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Outdoor Recreation, Greenspace, and COVID-19 in Maine

Jayne Marie Foley

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Professor Yuseung Kim, Capstone Advisor

Introduction:

In the State of Maine, the beginning of Spring is when the world around us awakens and people start coming out again. Soon after the trees bloom, businesses get ready for another busy summer. In Maine, many of us wait long months for the few short sweet months of summer, where there is money to be made and the outdoors to explore. Many people outside of Maine wait all year for their annual trip to the state. The summer here is essential for the economy, outdoor enthusiasts, and residents alike.

In Maine, the spring of 2020 did not start off in its usual fashion. On March 11th, 2020 the World Health Organization declared a global pandemic. Instead of getting ready to open for the summer season in the coming weeks many places stayed shut and those that were already open were forced to shut their doors. Businesses closed and streets were emptied. The world went into lockdown as the COVID-19 pandemic went into full force. People were laid off with none of the usual distractions to keep them busy. All bars, restaurants, gyms, retail stores and workplaces deemed non-essential were temporarily shut down. With the economy and society on hold, many people went back to simpler ways of life. They began spending more time outside, in the fresh air, where they could both get out of their house and keep a safe distance from their neighbors. For many, outdoor activity became a lifeline for remaining sane and necessary for their mental/physical health. There is a reason for this, many studies suggest that outdoor activity directly relates to our overall health and well-being.

This study aimed to examine the extent to which people increased their use of public outdoor spaces during the pandemic and ways in which we can better plan for more sustainable spaces in the future. This study aimed to answer the following research question:

> How can we use our observations and experience with the COVID-19 pandemic and lockdown to better support our need for outdoor recreation and public green space? And how does this relate to overall sustainable solutions for the future?

Public space can be good for a community if planned properly and contributes greatly to social sustainability. Public space or greenspace will be used as to define community space consisting of land (such as parks) rather than buildings. (Merriam-Webster, n.d.). For the purpose of this

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research we are going to define and use two of the three pillars of sustainability including social sustainability and environmental sustainability[1]. We are defining these two pillars in this research specifically as follows.

> "**Social sustainability**: the formal and informal processes; systems; structures; and relationships actively support the capacity of current and future generations to create healthy and livable communities. (Wikipedia contributors, 2020) Social Sustainability looks into the underlying question; what are the social goals of sustainable development?' This includes the quality of life and well-being of individuals both on a physical and psychological level. (Dempsey et al, 2011). Social sustainability is inclusive and recognizes the well-being of all people. (World Heritage Committee, 2015)

> **Environmental sustainability**: This involves a responsible interaction with the environment in both natural and cultural properties, to avoid depletion or degradation of natural resources, ensuring long-term environmental quality and the strengthening of resilience to disasters and climate change. (World Heritage Committee, 2015)

In this report we are exploring the significance of outdoor recreation and usage in response to the COVID-19 pandemic. We will discuss the importance of green space and outdoor recreation as a part of sustainability and what we can do for the future to provide sustainable and safe spaces for the public. I will be looking at the response of 119 individuals from a survey collected and three interviews from stakeholders in Maine on their experiences with the outdoors during COVID-19 and comparing these results to other similar findings. We can use this information from the COVID-19 experience to better support sustainable development for future towns and cities. With this information we can move towards the development of sustainable and safe outdoor spaces for the future in relation to the experience of the COVID-19 lockdown and pandemic in the state of Maine.

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[1] For this research we are not including economic sustainability however if more time was given it could be further explored.

Limitations:

In this report we must acknowledge this focuses on the perspective from people in Maine, which may not represent people in other areas as accurately. Interviews of stakeholders also do not represent all stakeholders and the City of Portland, Maine might have differences in their experience. This study just focuses on the views of these individuals. We must also recognize that a survey of 119 people does not reflect everyone's Maine experience. This survey was also done through online platforms which all people in the state may not have access to. However, using these findings and the support from other studies we can draw some conclusions and general observations. Policy, regulations and suggestions will have to be adjusted for other areas and places more densely populated.

In many of these studies we are limited in social and environmental sustainability because ultimately, we cannot control people and tell them what to do. We can only encourage these behaviors with policy and infrastructure that supports them. Additionally, to fully address social sustainability we would also have to consider in greater depth social justice. Social justice is a concept of fair and just relations between the individual and society, as measured by the distribution of wealth, opportunities for personal activity, and social privileges. (Wikipedia contributors, 2020) (United Nations, 2006). Without the inclusion of all people in these opportunities we cannot have sustainability. This includes the topic of socioeconomic disparities that may limit people from opportunities mentioned in this study. In this study we are strictly focusing on the benefits of outdoor usage. Further studies and discussions should and need to be done on this topic that include the socioeconomic factors and other factors of social justice and sustainability as demographic information was not collected in this report/survey. "Conversely, as some low-income residents expressed concerns about gentrification, it is critical that projects to expand urban green spaces are community-oriented, have a social cause, and provide support to maintain such initiatives in an equitable way. Such efforts can support the pursuit of social justice, health equity, and sustainability in diverse urban communities." (Jennings, Baptiste, Jelks, & Skeete, 2017)

Methodology:

This study used a mix-methods approach to answer the proposed research questions, combining an online survey with key informant interviews. The survey was conducted online and targeted users of outdoor spaces. This survey focused on residents of Maine, however non-residents were allowed to complete the survey. The survey was distributed via social media and email using a snowball sampling method. In total 122 respondents completed the survey, however 3 were removed from analysis because they neither visit nor were residents of Maine. The survey asked 9 questions related to outdoor recreation, social and environmental sustainability and Maine. Survey and interview questions focused on answering the following key objectives:

1. How are people in the state of Maine using outdoor spaces?
2. Has people's experience/usage changed since the pandemic?
3. Have we as a state responded appropriately with rules and policies to support their use?
4. Are there ways we can improve our outdoor spaces to create a more sustainable environment in urban and rural areas?

The full survey questions list can be found in the Appendix of this report. Three interviews were conducted with key stakeholders (outdoor recreation business owners, and local government officials) to gather more in-depth qualitative testimonials. Interview participants were selected using a convenience sampling method.

