work on the issue.

Barriers to Cities going Sustainable

Even though being sustainable is a desire for most major cities, many people still refuse to commit to sustainability for a number of reasons. One of the biggest holds is that even though sustainable energy is cheaper outright than fossil fuels, there are additional costs and issues of reliability to be considered. For example there are capital costs, the cost of waste disposal which is much higher for renewable resources than for fossil fuels. Also according to some scientists, like Dr. Charles Frank of the Brookings Institution says that the traditional way of measuring costs, also known as Levelized Costs was incorrect because it didn't account for times when sustainable energy sources supply power

[15] "The least sustainable city: Phoenix as a harbinger for our hot future." *Grist*. http://grist.org/climate-energy/the-least-sustainable-city-phoenix-as-a-harbinger-for-our-hot-future/.
[16] Ibid.
[17] "How Cities and States Reacted to Trump's Decision to Exit the Paris Climate Deal." *The New York Times*.
[18] "How Cities and States Reacted to Trump's Decision to Exit the Paris Climate Deal." *The New York Times*.

when sustainable energy is not (solar panels at night).[19] According to his findings Solar, Wind, Hydro, and Nuclear power are all actually the most expensive sources to implement.

Another issue that is pointed out in an article by The Guardian is that sustainability isn't really marketed properly.[20] Even though numerous studies have shown that people do truly care about sustainability, they won't always choose the more sustainable option. That is because it is

COSTS	BENEFITS
• In the short term may be less economically hence costly • Risks of over-exploitation • Requires intensive research and planning • Requires development of markets/infrastructure • Requires compromise and communication • Requires mechanisms for education • Requires the resolution of competing claims forests to forest lands through the institution of new laws • May require conflict management mechanisms • May require politically unpopular land reform	• Involves local people and provides them with rewarding, immediate work, income, and education • Preserves functionality and diversity of system while providing a wide range of economic benefits • Promotes the diversification of forest products including non-wood forest products (NWFPs) • Preserves the natural services provided by forests • Provides a niche for indigenous peoples in modern, free market society should they choose

marketed for what is best for the environment or our children or our world, but not about how it can benefit the individual. According to economics people will buy things based on not only function, but also how it makes the feel personally and look socially. Sustainability is marketed too much on the collective in many cases and not enough on the consumer which makes some people ambivalent to it. This logic can be used to block any sustainability issue like, "Why should I not have a car and use the bus system instead, what's in it for me personally?" "Why should I pay more for fancy sustainably sourced foods when the value brand is cheaper and just as good?" These are questions that need to be answered at the personal level, group morality can only go so far.

Examples of Other Countries Approaches to Eco Cities

Often the prime example of sustainable urban planning used is Curitiba, Brazil. Curitiba did this, in part, by establishing a modern transit system in the 70s that helped reduce energy usage and pollution by taking more cars off the road. Often times, public transit programs are an effective way to reduce emissions and develop more vibrant communities. Additionally, in Curitiba, it helped cluster people and develops around the main transit centers preventing the development of a large,

[19] "Levelized Cost." *U.S. Energy Information Administration.* https://www.eia.gov/outlooks/aeo/pdf/electricity_generation.pdf.

[20] "The problem with sustainability marketing? Not enough me, me, me." *The Guardian.* https://www.theguardian.com/sustainable-business/behavioural-insights/2015/mar/09/problem-sustainability-marketing-not-enough-me.

inefficient and unsustainable suburbia.[21] Living in the suburbs is not inherently a negative thing, but it is unsustainable as it takes of a large amount of land and by necessitating travel by automobile, also increases carbon emissions and energy use.

Another example is Reykjavik, Iceland, which takes advantage of its location on a volcanic island and uses geothermal power for heating and electricity.[22] Geothermal energy generation is a sustainable energy source, but it can only be a source of energy for cities near volcanic activity. Additionally, Iceland created a process that uses CO2 Emissions mixed with Hydrogen to create clean methanol that gets mixed into gas to even make gasoline greener. Since Iceland's CPI plant is the only one so far to perfect creating "Vulcanol" they have capitalized on this to create many sustainable jobs that has been helping in stabilizing Iceland's crippled economy.[23] While Iceland's successes are difficult to replicate elsewhere, it is an example of using the environment around you to improve sustainability and the economy. Reykjavik also uses Hydrogen powered buses to greatly reduce pollution.

