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## **An Examination of Sustainability Practices Within NCAA Division I Athletic Teams**

Anna Harder

*University of Tennessee, Knoxville, aharder@vols.utk.edu*

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To the Graduate Council:

I am submitting herewith a thesis written by Anna Harder entitled "An Examination of Sustainability Practices Within NCAA Division I Athletic Teams." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Recreation and Sport Management.

Dr. Jeffrey Graham, Major Professor

We have read this thesis and recommend its acceptance:

Dr. Robin Hardin, Dr. Sylvia Trendafilova

Accepted for the Council:

Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

To the Graduate Council:

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**AN EXAMINATION OF SUSTAINABILITY PRACTICES WITHIN NCAA DIVISION I  
ATHLETIC TEAMS**

A Thesis Presented for the  
Master of Science  
Degree  
The University of Tennessee, Knoxville

Anna Harder  
May 2023

## **DEDICATION**

To my family, Mom, Dad, Adam and Austin, thank you for your love and continued support. Your encouragement has allowed me to pursue this achievement. And to all those who understand and implement environmental sustainability in their daily lives - your actions make a difference.

## ACKNOWLEDGEMENTS

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## ABSTRACT

The United States Environmental Protection Agency, in 1960, 7% of U.S. waste was recycled or diverted – in 2023, that is almost 35%. The minimization and eventual elimination of such products will help with issues such as diversion from these products in everyday life and replacing them with reusable alternatives are what makes a difference. Universities nationwide are beginning to understand the importance of the relationships between sustainability personnel and athletic administrators, which then channels into how collegiate teams practice sustainability. There is still much work to be done regarding the implementation of sustainability practices and procedures in college athletics. A working definition of Environmental Sustainability suggests “environmental sustainability as the maintenance of natural capital” (Morelli, 2011, p. 1). Within universities, a new method of sustainability integration has emerged - Green Teams. Green Teams serve to formalize the relationship between institutional partnerships, which allows athletic departments to contribute to the sustainability goals of the university. The purpose of the current study was to determine whether sustainability practices change based on an individual’s environment and how those behaviors influence others. I interviewed staff that held the title of Director of Operations or conducted operation-like tasks for all NCAA Division I teams. The findings show it was clear that there was a strong relationship in the disconnect between athletic and on campus departments regarding environmental sustainability habits. Participants mentioned that although they noticed on-campus environmental sustainability (ES) efforts being enforced, those

same practices were not implemented throughout athletic departments. There was also a disconnect between home and work practices, as many participants noticed that it was easier to practice ES on their own compared to at work due to the sheer number of athletes and staff they manage. Geographic location also played a role in participants' mindset and ES habits overall.



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## **ABBREVIATIONS**

DO	Director of Operations
ES	Environmental Sustainability
SS	Social Sustainability
ECOS	Economic Sustainability
GT	Green Team
NCAA	National Collegiate Athletic Association

## CHAPTER I – INTRODUCTION

Recently, environmental sustainability has become a topic of constant discussion and argument. Although many people believe in the idea of recycling and reducing carbon footprint, there are still individuals who do not believe or take part in implementing change regarding the environmental crisis at hand (Clarke, 2014). The United States Environmental Protection Agency, in 1960, only 7% of US waste was recycled or diverted – in 2023, that is almost 35%. Although this is promising data as it is trending upwards, each American still produces 4.9 pounds of waste on average per day – and it is growing by the year (EPA, 2022). Research has shown that if individuals do not make a significant change, there will be more plastic waste than fish in the ocean by 2050 (WWF, 2023). Although recycling is a good place to start, the real change comes from eliminating single use plastics - such as plastic utensils, plastic bags, and plastic straws. The minimization and eventual elimination of such products will help with issues such as diversion from these products in everyday life and replacing them with reusable alternatives are what makes a difference. Many times, people raise the statement, “My recycling actions don’t make a difference” or “I am not the problem, large companies like Amazon are.” Although this may seem true on the surface, if 1 million people that adopt that ideology changed their sustainability habits, it could possibly make an impactful difference.

The topic of research is the examination of environmental sustainability practices within NCAA Division I athletic teams. Furthermore, hoping to gain more knowledge on whether personal sustainability practices outside of work affect the sustainability efforts, or lack thereof, practiced at the participant’s job. From this information, the goal is to inquire whether athletic departments are facilitating conversations regarding sustainability and if not, understanding why and encouraging the implementation of such conversations. Additionally, finding out if the

participants work with any other administration on campus in implementing conservation efforts throughout daily activities and traveling. Such administration could be a sustainability office or personnel who work indirectly with the initiative.