The survey data was analyzed using descriptive statistics and the results are presented in charts throughout this report. Interviews were analyzed using qualitative methods, looking for themes and are represented in quotes in this report.

Findings:

Out of 122 responses, 119 people said they either live in Maine year-round, seasonally or visit frequently. Since this study is focusing on Maine, we are going to only further include those 119 people who would be most likely to use these outdoor resources in our survey results. The results of this survey show that 59.6% of survey takers reported an increase in outdoor activity during lockdown and 57% of those who reported an increase said they plan on continuing to get

outside more even beyond the pandemic. Beyond this increase in activity the majority of survey takers also stated use of some kind of outdoor space and wanted to see more attention to outdoor space. The results of this survey will be analyzed quantitatively in the next few pages.

In an effort to get a first-hand perspective on the effects of this pandemic to those who deal with the public and outdoors on a regular basis, interviews were conducted with those working in fields of interest.

These key stakeholder interviews included:

- A Bangor City Council member,
- A long-time Maine Master Guide and current owner of an outdoor kayak and bike rental and retail store in Skowhegan, Maine
- The Director of the Parks and Recreation Department in Bangor, Maine.

Efforts were made to include stakeholders in the city of Portland, Maine as well, but those stakeholders declined to answer questions.

Survey Results

Our survey results coincide with other similar reports stating an increase in outdoor usage and outdoor recreation during the COVID-19. Our findings also see a potential increase and new highlighted appreciation for access to outdoor activity that has potential to continue beyond the pandemic.

Figure 1. we are looking the % of Maine residents (1) and in Figure 2. how many of those people said their activity increased during COVID-19 lockdown (2). In Figure 1. out of 119 respondents 95.8% of those are year-round residents so we can assume that those people were here during lockdown. Out of those remaining 0.8% are seasonal, who may not have been here originally but have arrived since then, and 3.4% said they visit frequently. We can conclude that at least 95.8% of respondents were in Maine during lockdown with a chance of that number being slightly higher if some of the others were visiting. Regardless, all of these respondents (remember we removed the other 3 who said they do not visit Maine) use Maine resources on regular bases. Out of these respondents in Figure 2. it shows 59% said they increased their outdoor activity during lockdown. Only 8% said they decreased their outdoor activity. Considering most people were out of work or home from school, the results might have shown a decrease in activity, instead we see the majority actually became more active.

Figure 1. Are you a Maine resident?

Yes-seasonal, 0.8%
Yes- year round, Total, 95.8%
No- But I visit frequently, 3.4%
Total

Figure 2. Did your outdoor activity increase during COVID-19 lockdown?

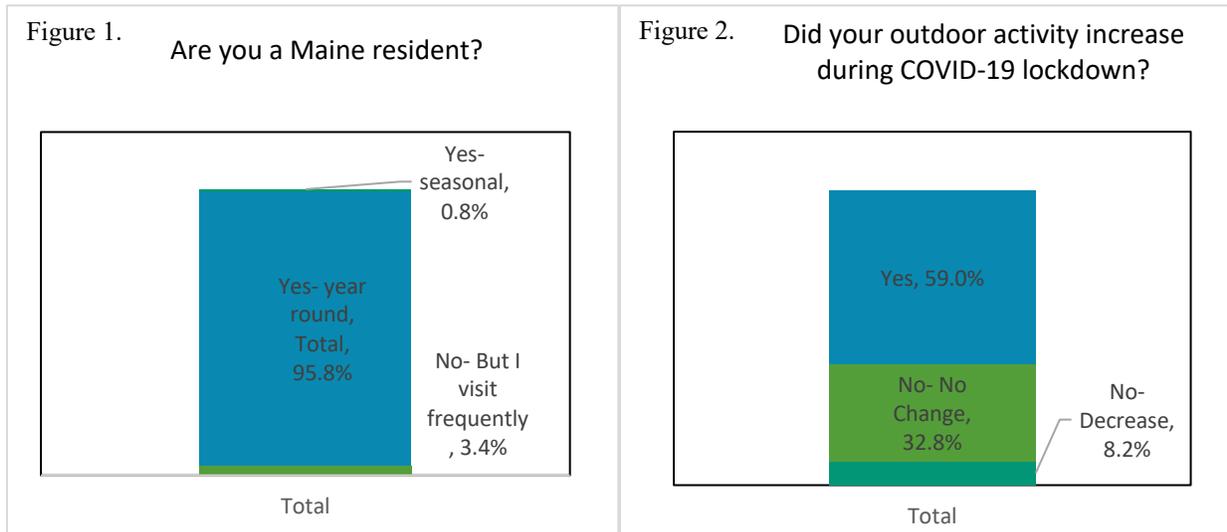Yes, 59.0%
No- No Change, 32.8%
No- Decrease, 8.2%
Total

Figure 3. using the percentage of activity increase from Figure 2. of 59%, we see that out of that 59%, in Figure 3. 57% of respondents plan on continuing this outdoor activity increase after lockdown (3). Therefor 97% of those respondents who said they increased activity plan said they are planning on continuing that activity.

Figure 4. shows that 80% of the respondents said they would like to see more accessible outdoor spaces in their areas(4). This means that even those who did not necessarily increase activity would still like to see more outdoor spaces, these people might include those looking for green infrastructure, gardens, green space, or plant life instead of the more recreational type open space such as trails.

Figure 3. If your activity increased, do you plan on keeping up with this change of lifestyle? Will you continue the habit beyond the lockdown?

- Yes, 57.14%
- Does not apply-my activity did not increase., 41.18%
- No, 1.68%

Figure 4. Would you like to see more accessible outdoor spaces in your area based on your outdoor activities mentioned above?