Finally, Vancouver often tops lists of sustainable cities through its "Greenest City" project, which is a multifaceted plan that tackles all three of sustainability. [24] Through the program Vancouver has reduced greenhouse gas emissions 5% below 1990 levels, despite a 27% increase in population. Additionally, they have implemented North America's greenest building code, improving natural light in buildings as well as energy efficiency.[25] The Vancouver plan is certainly the easiest one to translate to American cities since it is the most similar to an American city environmentally and culturally. The people of Vancouver seem to be welcoming to this change because many of these decisions were helped along by community councils with real say on their city's future, which helps with civic pride and engagement.

Recent Plans Put Into Effect

One new technology, the *Seabin,* which acts as basically a floating trash can that uses a vortex to suck trash in and let only water out the other end. The manager of Miami's marinas plans to make Miami the first major city to implement the device sometime in 2017. How successful they will be on a mass scale is yet to be determined though, but water pollution often comes from trash that it disposed of correctly, but finds its way into the water system anyways.[26]

Vaxjo, a city in Sweden, has managed to cut emissions largely by converting old buildings from using oil heating to biomass fuel and today 90% of the city now uses woodchips for heating

---

[21] "What are Cities Doing to Go "Green?" *Scientific American*. https://www.scientificamerican.com/article/how-do-cities-go-green/.
[22] Ibid.
[23] "Iceland Seeks to Cash In On Its Abundant Renewable Energy." *Yale E360*. https://e360.yale.edu/features/iceland_seeks_to_cash_in_on_its_abundant_renewable_energy.
[24] "Greenest City goals." *City of Vancouver*. http://vancouver.ca/green-vancouver/greenest-city-goals-targets.aspx.
[25] "Greenest City: 2020 Action Plan." *City of Vancouver.* http://vancouver.ca/files/cov/Greenest-city-action-plan.pdf.
[26] "The five innovations that shaped sustainability in 2016." *The Guardian*. https://www.theguardian.com/sustainable-business/2017/jan/01/sustainable-technology-2016-climate-change-environment.

instead of oil. They've also been trying to incentivize buying energy efficient cars by offering things like free parking, however this plan has not had much great success thus far.[27]

Potential Sustainable Technologies

Since creating a better world is one of, if not the most important facet of science, it should come as no surprise that there are new sustainable technologies being developed every day. One fledgling practice yet to make it to the US is using recycled plastics taken from bottles to use in 3D printers. The 3D printer industry is a massively growing one that currently mostly relies on new, not recycled plastic. Not only could this help the environment, but could also create millions of jobs involved with the collection and repurposing of the old plastic.[28]

In the UK a scientist, Ahmed Osman, has found a way to make biofuel catalysts out of old tinfoil. The new crystal created from it is about $200 cheaper per kg and is more environmentally friendly than the standard catalyst. The currently used catalyst is mined from West Africa, West Indies, and Australia with detriment to the environment. This new way is still freshly discovered, and as such is not employed on a large scale anywhere.[29]

Questions to Consider

- How can you increase access to clean energy in poorer areas?
- How can you help build a greener city without hindrance to business of the taxpayer?
- How do you get other cities to also go green?
- How will you respond to the federal government's decisions on climate change?
- How can cities work together on sustainability projects?

---

[27] "5 Sustainable Infrastructure Projects Other Cities Might Want to Copy." *City Lab*. https://www.citylab.com/life/2013/04/5-intriguing-sustainable-infrastructure-projects-around-world/5356/.

[28] "The five innovations that shaped sustainability in 2016." *The Guardian*. https://www.theguardian.com/sustainable-business/2017/jan/01/sustainable-technology-2016-climate-change-environment.

[29] "Turning dirty tinfoil into biofuel catalyst." *ScienceDaily*. www.sciencedaily.com/releases/2017/07/170726092053.htm.