### *Topic Relevance*

This topic was selected because of knowledge, background and passion for sustainability and conservation efforts. Being from Hawaii and learning from a young age the importance of eliminating the use of single-use plastics and trying my best to conserve energy and water, helped shape habits and mindset. I witnessed first-hand the effects of people's choices as beaches that were once clean became engulfed with microplastics and trash. As I grew older and began swimming competitively, I was able to see my coaches and other adults involved implement sustainability practices within our team. Whether it was done through using recycled materials at swim meets or reducing our solid waste, which includes but is not limited to single use plastics and food, there were always sustainability measures taken. As I transitioned into a college swimming atmosphere in the Midwest, I realized quickly that the mindset surrounding sustainability was completely different. There were little to no measures taken on my swim team and our athletic department did not facilitate conversations regarding sustainability or how to implement practices or procedures. This was difficult for me to understand but I was not able to implement change while I was a member of the swim team. After graduation when I decided to pursue a master's degree, I made it a goal and a priority to implement sustainability practices wherever I went next. Pursuing this topic brings me joy and sparks a passion in me that will hopefully translate into making real world changes that will be apparent over time. I decided to focus on interviewing NCAA Division I athletic teams because of my background, so I feel connected to these programs and my passion drives my desire to understand more about other

ideals and practices, which hopefully will help me encourage others to make changes. I also have experience when it comes to single use plastics and waste during travel meets. I want to see the similarities and differences between the experiences of the participants within NCAA Division I sponsored sports and analyze how personal practices affect those portrayed at work and whether that affects team decision making regarding sustainability.

Over and above personal interest, the topic of environmental sustainability is important to examine because not much research has been provided on the disconnect between athletic department and university ES habits and mindset. Previously, research has been conducted on Green Teams within universities, and how those groups of people are able to come together and create and implement initiatives campus-wide (Barrett, 2021). In order to implement long-term change in athletics, figuring out why people do not enforce effective ES habits is crucial. From there, understanding the why behind those reasons. Collegiate athletic programs and the National Collegiate Athletics Association (NCAA) have resources, power, and the financial means to implement ES habits throughout all athletics departments but are failing in this area. ES has been addressed by the NCAA on a few occasions, but there has not been effective change put in place to ensure ES habits are seen through and implemented (NCAA, 2013). With this research, the hope is that ES becomes a priority throughout the NCAA and real change is seen and enacted throughout college athletics.

## CHAPTER II - REVIEW OF LITERATURE

### *Definition and Concepts of Environmental Sustainability*

Environmental Sustainability has been defined many different ways throughout the years, as it has been somewhat of an elusive concept. Because of this, there is not one concise definition or concept surrounding the idea of ES. In an article written by John Morelli titled “Environmental Sustainability: A Definition for Environmental Professionals”, the author begins with a quote from Robert Goodland as he calls to mind the historical documentation and progression of the need of ES and puts forth his own definition of ‘environmental sustainability as the maintenance of natural capital’ (Morelli, 2011, 1). This means that ES has to do with both social and economic sustainability. In order to understand ES, it is important to break down the other two concepts because they all work in conjunction to create viable and lasting sustainability solutions.

The concept of sustainability was originally developed in 1987 when the United Nations published *Our Common Future*. This literature piece highlighted former Norwegian Prime Minister Gro Harlem Brundtland and his role as Chair of the World Commission on Environment and Development. This book highlights the ideology of development and the environment being one entity and acting as a single issue. Brundtland’s Commission was created through this effort and this mandate was put in place to highlight three key issues. The mandates mentioned were taken from an article titled *Report of the World Commission on Environment and Development: Our Common Future* and they are as follows:

1. To re-examine the critical environment and development issues and to formulate realistic proposals for dealing with them.

2. To propose new forms of international cooperation on these issues that will influence policies and events in the direction of needed changes.
3. To raise the levels of understanding and commitment to action of individuals, voluntary organizations, businesses, institutes, and governments (Brundtland, 1987, 2).

The overall idea that was concluded from this research was that poverty has the power to reduce sustainability and development, which accelerates environmental pressure. This in turn creates a dire need for a balance between ecology and economy. Through this publication and the Prime Minister's efforts, the term "sustainable" and "sustainability" became used more frequently as the world "endured a period of accelerated evolution" (Morelli, 2011, 5).

Social Sustainability (SS) relates to the ability of society or a specific social group to create and implement sustainability goals and procedures, whether this be in a home or work setting. SS seeks to support the individual's overall social and cultural life. One important aspect of SS is the idea of equal opportunity for all individuals to practice sustainability efforts in their daily lives, which includes access to specific resources, such as reusable products. Economic sustainability (ECOS) refers to the procedures created and practiced that help develop long-term economic growth, without compromising the social and cultural well-being and aspects of any given community. This may include implementing reusable energy sources or a recycling center in a community without destroying land that is meaningful to the locals or invading on private property. Finding a balance between the two helps create a holistic ECOS approach, which will benefit all of society.

