

Letter from the Chair

Hello Martians!

Welcome to the Mars Colony. My name is Meaghan Wallace, and I am so excited to be your chair. I am a senior at Boston College majoring in biology and minoring in journalism. This is my fourth year in EagleMUNC, and I've loved every second of it! My freshman year, I was a simulations staffer in the Papal Conclave and Anasazi Empire committees; in my sophomore year, I was the Director for the Pirate Republic and Time Capsule committees; and in my junior year, I would have been the Deputy Under Secretary General of Political Affairs Simulations.

I am still learning so much about EagleMUNC and I'm so excited for my first year as a chair! The Mars Colony committee is sure to be exciting and full of surprises...my aim in writing this background guide was to capture as much realism as I could for a situation that is not real (yet). The committee incorporates the real issues of Earth and places them in the setting of Mars. Bring your A-game, because the politics will be intense!

- Good luck,

Meaghan Wallace

Establishment

After many years of pollution and exploitation, Earth faced a climate reckoning in 2050. Fearful that an impending disaster could wipe out humanity, many countries put their efforts into establishing colonies on another planet as a backup plan. This initiative was largely led by United States billionaire Elon Musk, who successfully established the first colony on Mars.

With multiple large powers gaining interest in colonizing Mars, the UN, backed by the majority of its members, decided to implement regulations and restrictions for Mars. This set of rules was laid out in a UN decree made in 2051 during a Security Council meeting in New York. This led to the Space Program Association of Colonies against Extinction Agreement, or the S.P.A.C.E. Agreement. This is considered to be the most important governing document for the Martian colonies, and many of them follow it over their sponsor countries' constitutions. Three of the most important points in the S.P.A.C.E. mandate are: no one can be forced to emigrate to Mars against their will; that all sponsors are banned from allowing emigration of people who are pregnant, under 18, prisoners, or severely ill; and that all colonies must abide by UN human rights laws.

Another important topic that the S.P.A.C.E. Agreement addresses is representation. There must be at least one representative from each colony in the government of the parent country and one representative to the UN - these usually are the same person. The colony UN representatives convene by themselves at the **UN Martian Colonies Committee (UNMCC)** to discuss issues that affect them without their sponsors. The UNMCC is located in its own dome (the S.P.A.C.E. dome) between the colonies. This, along with several other events, had led to an increased

feeling of solidarity between some of the colonies and a sense of “Martian” identity apart from their parent countries. Across the Red Planet, there are now talks of independence.

The inaugural UNMCC meeting, S.P.A.C.E. dome

History

The first colonists was to Mars by United States, in entirety of engineers, and in 2057 in the



group of 84 launched into a path SpaceX in the 2050. Made up astrophysicists, doctors, they landed Utopia impact

crater- a wide basin on the Martian surface where the colonists hoped the weather would be less volatile.¹ Their ship was set-up to act as a temporary living space and hold them for up to two years after landing while they constructed their dome and its artificial atmosphere. All the while, the colonists sent missions to the poles to melt the ice caps and begin the terraforming process, and three other ships arrived to start three other colonies. The United States was joined on Mars

¹ “Mars Exploration: Multimedia,” NASA (NASA), accessed June 16, 2020, <https://mars.nasa.gov/gallery/waterfeatures/PIA00571.html>.

by China, Russia, and Brazil, which sent ships out very soon after the first US mission, between 2050 and 2052. These original four colonies are known as “First Wave” colonies, and developed a sense of pride over living on Mars the longest.

The rest of the colonists, having waited to start the expedition until they saw that the First Wave arrived safely, trickled in between 2064 and 2068, with the United Arab Emirates and Australia the most recent to establish themselves.

Disaster struck in 2064, when the Russian colony, in an attempt to inspire confidence in their citizens on Earth and get more people to immigrate, sent out an expedition of 25 people known as the Moscow Mission. The goal was for this expedition to travel into the Northern Lowlands and establish a second Russian satellite colony, but the colonists lost contact with the Moscow Mission ship after 11 days. When they sent out an order for the Moscow ship to return to the Utopia Basin and give up the mission, there was no response. Search parties came up empty. After two more years, the mission was declared to be lost and the Russians stopped searching or attempting contact. The Russian colony governor has blamed the Moscow Mission disappearance on a US sabotage plot, but there is no evidence for this and the US continues to deny it. Regardless, the lost mission led to a fear of the Northern Lowland region among the colonists, and a general attitude that the Utopia Basin is the only safe place to live. No one has attempted any expansion since then.