- Yes, 79.83%
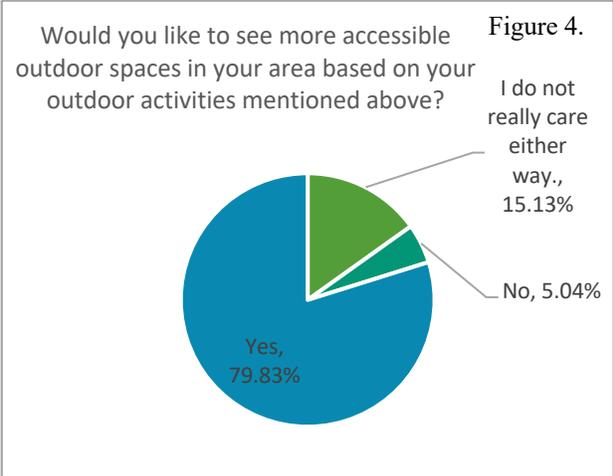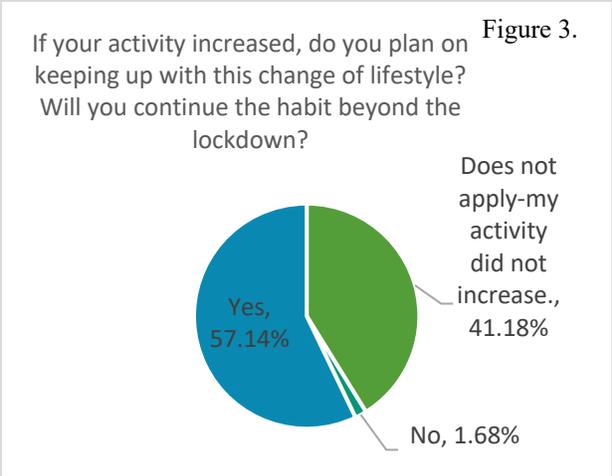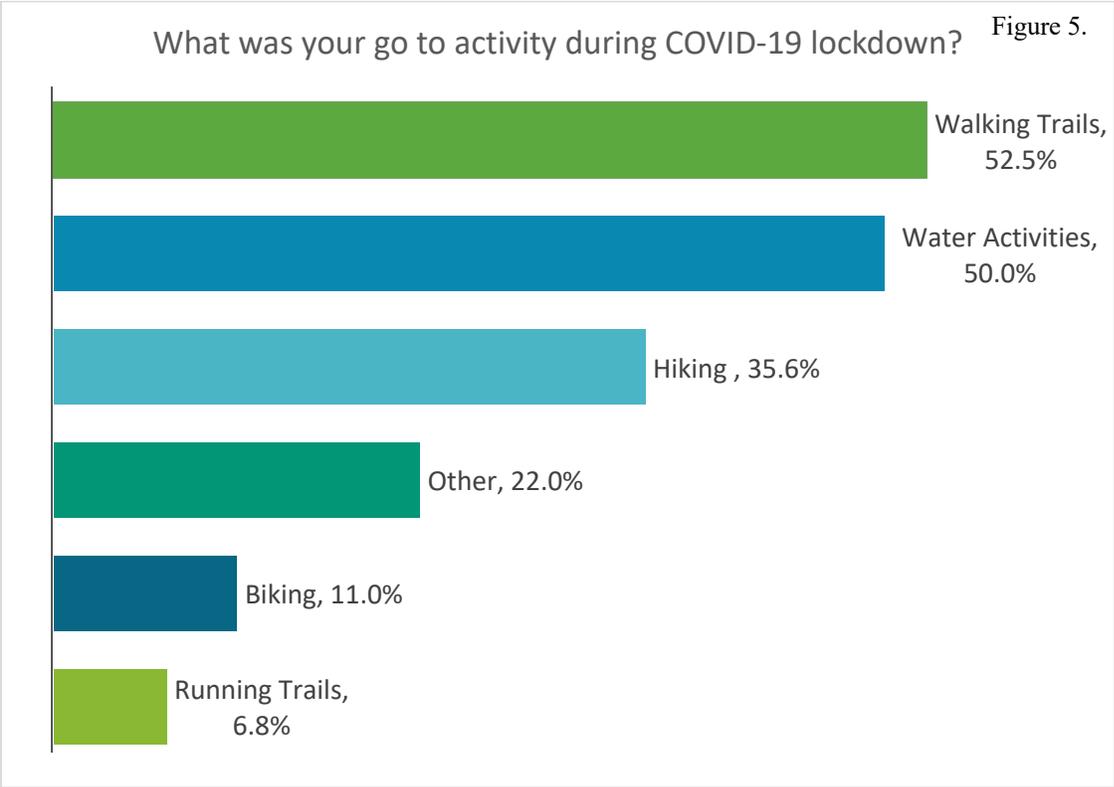- I do not really care either way., 15.13%
- No, 5.04%

Figure 5. shows us the majority of people stayed active using trails in some form (mostly walking but some running), water activities and hiking (5). This could be where we put more focus on when designing outdoor space. This question allowed the respondents to choose more then one answer so our percentages here are based on total respondents. Out of 119 respondents 53% said they spend their time walking on trails.

Figure 5. What was your go to activity during COVID-19 lockdown?

- Walking Trails, 52.5%
- Water Activities, 50.0%
- Hiking , 35.6%
- Other, 22.0%
- Biking, 11.0%
- Running Trails, 6.8%

Based on the previous activities Figure 6. looks at what people would like to see for improvements(6). This question the respondents could not choose more than one answer leaving them to choose the most important answer to them. If this survey was to be done over, consistency would change so that comparison on numbers would be more streamline and all answers would be either be multiple choice select one OR select all the apply. This question was also skipped by 4 respondents leaving us to believe they do not have any of these concerns. While green space was chosen the least here, we can also recognize that this term is not easily definable by the general public and can include open space, which encompasses all these answers. Parking, commuting and cleanliness are all considerations when we look at sustainable planning and properly designed green space.

Figure 6.

What are some of your concerns/what would you like to see in changes/improvements in outdoor public spaces based on the above activities?