One barrier that is seen frequently when it comes to finding ways to achieve ES as a societal whole is that not everyone agrees regarding the importance and urgency of ES. In *The Concept of Environmental Sustainability*, the author calls to mind that "sustainability includes an element

of not harming the future (intergenerational equity), and some find the intergenerational equity component of sustainability to be its most important element” (Goodland, 1995, 6). It will be difficult to achieve intergenerational sustainability in the near future if changes are not made. With this idea at the forefront of the ES movement, it is important to consider the idea of how to implement change within those communities that do not see the urgency in the issue. Allowing people from different backgrounds, including those who do not feel that change is necessary in this realm, to get together and implement procedures that show true impact. It is difficult to execute change in one’s personal life without the support of others and when you are not able to physically see the difference your actions are making. This is why enacting change as a community or a larger entity is more beneficial because overtime, it is easier to notice the difference that is being made as a whole.

#### *The Importance, Creation and Implementation of Green Teams*

College campuses nation-wide are feeling the pressure regarding the implementation of environmental sustainability procedures (Murtagh, 2019). Whether that includes the placement of recycling bins around campus or the minimization of single use plastics, students are more aware of the sustainability habits that universities are practicing. Interestingly enough, “Studies now show that upwards of two-thirds of prospective college freshmen look at campus green rankings as a factor in college choice” (Newport & White, 2012). This shows that the younger generation puts sustainability practices high on their list when choosing which universities to attend, which leads to the idea that college students will continue to care about such practices being implemented. Because universities are being pushed by societal ideologies into making sustainability changes, that leads to other entities on campus feeling the pressure to implement policies and procedures. The problem that lies ahead is the fact that these on-campus entities are



not working together in order to implement change across the board. Although the importance of environmental sustainability is on the rise, universities are at a loss for where to begin and how to incorporate all other departments, such as athletic departments, in creating change. This is where the term “Green Teams” (GT) comes into play.

“Green teams serve to formalize the multiplicity of inter- and intra-institutional partnerships and allow athletic departments to contribute to the sustainable development goals of the university...” (Barrett, 2021, p. 2). Ideally, green teams are created in hopes to gather representatives from different university organizations to plan and implement campus-wide change. In order to incorporate an effective GT in a university setting, it is integral to include employees from different departments. For example, if an athletic department at a Southeastern conference (SEC) university wanted to create a GT, it would be beneficial to include individuals such as student-athletes, or those from departments such as academics, marketing, business, and operations, as well as on campus partners which may include but is not limited to university administrators and advisors from different colleges. From here, the GT would establish goals and expectations/guidelines that will help guide the group in implementing change.

Specifically in the world of college athletics, “research has demonstrated that there is a working relationship, albeit unbalanced, between college athletic and sustainability offices” (Pfahl et al., 2014, p. 46). Frequently, sustainability is marketed to fans at sporting events, which gives the allusion that collegiate athletic departments are the front runners on sustainability efforts. But if we look in depth at what is being done internally and what connections are being made externally, gaps and misconceptions can be found. Is what is being conveyed to fans synonymous as to what is being practiced within athletic departments? This ties into the idea of greenwashing, which deals with the act of providing the public with false advertising regarding

athletic sustainability habits and efforts. It's easy to market information to the public but how can athletic departments prove that they're making changes and implementing such efforts?

When research was conducted regarding the formation and function of a collegiate athletics sustainability committee, it was found that members of a given GT became involved due to the “university as a whole [placing] a strong priority on environmental sustainability” (McCollough, et al., 2018, p. 63). Integrating the idea of sustainability within a university's core values and mission statement puts an emphasis on its importance campus-wide, which encourages people to join in on the effort because of its overall influence. While this seems simple to implement, the problem circles back to athletics.

Members of GTs that were interviewed in the aforementioned study noted that it was necessary to have the entire athletic department's support in order to have a like-minded culture and general awareness of GT practices and procedures. One roadblock that came up was that after a stadium renovation project was completed due to increased amounts of athletic funding, which came from efforts led by the GT, athletic administration quickly lost interest. “[They] became less involved as the Green Team repositioned itself toward a new, broader goal: to integrate environmental sustainability across the athletic department from its organizational culture to its daily operations” (McCollough, et al., 2018, p. 67). This statement solidifies the fact that in order to create a large enough impact, there needs to be a shift in overall culture and a way to incorporate ES into everyone's daily operations. “With sustainability teams the hub of environmental actions and strategically located at the intersection of numerous organizational operations, it should remain as close to daily operations and senior management as possible” (Pfahl, 2010, p. 46). This helps ensure that sustainability efforts are kept in the front of the universities' minds, and it does not become a back thought.