The mid to late 2060s saw a boom in trade between the colonies as they settled into living together. Colonies began to send surplus supplies of oil, food, water, and, more recently, seeds from successful farming projects inside the domes back and forth to each other. This was almost always without intervention or input from the parent countries on Earth, since the colonists viewed it as an issue of survival on Mars instead of a political trade deal. Trading fostered a

sense of connectedness and self-sufficiency between the colonies, but also led to new disagreements and tensions that had no origin in Earth politics.

The 2060s also brought a wave of births; the first human born on Mars was a little girl in the Chinese colony in 2062. More births followed hers throughout the 2060s, so even though no one under 18 can emigrate from Earth, there is a substantial population of children being raised on the red planet.

In contrast to the general prosperity and good feelings of the 2060s, the 2070s ushered in a new era of tension. In 2072, there was a disaster in the Brazilian colony known as the “Cisne Incident.” Brazil sent a ship called the Cisne carrying 6 months’ worth of oil to Mars, however, the ship’s takeoff was delayed by four days due to a Category 5 hurricane that made a launch unsafe. Despite attempts by the colony to ration their previous supply of fuel, they calculated during the final week that they did not have enough fuel to keep the generators inside the dome running for the last two days before the Cisne arrived. Amid rising concerns that two days without heat would cause the colonists to freeze to death, the Brazilian colony sent out a plea to its neighbors for spare oil rations. The Martian Colonies Committee called an emergency meeting a week before the Brazilian colony was set to run out of fuel and agreed that each colony would send any excess oil they had to the Brazilian colony. On Earth, tensions between the United Kingdom ran high after the UK shot down an unannounced Brazilian plane, nearly triggering a war between the countries. Because of this, the UK ordered their colony not to aid Brazil’s, and Brazil ordered their colony not to accept aid from the UK. Both colonies defied orders and helped each other, and both colony governors were promptly dismissed.

The mysterious death of the popular Brazilian colonial governor, Bietio Teixeira, about two weeks after he was fired threw the colony into outrage and started many talks about breaking

away from Mainland Brazil. The situation worsened when the governor that Brazil flew in as a replacement for Teixeira was assassinated only 4 months into his term. Though the Brazilian government demanded an investigation, the colonial government insists to this day, several months later, that they have no leads and no suspects.

The Cisne Incident and the ensuing assassinations were the largest catalysts for the growing movement in all the colonies for independence. Many colonists feel that their shared experiences and struggles to survive on Mars have bonded them closer to each other than to their respective countries, and given them a unique Martian identity. This feeling among the colonists was given the nickname “Martianization.” As a result of this, many colonies began to resent their home countries for getting them tangled in Earthly politics. Earthly matters became less and less relevant to the colonists the longer they were on Mars. They see the constant communication and orders from the Earth governments as a burden, and view the politicians as out-of-touch with the realities of life on Mars. Increasingly, colonies have started being more vocal in the United Nations and using UN guidelines rather than their national laws. Still, other colonies remain loyal to their home governments and maintain that they are citizens of their countries before they are Martians.

This has created a divide between the colonies, and a growing amount of worry on Earth. In 2075, the US, Brazil, China, Germany, and South Africa all sent deployments of soldiers to emigrate to Mars. Though the Earth countries insist this is only to add more people to their settlements and provide protection, most of the colonies view it as a threat and an attempt to keep order.

Present Day Mars

It is now 2080, and the Mars colonists are forging a society on a planet that was long considered to be uninhabitable. The largest colony is made up of people from the United States, located close to the X Crater. Clustered around the same region are the colonies of South Africa, France, the United Kingdom, Japan, India, China, Brazil, the United States of America, Russia, Ukraine, South Korea, Canada, Saudi Arabia, United Arab Emirates, and the Free State of Mars, an independent group of colonists that broke off from the main colonies.