- More parking near trails, parks etc. , 19.3%
- Improvements on pedestrain friendly commuting, 29.8%
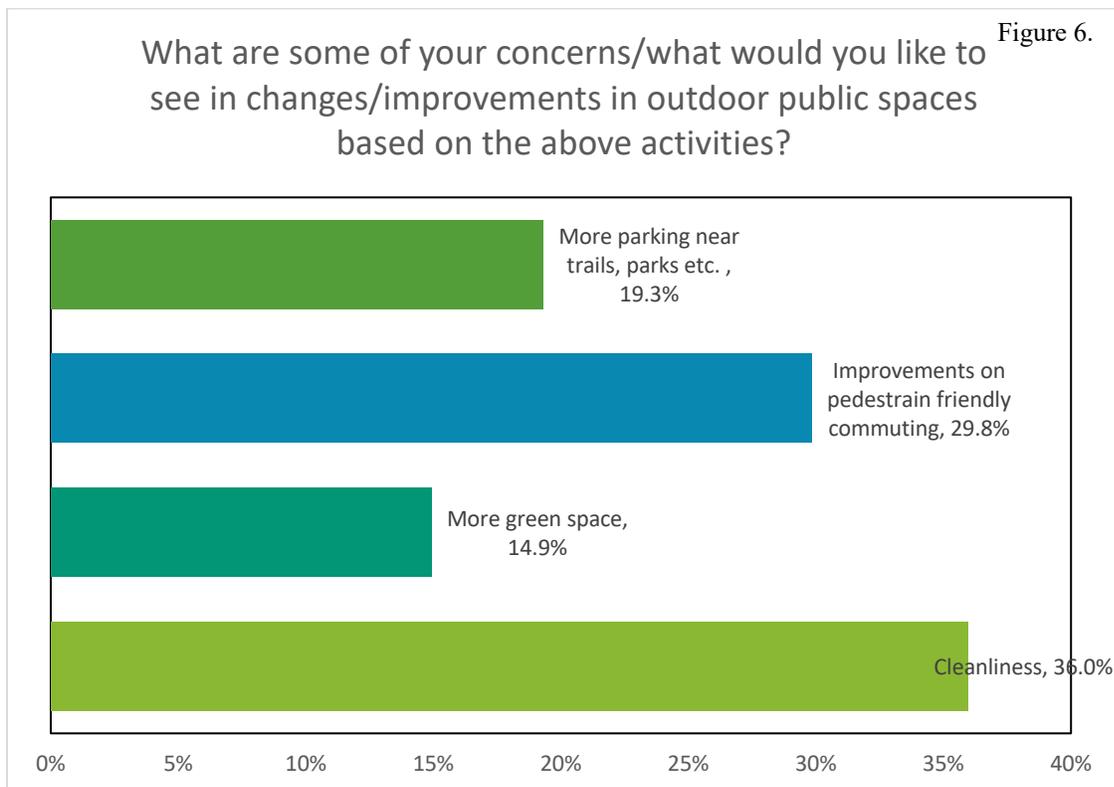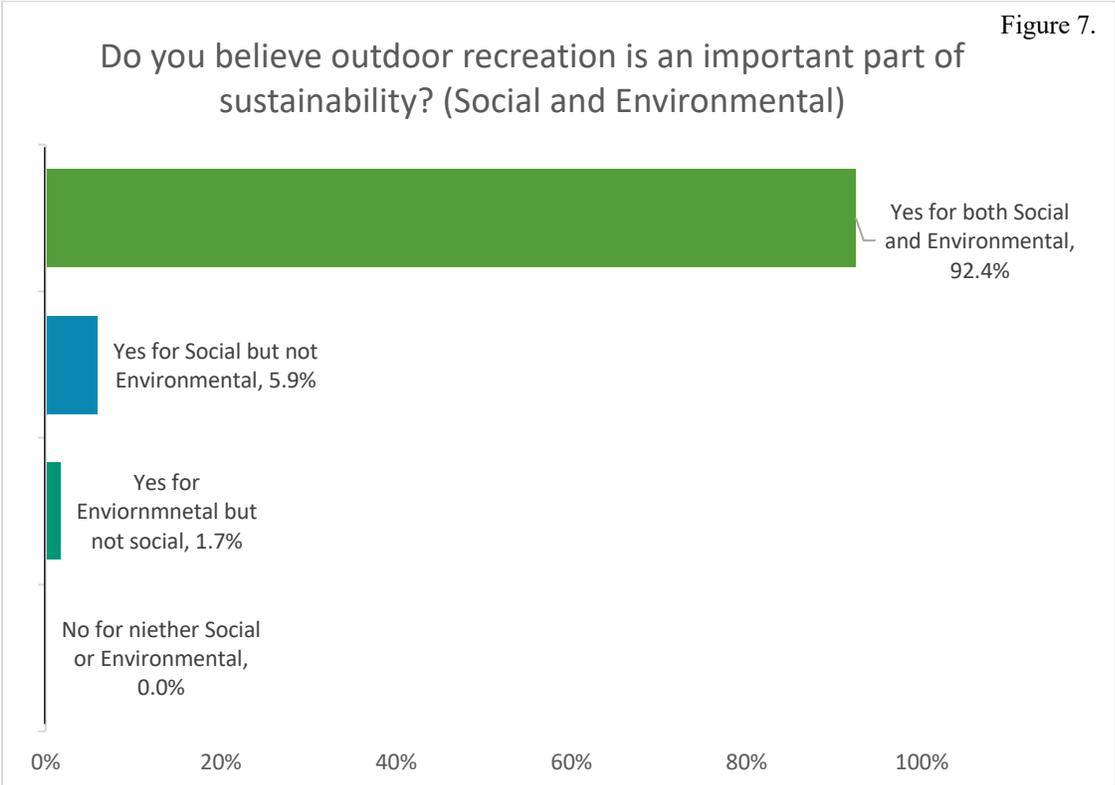- More green space, 14.9%
- Cleanliness, 36.0%

Figure 7 encompasses our thesis and leads us with the conclusion that all people surveyed find outdoor recreation important for some part of sustainability (this question was answered by all 119 respondents) (7). While 92% of the respondents said that outdoor recreation was

important for both social and environmental sustainability. We can further understand those who chose for social not environmental, as we look into some reports, some forms of outdoor recreation can actually have a negative effect on sustainability and cause more harm to the environment. (Bassetti, 2019) For those who chose environmental but not social we are going to assume they might have a different definition of these terms or further explanation not found here.