### *The Relationship Between Athletic Departments and Sustainability Personnel*

It is known that athletic departments and on campus sustainability personnel need to have a relationship in order to promote change across the board. Different knowledge and expertise is integral in creating an internal system that implements plan and procedures. Generally, “athletic department personnel often lack the formal education or training to initiate sustainability-related strategic actions on their own, thus necessitating processes of collaboration with other university departments” (Barrett, et al., 2021, p. 5). Although this relationship is necessary, it is sometimes overlooked and difficult to create, especially because athletic departments are often seen as separate entities in a university setting. This calls to mind the question of who is responsible for bridging the gap between sustainability personnel and athletic administration.

Athletics facilities have played an integral role in creating connections between sustainability experts and employees. For example, many universities have implemented sustainability initiatives such as setting up recycling bins around campus. Athletic departments nation-wide have implemented practices and relationships by incorporating recycling efforts in athletic facilities such as swimming pools, academic buildings and indoor complex arenas. In a study regarding the examination of sustainability department and athletics department collaboration, respondents indicated that “no direct mandate from a higher administrative power to initiate the relationships” was encouraged (Pfahl, et al., 2014, p. 38). Initiatives to create relationships between sustainability personnel and athletics came from mainly direct outreach from the sustainability offices on campus. This calls to mind two issues. One being, athletics is not generally spearheading the initial relationship building and the other being, what happens when a university does not have a sustainability office. It was also reported that even though sustainability experts in waste reduction, energy, sustainability, etc. are implementing ideas

within these teams, athletic department personnel have the final say. This research shows that even though athletic personnel are not at the forefront of creating sustainability initiatives and enacting change, they have a lot of say in the end results. This is promising if relationship building continues to grow and ES becomes a leading issue in the minds of athletic personnel.

### *Creating Strategic Plans to Implement Sustainability Procedures*

Creating goals and working to form GTs while building relationships throughout university partners are all tasks that are integral in the forward movement of sustainability, but all of that means nothing without the implementation of these practices. Once GTs are formed and relationships are established, what needs to happen to actually implement real change? Although this may seem easy once the above tasks are put in place, “Implementing sustainability practices across all walks of the campus often proves to be considerably more challenging than in a corporate environment because campuses have additional pressures” (Velazquez et al., 2005, p. 2). For example, universities are often faced with a myriad of issues including the development of curricula and budget cuts. Sustainability efforts may be seen to such universities as a problem that is lower in priority than issues that directly affect students and campus administrators. Another barrier is that although sustainability-oriented classes and events are on the rise throughout campuses nationwide, they tend not to be overshadowed by classes that have the immediate ability to advance certain curricula that also appeal to alumni and donors.

Newport and White discuss the four phases of university approaches to sustainability. They are as follows.

1. Grassroots
2. Executive acceptance of the business case for sustainability
3. The visionary campus leader

#### 4. Fully self-actualized and integrated campus community

In the first phase, “Grassroots campus champions advocate for various sustainability-related services and policies” (Newport & White, 2012, p. 21). From here, campus administrators either accept or deny such ideas, which leads these sustainability advocates to launch their own individual efforts. These advocates run the risk of overstepping boundaries and undermining administrators, whereas they need to be wary of their initiatives.

The second phase calls to mind the idea of incorporating business tactics in order to sell the concept of sustainability initiatives. For example, campus administrators and university leaders may not understand the effect that such sustainability efforts have on the environment and throughout campus, but they will understand the cost savings and campus reputation and notoriety that such initiatives may bring.

The third phase includes the promotion of such sustainability initiatives, mainly by academic visionaries and those who hold higher titles within universities. “As part of this phase there is full executive leadership on sustainability, a keen understanding of its tenets, and an articulated vision for the future” (Newport & White, 2012, p. 22). The main goal in this phase is the reprioritization of sustainability initiatives, putting these at the forefront of peoples’ minds.

Finally, the fourth phase promotes full integration across the campus community and prioritizes a self-awareness aspect that is important for a change in overall culture and mindset. There is an educational aspect that is needed in order to attain this phase as a university. All campus personnel need to be on the same page regarding the importance of ES, as well as the long- term benefits it has the potential to bring.