Though restrictions on moving to Mars have been loosening in recent years as the colonies become more stable and habitable, most parent countries on Earth still largely require applicants to hold a professional degree and/or have skills that would make them very useful in helping to build the colony. As a consequence of these policies, each colony is made up of primarily scientists, soldiers, farmers, and a handful of politicians to navigate relations with Earth. The restrictions are considerably less strict, however, for the Saudi Arabian colony, the Russian colony, and the Ukrainian colony, which typically allow applicants to move to Mars based on how much they can pay. Although the taxes in these colonies are steep, many aspiring businessmen and women choose these over other colonies because of the loose laws. This causes occasional tension because professionals of a certain country may be poached by the less restrictive colonies or enticed to emigrate to them.

Environment and Resources

_____ Mars is a naturally uninhabitable planet. Although there is a wealth of evidence that suggests it once had water (and possibly life), its modern atmosphere is over 95% carbon dioxide

and only 0.13% oxygen (compared to Earth's mostly oxygen and nitrogen atmosphere).² The average temperature is also a chilly -81 degrees Fahrenheit (about -63 degrees Celsius).³ There is no rain or snowfall, but there are dangerous wind and dust storms that rage all around the planet, and higher-than-Earth levels of radiation from the sun.⁴ It would be impossible for humans to survive on Mars if not for an ecological engineering technique called 'terraforming.'⁵

Terraforming is the process of changing a planet's atmosphere through human intervention, with the goal of making the air similar to Earth's and breathable by humans.⁶ For Mars, this involves first blasting the planet with heat to melt the carbon dioxide ice caps at the North and South Poles.⁷ Once this ice melts, it will release carbon dioxide into the air, which will trap heat much like it does on Earth and warm the whole planet to a more comfortable temperature. At a warm, Earth-like temperature, the colonists hope Mars will be able to have liquid water on it so they can grow plants that will produce oxygen for them to breathe.



At the time of the 2080 meeting of the UN Martian Colonies Committee, the colonists are still in the middle of the long process to completely terraform Mars. Because of the scope of the project, it requires the cooperation of every colony, which has helped forge bonds between colonies on Mars that may not exist between countries on Earth. They completed the melting of the ice caps in 2066, but the temperature has only crept up to -55 degrees Fahrenheit, and is still

² Sharp, Tim. "Mars' Atmosphere: Composition, Climate & Weather." Space.com, September 12, 2017. <https://www.space.com/16903-mars-atmosphere-climate-weather.html>.

³ NASA. "Mars Facts." NASA. NASA, February 13, 2020. <https://mars.nasa.gov/all-about-mars/facts/>.

⁴ US Department of Commerce and NOAA, "The Planet Mars," National Weather Service (NOAA's National Weather Service, March 13, 2015), <https://www.weather.gov/fsd/mars>.

⁵ Lee, Steve. *The Martian Poles and Cloud Cover*. June 30, 1999. Mars Express accessed June 15 2020. <https://sci.esa.int/web/mars-express/-/24476-the-martian-poles-and-cloud-cover>

⁶ United States, Washington. "On the Habitability of Mars: An Approach to Planetary Ecosynthesis." NASA. NASA, 1976. <https://ntrs.nasa.gov/search.jsp?R=19770005775>.

⁷ Sagan, Carl. "Planetary Engineering on Mars." *Icarus*. Academic Press, October 26, 2002. <https://www.sciencedirect.com/science/article/abs/pii/0019103573900262>.

much too cold for water. While they wait for greenhouse gases to heat up the atmosphere, the Martian colonies live in huge domes (one per colony) with controlled air and temperature- basically a miniature, contained version of what they want to do for the whole planet. This process is known as ‘paraterraforming.’⁸

Since the environment outside of the domes is still very hostile to humans, it is extremely important for the Martian colonists to maintain the structures they live in. For this reason, oxygen and nitrogen are two of the most frequent and most important imports that the colonies receive from Earth, so they can keep the air inside the domes breathable. Some colonies have turned to growing as many plants as they can in their domes to try and produce their own oxygen, but no colony has yet reached a point where they can completely stop importing oxygen from Earth.