Do you believe outdoor recreation is an important part of sustainability? (Social and Environmental)

Yes for both Social and Environmental, 92.4%

Yes for Social but not Environmental, 5.9%

Yes for Enviornmnetal but not social, 1.7%

No for niether Social or Environmental, 0.0%

0%   20%   40%   60%   80%   100%

Interviews

Similar to our survey findings, our interviewees have the hopes that this new activity will help encourage these behaviors beyond the pandemic and will encourage further support for outdoor recreation and public space.

While the COVID-19 pandemic many not have permanently change outdoor usage it has certainly reinforced the importance of outdoor spaces. This is the general theme amongst those interviewed. Tracy Willette, Director of Parks and Recreation for the city of Bangor, Maine

stated "I think the pandemic has reinforced the importance of our park and open spaces in a community. Parks are often the outdoor "community centers" for neighborhoods where they are located. They continue to serve an important role as citizens continue to deal with the pandemic." This is important when it comes to getting the public on board with projects and policy decisions. People see the value in things like open space, mixed zoning and parks after this experience. And for many businesses the access to the open space outdoors was a lifeline during these times as Laura Supica City Councilor of Bangor, Maine emphasized.

> "I have always supported increasing green space, pedestrian only space and events outdoors. I would say it has not so much changed my focus but presented a situation where people who are reluctant to make change see more value in the outdoors and wish to explore we as a city can rezone, close down certain streets and give citizens outlets to safely leave their homes and engage with their community. What would normally be a years long conversation with no movement has become something people are willing to try and experiment with." -Laura Supica, City Councilor

Mike St Laurent has been in the outdoor recreation business for over 20 years. He started as a Whitewater rafting guide in 1996, got his Maine Master Guide license in 1998, was the previous owner of Dead River Expeditions and now works as a paramedic and owner of Down River Expeditions, a kayak and mountain bike rental and retail store in Skowhegan, Maine. He says the outdoor recreation business has been declining for many years as the younger generation looks for resort-style vacations. But the pandemic has brought a spike in rentals as people look for smaller outdoor vacations to stay safe and socially distant. He is hoping this reinforces the importance of these businesses and the service they provide for the Maine experience and Maine communities.

> "It is the small businesses that start people in outdoor adventures and vacations, it is businesses like mine that set the standard…" -Mike St. Laurent, Owner of Down River Expeditions.

Our findings support the statements made by many other similar studies. Parks are emerging as important public health solutions in urban communities. Nearly 40 years of research evidence confirms that nearby nature, including parks, gardens, the urban forest and green spaces, support human health and wellness. (Wolf., 2017) "Greenspace and open public space provide safe places for outdoor recreation and activity, which promotes physical health to a community, is psychologically more appealing which can contribute to a range of benefits for peoples mental health, encourages social interactions, and can make residents feel more safe and part of a community." (Jennings & Bamkole, 2019)

The COVID-19 pandemic only emphasizes the importance of these spaces and having the proper planning to include them in cities and towns. In the past outdoor recreation has not always supported the full scale of environmental sustainability. Outdoor recreation users have been a select group who are concerned more with environments that support their activities then the overall environment itself. (Bassetti, 2019) With this new evidence of increasing outdoor enthusiasm, we can hopefully begin to bridge that gap and shed light on the importance of preserving nature as a whole by creating overall sustainable planning and communities.

Discussion:

Based on our survey findings and responses from stakeholders we can conclude our research supports what other researchers are finding. Outdoor activity and appearance are of vital importance to a populations well-being. The pandemic of COVID-19 has shown us that people in stressful situations need these resources. Social sustainability means the well-being of people and in order to support that well-being we must provide better access to these resources. (Wang, 2020) (Wolf., 2017) Our survey respondents show us that while a good number of people are increasing activity beyond this crisis, the majority (79.8%) would like to see more accessible outdoors spaces. And a majority of 92.4% of survey respondents said believe that outdoor recreation is an important part of both social and environmental sustainability. While amongst all interviewees, the consensus was that outdoor recreation and green space is of vital importance to cities and towns.

While we have made it clear the importance of outdoor recreation and greenspace for social sustainability. The question still remains on what it means for environmental

sustainability. The 5.9% of survey respondents who said outdoor recreation was not important for environmental sustainability were not entirely incorrect. In fact, if we look at Figure 6., where the biggest concern for outdoor spaces was cleanliness, our findings support the reasoning for why outdoor recreation is not always beneficial to environmental sustainability. Outdoor recreation often attracts people to the outdoors but only in ways that our beneficial to them and does not always translate into stewardship of the environment. (Bassetti, 2019) We have to ensure that while we are seeing record numbers of visitors to places like national parks over the last few years, that also comes with increased environmental awareness.

"A classic example is the often-cited discovery that PFCs contained in outdoor apparel waterproofing are washing off rain-jackets and into the biomes of remote areas. Another could be the Guardian's study on 8 US national parks, revealing that a huge increase in visitors is bringing lasting damage to these popular sites." (Bassetti, 2019)

"The fact that outdoor recreation is a fast growing business means that it can become a fundamental cog in the movement towards tackling climate change, rather than another burden on the back of an already struggling natural world." (Bassetti, 2019)

Maine has become a leading safe haven for people all over the country. A state that takes pride in its' commitment to nature and the outdoors and thrives off of a variety of outdoor recreation and tourist related businesses. Whether it is the ski lodges in the winter, the rocky coast of summer, or the crisp foliage and hunting season of the Fall. Maine offers a lead in outdoor recreation. According to a federal study Maine is the third leading state in Outdoor Recreation (Mcguire, 2019). This gives Maine the opportunity to develop in ways that support sustainability. As cities like Portland and Bangor grow and people from other states continue to seek residency in Maine, we can use this development to lead into a sustainable future. We have to find ways that make people care about the environment they live and want to protect it, by showing them the benefits of the outdoors.

The outdoor recreation industry makes up a larger percentage of Maine's economy than in almost any other state, according to federal data released Friday. Boating, hunting,

camping, skiing and dozens more outdoor pursuits contributed about $2.9 billion to Maine's $64 billion economy in 2017, almost 5 percent of the state's gross domestic product, according to state-level data from the Bureau of Economic Analysis. And the GDP impact of outdoor recreation in Maine is more than twice the national average. (Mcguire, 2019)

Why this is important in urban and rural planning?