Circling back to the educational aspect that lies behind the application of sustainability practices, research has shown that many sport managers do not address sustainability issues

because they do not feel comfortable speaking on such issues, and it is not directly listed in their job description (Fineman, 1997). “Resource issues enable and constrain strategic planning and an individual’s level of awareness, knowledge, and action regarding the natural environment” (Pfahl, 2010, p. 39). This shows that creating strategic plans is integral in ensuring that individuals have awareness regarding the impact that their actions make. Once this is accomplished, we will begin to see a shift in the overall mindset of a larger group or organization, such as athletic departments.

### *Sustainability Practices at Home Versus at Work*

Developing and practicing sustainability efforts, such as recycling, eliminating or minimizing single-use plastics and/or composting, in one’s daily life is an individual effort and choice. Many times, those who do not practice sustainable habits blame it on the idea that “one person’s actions can’t save the environment” although, in theory, this is partially true due to the nature of the environment’s current circumstances, changing mentalities starts with one individual and the actions they choose to make. The problem that arises here is the inconsistencies between at home and at work practices. For example, some people who choose to recycle at home are not able to at work due to the sustainability efforts being enacted within university and athletic department standards. The same goes for the opposite. In order to understand the sustainability practices of certain individuals and athletic teams, it is necessary to examine what is being done away from said environment.

This relates to value-belief-norm theory (VBN), which was established to analyze and explain the influence that personal values and beliefs have on our behavior, focusing heavily on environmentalism. In a journal article regarding personal norms and sustainability, the authors call to mind the definition of a theory that incorporates value theory, the new environmental

paradigm perspective and norm-activation theory which “suggests a chain of variables, from values and general environmental concern to specific beliefs about the negative consequences of certain actions and the individuals' ability and responsibility to avert these negative consequences, which in turn activates sustainable personal norms for behavior” (Lind et al., 2015, p. 120). Overall, this relates to this study because the individual’s personal values regarding sustainability are in question, and how that translates into the workplace and influences behavior from university athletic teams.

Public support and inquiry are integral in creating a space for change and awareness. For societal support, this awareness stems from personal values, beliefs, and norms. VBN framework plays a role here as it deals with the constructs of “values, general pro-environmental beliefs, awareness of consequences, ascription of responsibility, and personal norm, and social norms (injunctive and descriptive)” (Lai et al., 2020, 1). Within those constructs, pro-environmental beliefs come from awareness of ES and the consequences that follow one’s personal choices and habits. If athletic department personnel are made aware of positive ES impacts, hopefully that will shape personal beliefs, which then translate to productive ES initiatives.

The creation of sustainability teams, or GTs, is arguably the most important part of ensuring and implementing sustainable practices because gathering individuals with different mindsets and allowing them to influence each other in a positive way is what jumpstarts that initial movement. There is an argument suggesting that remote work is better for the environment as well. During the COVID-19 pandemic, individuals were forced to work from home, which came with certain challenges naturally. One positive aspect that came from the pandemic was that CO<sub>2</sub> emissions decreased worldwide, and there was not as much food or plastic waste. Past research has shown that people were more sustainable during the pandemic,

which speaks to the positive impact that COVID-19 had on the environment. “During the lockdown period, the major industrial sources of pollution have shrunk or completely stopped, which helped to reduce the pollution load” (Yunus et al., 2020, p. 1). It was also seen that “many people now have a greater appreciation of the benefits of a more intact natural environment” (Deutsche Bank, 2023, p. 1).

In order to establish sustainability practices in the workplace, we need to promote individual employee’s well-being and develop their personal sustainability goals outside of their home. Again, this relates back to ensuring that higher administration is educated on sustainability practices, therefore employees are supported in their initiatives to practice sustainable choices at work. It is important to establish a work environment that fosters that idea of sustainability rather than forcing employees to abide by certain policies. This is where the implementation of GTs is important, because individuals feel that they have a say in the matter of what sustainable practices look like. Most recently, there have been CEOs and founders who realize the importance of ES. For example, Ingvar Kamprad, the founder of IKEA, is credited with being a pioneer in sustainability in the workplace as he encouraged employees to stop using business class while flying (Milne, 2023). Small changes like this increase employee awareness on the issue while also allowing them to be part of the shift.

Research in this area is lacking, which is why this topic is necessary in the movement towards implementing sustainability procedures within athletic department personnel, most specifically. The purpose of this study is to examine the relationship between individual ES habits and mindsets with individual team and athletic department efforts. It also looks at the effect that one individuals’ practices and ideologies surrounding sustainability have on the



university athletic teams studied as a whole and what external factors play a role in overall ES mindsets and practices. Therefore, the research questions guiding this study were the following.

1. What steps and actions are being implemented throughout NCAA Division I athletic teams that will help ensure sustainability and the minimization of solid waste? If no action is being taken, what can the team do to make changes and who is responsible for implementing these changes.