Another crucial import is oil. Mars depends completely on generators to keep the temperatures in the domes well above freezing, and to run the generators alone, Mars has to have a steady supply of about 7 million barrels of oil per day, per colony. On top of this, the colonies also need oil to power vehicles that travel between the colonies, and to make repairs to the steel outsides of the domes, which are routinely battered by the harsh Martian weather. Since the journey from Earth to Mars takes about one to three weeks, the colonists must very carefully ration their oil so they don’t run out before another shipment comes through. There have been informal trades or donations of oil between the colonies to help each other during times of oil scarcity, but the Martian colonies are completely dependent on Earth unless they can find a source of oil or other fuel that is closer. Although potential new energy sources such as nuclear

⁸ Taylor, Richard L. S. “Paraterraforming - The Worldhouse Concept.” NASA/ADS. The British Interplanetary Society, 1992. <https://ui.adsabs.harvard.edu/abs/1992JBIS...45..341T/abstract>.

power and harnessing Mars' core have been discussed by scientists, they are not yet feasible on the planet. Many colonies have begun mining projects to search for oil and increase their self-sufficiency.

The resource that the colonists have made the most progress on in terms of establishing a local source instead of relying completely on Earth is food. Since the domes have hospitable environments within their walls, the colonists have been able to plant various food crops in huge farms under high-powered lamps run by the generators. A handful of colonies have become so successful with these farming projects that they do not rely on Earth for any plant food products, however, this could change if they experience a surge in immigration that made their population too large to feed. All colonies still rely on Earth at least partially for water to grow the plants and to drink. The environments of the domes are also not suitable for raising livestock, and the spaceships can only achieve hyper-speed at minimum power and thus cannot have freezers to transport meat, so the colonists must genetically engineer and culture meat cells in the laboratory.

Some colonies have proposed making a separate satellite dome for cows and other livestock, which would make it easier to produce meat without releasing too much methane into their living environment.

Earth

_____ Earth is experiencing numerous challenges brought on by climate change. By 2050, the population density has exploded and most of the world lives packed in over-crowded cities, leading to uncontrollable sanitation problems and an increase in outbreaks of disease.⁹ Melting

⁹ Christina Sterbenz, "15 Ways the World Will Be Terrifying in 2050," Business Insider (Business Insider, March 31, 2015), <https://www.businessinsider.com/ways-the-world-will-be-terrifying-in-2050-2015-3>.

ice caps and global warming have led to rising sea levels, deadly coastal floods, and more frequent and severe Category 4 and 5 hurricanes.¹⁰ The unchecked fossil fuel consumption over more than a century has filled the air with pollution that causes serious lung and respiratory conditions. Scientists predict that the environmental crisis will only get worse.

Elon Musk of SpaceX, Tesla, and the Boring Company was very crucial to the colonization process. SpaceX carries oil and food shipments for 13 out of the 17 governments who have colonies - everyone except for Russia, Saudi Arabia, the United Arab Emirates, and Canada. He has a strong influence over the policy of many of these governments as a result, especially the US and South Africa, and has contributed to various laws being passed down to govern the colonies.

Humanity also stands on the edge as tensions grow between the US and China and Russia, and between the UK and Brazil. Weapons of mass destruction have only grown deadlier, and any kind of nuclear attack during a conflict would certainly be disastrous for the entire world. As a result of these crises, humanity has turned its attention towards Mars.

Topics:

Topic 1 - Earth's Affairs/Governance:

¹⁰ "Global Warming and Hurricanes," GFDL, accessed June 16, 2020, <https://www.gfdl.noaa.gov/global-warming-and-hurricanes/>.

As delegates of Martian colonies, it is important to take into consideration how the at times complicated political relationships with their respective countries on Earth impact policies on Mars. Many of you will be representing founding countries of the Mars colony, with longstanding presences and deep ties to their home countries. On the other hand, many of you will also be representing colonies with a growing sense of “Martianization” and Martian identity. As a result, many of the colonies feel more connected to each other than they do to their distant home countries. One such colony, the Free State of Mars, is actually entirely composed of independent colonists, and is not attached to one main Earth country. Now, a new generation of colonists born on Mars has never even *seen* their countries on Earth, increasing this sense of distance. How will you balance these new sentiments with the logistical necessity of maintaining connections to home countries?

One other consideration that must be made is the effects of events on Earth and how they may impact relationships and existing partnerships between Martian colonies. While many countries may have tense relationships at home, the unsustainable nature of Martian colonies means colonies of warring nations are often faced with dangerous choices - risk the ire and resources of their home countries to support their fellow colonists, or withhold aid to appease their Earth countries? If a war or conflict goes on Earth, how will that affect the operations of the colonies? Will two colonies have to fight each other or suspend trade if their counterparts on Earth go to war? Some colonies whose Earth countries are feuding or have tense relations (such as the UK and Brazil) have pleasant relations on Mars, so the political feelings that their Earthly government may have towards another colony do not always carry over to Mars.