As we move to a more sustainable future and threats like climate change continue to lurk over us outdoor recreation and the inclusion of greenspace will have to become a more common part of planning. This study shows us a range of benefits for social sustainability, and the potentials for environmental sustainability and awareness. Planners are going to have to start looking at the future in ways that can be more beneficial society as a whole. We are well past the industrial age and have learned that nature is of a much greater importance than we thought and treated it. Now is the time to take this knowledge and implement it into our cities and towns of the future.

Parks and green infrastructure can be co-designed for co-benefits. Parks can serve their primary goals to offer recreation and aesthetic amenities, while also containing spaces that mitigate stormwater or improve air quality. Green infrastructure can achieve essential utility functions in the community but may also be designed to create the environments that provide nearby nature experiences and support health." (Wolf., 2017)

Green infrastructure, Green space, and outdoor recreation are essential part of planning and policy because they directly support sustainability in communities. Providing a better sense of health, safety and community, which contribute to overall sustainability. Building community sense through appearance and physical planning can encourage walking instead of driving, participating in social activity, and people who care about the well-being of their environment.

The increase of accessible urban green space in environmentally degraded and economically disadvantaged communities is important for the promotion of physical and mental health. The opportunity for community residents to gain job skills and employment through greening projects is also important in advancing health equity. (Jennings, Baptiste, Jelks, & Skeete, 2017)

There are specific policy and planning changes we can make that will improve communities and create these results, it has been done before and the evidence suggests that these changes work in improving sense of community, the well-being of its members, community members who are stewards of their environment and a range of other benefits.

Recommendations/Policy and Planning Solutions:

What is the ideal sustainable and safe use of outdoor recreational space?
Sustainability ensures that we are able to meet a standard level and maintain that level. without depletion of our resources. (Merriam-Webster., n.d.) This can mean environmental resources, economic resources or social resources. Safe outdoor spaces are places where people feel a sense of comfort and community and can trust going out in that community. Providing this improves outdoor recreation by making people comfortable going out of their homes. This is important for sustainability, getting people out of their homes is where we start.

Some researchers suggest that areas where people feel safe and comfortable to walk are conducive to positive perceptions of social cohesion and promotes interest in using urban green spaces [77]. For example, a review article on parental factors involved in outdoor play found that a parent's perceived level of neighborhood social cohesion is positively correlated with a child's amount of outdoor play

This underscores the potential for well-designed urban green spaces to enhance the social environment by supporting an increase in social capital, more visitors to green spaces, and greater physical activity [74]. Thus, understanding the role of urban green spaces

upon the social environment can support interventions for health concerns such as obesity [74] and psychological health challenges (Jennings & Bamkole, 2019).

By creating these communities, we are able to provides safe outdoor spaces that support sustainability. In a study done in the International Journal of Environmental Research and Public Health called "Urban Green Space and the Pursuit of Health Equity in Parts of the United States" different integrative greenspace projects were implemented in low income communities amongst various cities in the United States. These projects included walkable neighborhoods and green space in Washington D.C., urban gardens and access to healthy food options in Utica, NY and green space and local job creation in South Bronx, NY and Atlanta, GA. These studies and efforts are able to link urban greening to overall health equity. (Jennings & Bamkole, 2019)

Are there cities who are leaders in sustainability and have already done the policy and planning to become sustainable? The answer is yes, there are a few cities (but not nearly enough) globally we can use as potential examples for future design such as Lkubljana, Slovenia.

An example of an ideal compact city is Ljubljana, Slovenia, awarded the 2016 European Green Capital, in which almost 560 m² of UGS is available per inhabitant and virtually all its residential zones lie within a 300 m radius from public green space. Over the past two decades, Ljubljana's transformation—via urban planning, landscape architectural provision and sustainability thinking—has significantly propelled it from its Socialist past toward a modern 'green,' compact city. This emphasis on UGS policy has focalised the city on restorative and conservation-leaning development. Urban development, in the context of sustaining city compactness, is directed primarily on regeneration and renewal of existing developed areas and the rehabilitation of degraded ones. At present, Ljubljana's high level of environmental awareness has it as one of the world's most sustainable cities, ranking in the top 100 for the third time. (Russo & Cirella , 2018)

There are ways urban and town planners can implement plans that better support greenspace and outdoor recreation. Starting with including green space in future city plans, more often, and in all neighborhoods. Redesigning old building infrastructure, this could mean adding

roof top gardens (National Park Service, 2020), or greening the sides of buildings. A largely supported planning change is increasing mixed use zoning, which city officials like Laura Supica, City Councilor of Bangor, Maine, said they are in full support of. This means new developments are designed and allowed to have a variety of commercial and residential space that limits the need to travel far from home. This might also mean rezoning current areas to allow mixed usage to redevelop neighborhoods. By creating neighborhoods where all needs are within a walking distance, it can help limit the usage of vehicles and allow lower parking area requirements on new developments.

In order to support this type of planning, we also have to consider more basic redesigning that allows residents to feel safe in their neighborhood. By feeling safe they are more likely to participate outdoors. These planning changes include design elements that are important to all urban and town design, but often get neglected in areas of lower income.

As green spaces play a role in place-based social or health initiatives, we acknowledge that other factors (e.g., transportation, access to quality health care) influence health outcomes. For example, other design elements such as adequate sidewalks, public transportation, lighting, and cross walks can enhance walkability and levels of physical activity. Moreover, even if residents consider a crime-stricken area to be relatively safe during the day, others maintain that unresolved crime issues can limit efforts to improve neighborhood walkability (Jennings & Bamkole, 2019)

Our survey suggested people feel safety and sustainability are both important, out of the 119 respondents 78% of those respondents felt sustainability was important and 68% of the respondents felt safety was important when it comes to outdoor recreation (Figure 8.). We need these important safety design measures in order to further support sustainability and green planning.

Figure 8.