2. What outside factors play a role in the mindset and individual practices of each participant interviewed?

## CHAPTER III - METHODOLOGY

### *Instruments*

Individuals that hold the title of Director of Operations, or those that conduct daily operation-like tasks for various NCAA Division I teams, were contacted via email. Email addresses for these individuals were obtained from their universities' public online staff directories. In addition to using publicly listed email addresses as a first method of contact, potential participants were also contacted via other publicly available methods such as LinkedIn and social media messaging, as well as calling phone numbers listed on said public sites. Potential participants included individuals that hold the title of Director of Operations (DO), or a member of athletic staff that deals with daily team operations. These individuals are identified as DOs due to their titles listed on athletic department websites. These operations can include planning team travel, organizing meals for home and away games and overall facility management. DOs were interviewed due to their all-around influence and team organization on a daily basis. Because they know the ins and outs of their respective teams, it seemed practical to gain their perspective of daily team practices at home and on the road, especially as it related to environmental sustainability. It was also important to keep interviewees consistent between each university in order to maintain consistency and accuracy among data collected. Inclusion criteria were athletic department administrators who manage NCAA Division I athletic teams. Each of the interviews were conducted digitally through Zoom.

Interviews were chosen as the data collection method to gain insight about personal sustainability goals and whether that translates into the workplace. Understanding personal, workplace, and athletic department/team sustainability efforts required in-depth questioning and was easier to understand through conversation. Recruitment emails were sent to the potential

participants that detailed what was being asked of them and gave them the opportunity to reach out and ask additional clarifying questions regarding the study. This initial email included a consent form that was curated by the researcher and approved by the University Institutional Review Board, detailing that this was a voluntary study in which possible participants would not gain any rewards and that there was minimal risk, which may include having to answer anxiety-inducing questions associated with participating. The research team also sent an additional follow-up email after not hearing back from a potential participant for one week, and the consent form was re-attached for their convenience. Additional communication strategies were utilized to reach more participants, such as LinkedIn messaging or reaching out to others through personal network. Once potential participants agreed to be interviewed, signed consent forms were collected, and then a mutually agreeable time was scheduled for the interview.

### *Procedures*

For the data collection, the following procedures were taken. To begin, participants were from NCAA Division I universities who could speak on sustainability efforts and had sufficient knowledge on the topic – ideally, they were current administration who held the title of Director of Operations, or something similar, within the ages of 20-75.

The type of data collection that was used was interviews. Approximately ten interview questions were used that highlighted the sustainability practices of the individual, the associated athletic team program, and more specifically what actions or goals are being discussed within the team and its employees to implement sustainable changes. Furthermore, understanding the type of waste that was most heavily seen during travel meets and whether conversations surrounding sustainability were being facilitated - and who was involved in those conversations. These questions began with asking about the participant's knowledge surrounding ES and going into

personal and work habits, as well as questions regarding outside factors such as geographic location. The research team consisted of a sustainability expert along with others who have experience in the field in order to develop effective and efficient interview questions. Along with these specific interview questions, clarifying or additional questions were asked based on topics that came up over the course of the interview. This interview format allowed for uniqueness and variety between each interview session and each participant. The interview guide was developed from consulting with experts in the field and were based on research involving ES in collegiate athletics (Pelcher et al., 2020).

Interviews were selected as the primary method of data collection because it was the best way to get in-depth and detailed information. In addition, interviews were conducted via Zoom to facilitate remote interviews and to utilize the transcribing and recording feature through Zoom. Zoom interviews lasted on average 20-30 minutes depending on how in-depth the information received was and how many follow-up or clarification questions were needed. The shortest interview lasted 11 minutes while the longest interview lasted 28 minutes. Participants were interviewed only one time, and in that one session each of the initial and follow up questions were answered within our allotted time.

After each interview was completed, Zoom recording as well as the transcription that Zoom reported during each session was utilized to transcribe each conversation. Because each participant agreed to being recorded, each transcript was able to be reviewed for consistency and accuracy. Through this process, commonalities were found between participants' responses and reactions to certain questions using a descriptive coding strategy. After analyzing each transcript, key phrases and quotes were highlighted that stood out initially. Consensus surrounding ideas

and themes that emerged throughout the data were analyzed and hand coded. During the coding process, specific focus was given to instances in which participants described a lack of awareness, knowledge, or convenience surrounding ES. Furthermore, who was responsible for implementing ES was carefully looked for throughout the coding process. Upon completion of that task each of the twelve transcripts were compared and three common themes were found among each participant and their comments. The themes are listed below.

(1) Defining Sustainability - Analyzing the Difference In How Sustainability Affects Each Participant and Their Occupation.