Similarly, if a country was to order their colonists to stop aiding a colony as retribution for that colony’s sanctions on Earth, would that order be obeyed? The concept of independent

Martians opens the door for a separatist movement and a push for more independence from Earth. If some or all the colonies break away from Earth, will they form one Martian nation, or independent, separate states? What role should these Earth nations have in the daily operations of their colonies? Delegates will have to reconcile their differences with Earth, or face the possibility of all-out revolution.

Topic 2 - Immigration

Although many children are being born on Mars, the main source of population for the colonies is immigration from Earth. In 2079, the planet set a record with a total of 55,400 people from Earth immigrating to colonies on Mars. Earth countries do have some influence on how many colonists can go to Mars, as they control the application process, but each Martian colony ultimately decides who will be allowed to immigrate.

How will the colony control who is able to come to Mars? Is it dependent upon the skill sets of those who come in, or will they accept those seeking refuge outside of Earth? For example, if there is a war on Earth and the only safe haven is Mars, will the colony have the resources or means to accept new colonists? If the only people allowed to immigrate are doctors, scientists, and professionals, the colonies risk having issues related to discrimination and human rights. With a growing population and limited space inside the domes that house them, colonists must carefully control how many people are allowed in, or risk taking up too much oxygen and food to provide for everyone.

An important S.P.A.C.E mandate governing the flow of people in and out of Mars states: “Until a more sustainable fuel source for space travel can be developed, colonists cannot return from Mars once they settle.” Although it is theoretically possible for a very limited number of

colonists to return home if necessary, the potential for it to be taken advantage of has made it taboo. The main use so far of travel back to Earth has been for rare and necessary matters as judged by UNMCC such as criminal trials and emergency medical procedures with prior approval.

How will new colonists be integrated into the Martian society? This could open the door for issues like extradition and Earth-relations. For example, if an Earth citizen flees to a Martian colony, that colony which they flee to will have to decide whether to accept, reject, or extradite them to the Mars colonial equivalent of the country they fled (i.e. if they fled China, extradite to the Chinese colony on Mars).. Delegates will have to balance the colony's desire for more or less immigrants with their relationship to other colonies, and to Earth, along with the realities of living on limited resources.

Topic 3 - Resources

Given that the delegates will be on the Mars colony with no immediate access to Earth, how they utilize and preserve their resources will be a key part of succeeding. One recent issue that has been on the forefront of colonist's minds is the current lack of self sufficiency and the need to obtain all of their resources from Earth. There is growing concern among the colonists that, if an issue on Earth or a political disagreement interrupted the shipments of things like food and oil, the Martian Colonists could perish.

One key resource for the colonist will be power/fuel. To protect the colonists from Mars' frigid climate and unsuitable atmosphere, each colony is set up in a dome that provides heat and oxygen, which requires a tremendous amount of fuel. Many scientists in the colonies are working on discovering a way to run the domes with nuclear power- if not as a way to be completely independent from Earth, then at least as a back-up power source in case there is ever a delay in

fuel shipment. Other colonies have also sent out risky mining expeditions hoping to strike oil under the surface of Mars.

Given the unsustainability of transporting fuel to Mars, the risks of power failure, and the danger present in expeditions to mine for potential fuel, delegates will have to decide whether or not the hunt for a “Martian fuel” is worth the money, effort, and risk. Another important resource is food. As of now, the colonists have small gardens and greenhouses in their domes (which also provide some oxygen), but not enough to sustain everyone in the colony. Every colony is still at least partially reliant on Earth for oxygen and food, particularly with meat, since transporting livestock to Mars is extremely difficult, and keeping them alive in the domes takes up too much oxygen.

Several solutions have been presented for this issue, most notably a collaboration between the colonies from India, USA, Japan, South Africa, and South Korea called the “Methane Dome” Project. They plan to build a separate dome exclusively for cows and other livestock, and release the methane produced from the cows into the atmosphere. This would solve both the availability of meat, and also speed up the terraforming process by warming the atmosphere. However, it would require more oxygen than the colonies currently have.