What is a more important, sustainability or safety? or Both?
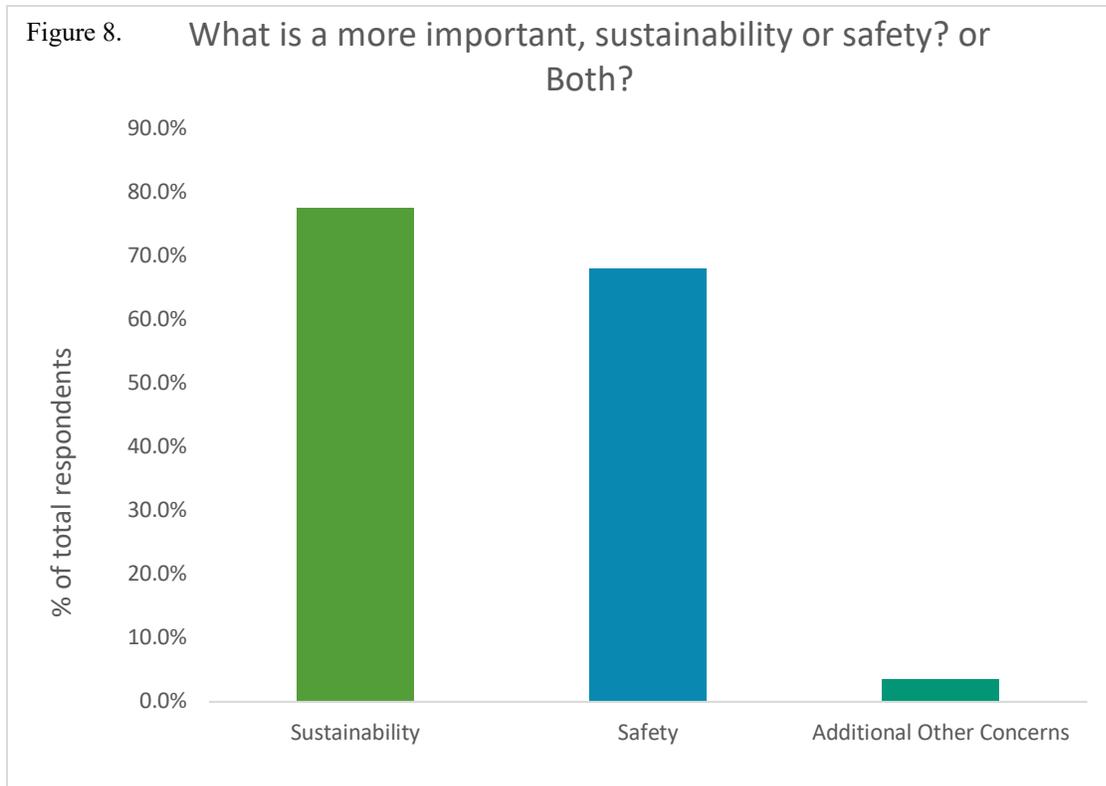
What other measures can we take to implement this? Our interviewees have some suggestions of ways we can further support outdoor recreation and greenspace planning. Funding for projects and government officials/employees following through on these plans is always a continuing concern. Tracy Willette, Director of Parks and Recreation in Bangor says support of federal funding can help communities in this way.

"On a larger, national scale, the full and permanent authorization of the Land and Water Conservation Fund (LWCF) will help ensure communities across country have access to funding for infrastructure projects" -Tracy Willette

Funding can also provide ways we ensure cleanliness and standards that keep our environment protected while we are able to enjoy the outdoors. Which was also the greatest concern noted in our survey in Figure 6. 36% of respondents said they wanted to see improvements in cleanliness.

From Laura Supica's perspective, the policy changes need to come from our elected officials, including reminding these elected officials that while they might live in neighborhoods

and have resources for themselves to access the outdoors, we still have to fight for those who do not.

> "I find we all say "we want green space" but the road to getting there is long, and people's attention can't always be singularly focused, we have work and families, responsibilities. These discussions continue with who we hire, and who we elect locally. Often those who stay elected already have nice homes, access to vehicles, and outdoor space. But as we increase that to everyone in the community, the City does better, even the people who have so much now." -Laura Supica

If we had these policy and planning measures already in place would we have been able to better respond to a global pandemic like COVID-19 better? Could we have known any of this before it happened? Strictly speaking of outdoor recreation and open/green space. Could we have planned better for this pandemic? Many local officials worked quickly to adjust to the crisis. City streets have been closed off and outdoor seating regulations quickly adjusted to allow businesses and restaurants to remain open. This is a success in our book when we walk down streets like Broad St. in Bangor, Maine, where large outdoor seating is obvious, and Exchange St. in Portland Maine. This allowed pedestrians to spread out safe distances from each other and saved many local businesses who did not have large outdoor seating prior. Other cities have not seen the same success, as places like New York struggle to keep people outside and distant. See various news articles such as "New York City Has 2,300 Parks. But Poor Neighborhoods Lose Out." (Hu & Schweber, 2020) or "New York Ranks Last for Amount of Green Space Per Resident Among the Major US Cities" (Rizzo, 2020).

But how could we have known that this was coming and with it the enthusiasm of the outdoors? While we could not prepare for the increase in outdoor activity entirely, we can create a society where outdoor recreation and nature are part of the normal everyday life, instead of a destination. Where walking, hiking, boating, hunting or any other activity is normalized enough that spikes in outdoor activity do not leave park directors or outdoor businesses overwhelmed. While COVID-19 might not be able to permanently change everyone's behaviors, it has certainly brought to their attention the unsustainability that can arise out of urban life, and makes policy, regulation and planning conversations about these issues more mainstream.

"The societal importance of forests underlined through the COVID-19 recreation boom calls for an updated forest policy framework, paying attention especially to urban forests" (Derks, Giessen, & WInkel, 2020)

Conclusion:

We use our observation and experience with the COVID-19 pandemic and lockdown to better support our need for outdoor recreation and public green space. This relates to an overall sustainable solution for the future. In this report we talk about sustainability of the future, but the reality is we are watching these things unfold before our eyes. Sustainability is a need of today. The COVID-19 pandemic gave us a grim glance at the coming problems of the world, disease, environment and economic crises. We have to ensure we are prepared for these crises. We need to build communities that are sustainable on their own, and that have general interest in self-preservation and protection. The future is not a world where we can discredit the environment like we have been but a world where we understand its importance and integrate the outdoors into our everyday lives.