(2) Athletic Department and Individual Team Sustainability Efforts - Analyzing Similarities, Differences & Who Is Responsible for Implementing Such Efforts

(3) External Factors That Affect Sustainability Practices - Geographic Location and Cultural Differences

This process of coding and breaking down the main takeaways of each interview transcription helped with the overall understanding of how many moving pieces are a part of the process of ensuring and implementing environmental sustainability within athletic departments nationwide. In the results outlined below, each theme is described in detail, and supported with quotes from participants.

## CHAPTER IV - RESULTS

### *Participants*

Originally, the target audience was specifically the Director of Operations for Swimming and Diving programs in the SEC. It was quickly learned that due to non-responses from the recruitment pool and the chaotic nature of swimming and diving programs, not enough interviews were scheduled for credible data collection. From here, the research team decided to move on and broaden the search to Power 5 conferences, which include SEC, ACC, PAC-12, BIG-10 and BIG-12 universities nationwide. The team ran into the same situation as before in which the DOs from many of these conferences did not respond to invitations for the interviews, the search was again broadened to all NCAA Division I swimming and diving programs. After addressing the real issue in that swimming and diving teams were not able to provide the time and information needed to carry forth with data collection and that ES is not a priority for most athletic department personnel, the research team agreed it would be best to open the interviews to all NCAA Division I athletic teams. This change came with much quicker results as interviews were scheduled and conducted in a two-week time frame. Continuity was important and with that in mind, all Division I programs as well as those who hold the DO, or title equivalent, position on the specific team were interviewed. Overall, the final interviewees are as follows.

- Two DOs for Division I Men's & Women's Basketball Programs
- Four DOs for Division I Men's & Women's Swimming & Diving Programs
- Three DOs for Division I Men's & Women's Tennis Programs
- One DOs for a Division I Women's Softball Program
- One DOs for a Division I Women's Soccer Program
- One DOs for a Division I Men's Football Program

Below is a table that provides basic demographic information regarding each participant to better demonstrate the interviewee pool (Figure 4.1).

These participants were able to provide a wide range of data and variety based on team dynamics, size, and overall culture. It was also a priority to make sure, geographically, that more than one region was represented. One aspect that was noticed while reaching out to a myriad of DOs across the nation was the overwhelming number of white women between the ages of 20 and 35 that held the title. Although the participant pool is not as diverse as initially expected, the data proves to be due to the nature of interviewing different sports located in different regions of the United States. Overall, each participant was able to provide information that further drives the point of the importance, implementation, and practice of environmental sustainability.

#### *Interview Results*

Three themes were constructed from the data analysis to better understand the overall results. They are as follows.

- Defining Sustainability – Analyzing the Difference in How Sustainability Affects Each Participant and Their Occupation.
  - a. This theme deals with the differing definitions among participants regarding ES and how ES specifically affects each participant at work, if applicable.
- Athletic Department and Individual Team Sustainability Efforts - Analyzing Similarities, Differences & Who Is Responsible for Implementing Such Efforts
  - a. This theme deals with each participant’s experience towards ES within their individual teams and athletic departments. It also analyzes the disconnect between

those two entities and raises the question of who is responsible for implementing change within the athletic departments.

- External Factors That Affect Sustainability Practices - Geographic Location and Cultural Differences

- a. Lastly, this theme analyzes the affects that geographic location and cultural differences have on each participant, especially the differences in regions from where each participant grew up to where they currently work.

*Defining Sustainability - Analyzing the Difference in How Sustainability Affects Each Participant and Their Occupation.*

To begin data collection, each participant was asked, in their own words, to describe sustainability and whether it had any meaning to them. Without describing a specific type of sustainability or sharing a personal definition, 60% or seven of the twelve participants described environmental sustainability in some capacity. The other 40% or five of the participants described sustainability in a broader sense. Participant 4 mentioned that “sustainability has a lot of different meanings whether that's in the workplace or at the home or in the environment...but I think the overall...trend or topic is basically something that you can keep moving...so that day by day, you can keep it going.” Although this participant touched on



Participant	Age Range	Geographic Region	Gender (M/F)	Ethnicity
P1	20-30	West Coast Region	F	White
P2	20-30	East Coast Region	F	White
P3	30-40	Southern Region	F	White
P4	30-40	Southern Region	F	White
P5	20-30	Mountain Region	F	Asian
P6	20-30	West Coast Region	F	White
P7	30-40	Midwest Region	F	White
P8	20-30	Southern Region	F	White
P9	20-30	Midwest Region	M	White
P10	30-40	East Coast Region	F	White
P11	20-30	Southern Region	F	Asian
P12	20-30	Mountain Region	M	White

Figure 4.1: Breakdown of Participant Demographics

ES, Participant 9 described sustainability as “something that lasts and something that can carry on from year to year without being totally disrupted or altered”.