Delegates will have to be very creative to find more solutions for food sustainability on Mars. Some of the potential projects could solve multiple issues at once (for example, plants providing both food and oxygen), but plans will have to be practical and within the colonists’ abilities given the resources they have, and *don’t* have.

Topic 4 - Disasters

The risk of disasters is a significant challenge faced by Martian colonies given their isolated nature and the dramatic toll a single disaster could take on the population of an already

harsh landscape. This will include how the colonists should prepare and plan ahead for disasters such as fires, power outages, meteorites, food shortages, lack of supplies, volcanic eruption, and even war.

Mars has frequent raging sandstorms that can take a toll on the domes that protect the colonists from the unlivable atmosphere. If a sandstorm is bad enough, colonists are concerned it might wear down the walls of the domes, already weakened by increased radiation from the sun, enough to break holes in them. The effects of this could be catastrophic. The domes exist with a delicate, artificial atmosphere that mimics Earth's, so if the walls were weakened enough, it would cause vital oxygen to flow out, leaving the colonists without breathable air. Exposure to the cold temperatures of Mars could also cause crops to freeze.

A storm, meteorite impact, or eruption could also cause a power outage, which could be equally disastrous. Any total shutdown of power could cut the colonists off from oxygen and heat, and potentially destroy an entire colony. Will the colonies develop enough generators and backup systems to protect themselves from the unpredictable possibility of a power outage or be left exposed?

The development of proper action plans and then the execution of these plans when disaster strikes may be essential to the survival of the colonies. Delegates will have to put systems in place to prevent disasters as well as react to them if a disaster does occur.

Topic 5 - Possibility of Life:

Three of the countries who sent colonies to Mars (the US, China, and France) have stated that at least one of their long term goals in establishing settlements on Mars is to search for evidence of extraterrestrial life.

Mars' similarity to Earth and its closeness to the sun have almost made it a good candidate for a planet capable of supporting life, but no concrete proof has been found to support this. Many scientists believe that, even if Mars is *currently* a dead planet, it did have life at one point in its history. Billions of years ago, it is likely that Mars had a denser, more oxygen rich atmosphere and higher temperatures that could have supported things like oceans and seas, and possibly life within them. This theory gained a lot of traction in 1996, when scientists discovered patterns that appeared to be microscopic fossils, on a billions-of-years old Martian meteorite that fell to Antarctica. Though critics have challenged that the fossil-looking imprints could come from things other than life, the meteorite is still a mysterious clue to what might have existed on Mars billions of years ago.

The idea of alien life may sound like a science fiction novel, but there are practical reasons for looking into it. If there was ancient life on Mars, then the lifeforms left behind fossils. If there are fossils, there may be fossil fuel. Many colonists hope that by discovering evidence of extraterrestrial life, they will also discover a source of fuel that is not dependent on their home planet.

Bloc Positions

- **Martians** are colonists who feel a strong connection to the planet Mars- stronger than any connection they have to Earth. They tend not to place much importance on the distinct colonies, and instead view them all as one collective Mars with shared goals and struggles. Many people on this end of the spectrum have been on Mars for most or all of their lives, and are usually first wave colonists who arrived decades ago, or part of the 'Space Generation' that was born on the planet. Martians will always advocate for colonies handling their own affairs rather than

asking for permission or accepting intervention from Earth. They are in favor of initiatives that will make them more independent from their countries on Earth. If one colony needs resources or assistance, but their home countries on Earth are in a dispute, a Martian would push for the colonies to ignore the orders of their Earth countries. Although not all Martians support complete separation from Earth, they are almost all in favor of increased autonomy and decision-making that is independent of their Earth governments.

- **Unionists** are colonists who value their connection with Earth. They believe in conducting their political affairs as if each colony were its Earth country, and in important matters, they will defer to the authorities of their respective countries. Many of the Unionists are newer immigrants to Mars, having arrived in the past 10-15 years, and therefore feel a stronger connection to Earth than people who have been away from the planet for a long time. In disputes between colonies, Unionists will always advocate for following the guidelines set by the countries that founded them instead of any personal relationships between colonies. They view the S.P.A.C.E. Agreement as set in stone, contrary to the Martians who feel that there is room for improvement. Unionists fear that alienating themselves too much from Earth will prove disastrous for the colonies, which don't have enough resources to survive on their own.