"Our research has found that nature is not an amenity—it's a necessity. We need to take it seriously." (Wang, 2020)

We need more leading examples of these planning and policy strategies. It is time to take these ideas and implement them into action in order to further research and understand what is required to build sustainable communities. Numerous studies have been done to understand the importance of nature to human wellbeing, the information has always been there. Now is the time to create policy and planning changes to support this information. Through better planning and design of infrastructure we can build Maine to support the life we already have grown so use to and use our outdoor recreation economy to our greatest advantage. We can be both a safe haven for those who want to visit and still take care of those who live here. Maine has a fast-growing economy, but if we are going to continue to grow as a state, we need to grow in a sustainable fashion that allows the integrity of Maine to stay intact. This also includes electing

officials who have the interest of the people who live here and want to create better lives for Mainers. Listening to business owners and residents about what their needs are and creating funding and policy that supports those needs.

The pandemic of COVID-19 is not over and as it continues to change our everyday lives, we also have to be able to adjust and find ways that support our mental and physical health. Outdoor recreation and greenspace are essential to keep everyone's physical, mental, and spiritual health intact. Staying indoors away from loved ones is not a safe or sustainable way for human beings to function and recognizing this now during this crisis will help prepare us better for those that may follow. While proper outdoor recreation offers help in a pandemic it also offers solutions to the overall wellness of society and people that in the end are much bigger than the pandemic of 2020. (Freeman & Eykelbosh, 2020) (Wang, 2020) (Jennings & Bamkole, 2019) (Derks, Giessen, & WInkel, 2020)

"In any moment of decision, the best thing you can do is the right thing, the next best thing is the wrong thing, and the worst thing you can do is nothing." — Theodore Roosevelt

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Survey Response Data

Outdoor Recreation in Maine during COVID-19

SurveyMonkey

Q1 · Are you a Maine resident?

Answered: 119 Skipped: 0

ANSWER CHOICES RESPONSES	
Yes- year round	
95.8%	114
Yes-seasonal	
0.8%	1
No- But I visit frequently	
3.4%	4
TOTAL	119

1/9

Outdoor Recreation in Maine during COVID-19

SurveyMonkey

Q2 Did your outdoor activity increase during COVID-19 lockdown?

Answered: 119 Skipped: 0

ANSWER CHOICES RESPONSES	
Yes	
59.7%	71
No- No Change	
32.8%	39
No-Decrease	
7.6%	9
TOTAL	119

2/9

Outdoor Recreation in Maine during COVID-19

Q3 What was your go to activity during COVID-19 lockdown?

Answered: 118 Skipped: 1

ANSWER CHOICES	RESPONSES	
Running Trails	6.8%	8
Walking Trails	52.5%	62
Hiking	35.6%	42
Water Activities- kayaking, swimming etc.	50.0%	59
Biking	11.0%	13
Other (please specify)	22.0%	26
Total Respondents: 118		

Outdoor Recreation in Maine during COVID-19

Q4 What outdoor public spaces did you use most during COVID-19 lockdown?

Answered: 119 Skipped: 0

ANSWER CHOICES	RESPONSES	
Trails	62.2%	74
Beaches/Bodies of Water	58.8%	70
Federal/State Parks	32.8%	39
Green Space, City Parks		

25.2% 30	
City Infrastructure (roads closed off, public areas)	
17.6% 21	
Other (please specify)	
12.6% 15	
Total Respondents: 119	

Outdoor Recreation in Maine during COVID-19

SurveyMonkey

Q5 If your activity increased, do you plan on keeping up with this change of lifestyle? Will you continue the habit beyond the lockdown?

Answered: 119 Skipped: 0

ANSWER CHOICES	RESPONSES
Yes	
57.1% 68	
No	
1.7% 2	
Does not apply-my activity did not increase.	
41.2% 49	
TOTAL	119

Outdoor Recreation in Maine during COVID-19

SurveyMonkey

Q6 Would you like to see more accessible outdoor spaces in your area based on your outdoor activities mentioned above?

Answered: 119 Skipped: 0

ANSWER CHOICES	RESPONSES
Yes	
79.8% 95	
No	

5.0% 6	
I do not really care either way.	
15.1% 18	
TOTAL 119	

Q7 What are some of your concerns/what would you like to see in changes/improvements in outdoor public spaces based on the above activities?

Answered: 114 Skipped: 5

ANSWER CHOICES RESPONSES	
Cleanliness (such as trash disposal, maintenance)	
36.0% 41	
More green space (parks, grassy areas in city/town centers)	
14.9% 17	
Improvements on pedestrian friendly commuting (bike lines, sidewalks etc.)	
29.8% 34	
More parking near trails, parks etc.	
19.3% 22	
TOTAL 114	

Q8 Do you believe outdoor recreation is an important part of sustainability? Sustainable: the ability to be maintained at a certain rate or level.o Social Sustainability: occurs when the formal and informal processes; systems; structures; and relationships actively support the capacity of current and future generations to create healthy and livable communities.o Environmental sustainability: is

defined as responsible interaction with the environment to avoid depletion or degradation of natural resources and allow for long-term environmental quality.

Answered: 119 Skipped: 0

ANSWER CHOICES RESPONSES	
Yes- For both Social and Environmental Sustainability	
92.4% 110	
Yes- For Social Sustainability but not Environmental Sustainability	
5.9% 7	
Yes-For Environmental Sustainability but not for Social Sustainability	
1.7% 2	
No- For neither Social or Environmental Sustainability	
0.0% 0	
TOTAL 119	

Outdoor Recreation in Maine during COVID-19

SurveyMonkey

Q9 What is a more important, sustainability or safety? or Both? (check all that apply)Sustainability: the ability to be maintained at a certain rate or level.Safety: the ability to be protected from or not exposed to danger or risk; not likely to be harmed or lost. This can apply both to environmental safety and social/human safety.

Answered: 116 Skipped: 3

ANSWER CHOICES RESPONSES	
Sustainablity	
77.6% 90	
Safety	
68.1% 79	
Other related concerns (please specify)	
3.4% 4	
Total Respondents: 116	