It became clear across the board that participants who mentioned a broad sustainability term related it directly to sports and how to maintain and build team culture throughout an extended period of time long after each participant has moved on from their position. Although ES was not directly mentioned in 40% of the participants’ definitions, it can be easily related. ES, much like team culture and success, is one that matters now. If as a society, we want to see future generations thrive on Earth, we need to be cautious and aware of decisions we are making in the present day, and how those decisions will allow us to sustain in the long term.

One aspect that was intriguing during data collection was the gender differentiation between defining sustainability. None of the male participants defined sustainability in relation to the environment, and when prompted to discuss personal definitions and awareness, they needed clarification of ES before answering. Something to consider and keep in mind is that this question was not designed to trick participants, as the consent form made it clear the purpose of the study was to examine and analyze environmental sustainability specifically. This shows me that ES is not on the forefront of peoples’ minds or radars. Additionally, each male participant directed their definition on sustainability towards team success. For example, Participant 12 mentioned “[sustainability] in the sports world...on the court it would be winning and success.” However, majority of the female participants described ES without being prompted, or included it in their overall definition of sustainability, which covered topics discussed above. For example, Participant 8 who expressed her lack of education towards ES mentioned “from what I’ve

understood [sustainability] is trying to do things to minimize your impact on the planet.” Overall, this finding could be a result of different awareness levels, geographic location of the participants and individual belief systems that will be later discussed.

Lastly, one aspect that was somewhat streamline across all participants was the effect of sustainability and what it meant to them. Those participants who described sustainability in a sense of team success expressed that sustainability affects their overall work. One participant mentioned that “it's important to think about how we can set this going in the right direction to where, you know, yes, we're going to have success this year, but we also need to have success down the line as well.” As a DO, many participants plan, organize and run their prospective teams, which creates a passion and care for the team and athletes they are working with. A few participants who described sustainability in an environmental sense had opposing views and mentioned that ES did not affect their overall job. For example, Participant 8 explicitly said “No, I don't think so” when asked if their personal beliefs affect the way they conduct their jobs. Participant 2 mentioned that “there's not really as much of a choice in terms of what I can do”, when asked the same question.

Although most participants answered this way, some realized that ES had direct effects on their work environment. When asked the same question from above about ES effects, Participant 7 stated “I'm always trying to reuse things; reutilize and repurpose...not be wasteful” and Participant 11 reiterated that “[ES has] definitely been kind of eye opening...but we want to be convenient for our athletes.” This quote resonated with me when analyzing this data because

it suggests that ES initiatives and the effects are seen, but the convenience factor and long-term habits overpower the curiosity of ES and its possibilities for a better future.

*Athletic Department and Individual Team Sustainability Efforts - Analyzing Similarities, Differences & Who Is Responsible for Implementing Such Efforts*

Out of the twelve participants interviewed, one DO mentioned their athletic department collaborated with on-campus departments regularly in order to ensure ES was being practiced throughout the entire campus. This glaring concern shows the immediate need for more conversation and communication between on campus departments. Because the other 11 participants mentioned the disconnect between the athletic department and campus discussion regarding ES, further investigation was conducted the relationship within athletics between the department as a whole and individual athletic teams. Figure 4.2 visually represents the relationship between ES conversation within Athletic Departments and Individual Teams:

Figure 4.2 shows that out of 12 NCAA Division I teams, only 25% of universities have ES conversation in both athletic department and individual team meetings. This visual also represents the 33.3% of universities who have no conversation in either their overall department or team, which is 58% of the population interviewed. Although the purpose of the study was not quantitatively based, seeing the result in this way helps to see how transferrable the findings may be to other Division I programs across the country.

Overall, the one participant who mentioned a strong collaboration between on-campus and athletic department personnel also had the university with the most ES initiatives in place. It was mentioned by Participant 4 that “football did a big recycling push. In our indoor tennis

[facility], we went with LED lighting, which was a push for the green initiative. So the university has done initiatives in each stadium or each facility.” Another interesting point Participant 4 shared was the relationship between on-campus and athletic personnel. “The president of the university and the athletic director work hand in hand together with these things.” When asked about the reason behind this relationship, this participant mentioned that both the Athletic director and the university's President felt strongly about ES initiatives and overall implementation for students and those affiliated with the university. This participant also cultivated an interesting idea into the interview as to why athletes should be involved with ES implementation and discussion. “It's easier from a marketing standpoint for the athletics department to put this [ES] on so we can get our fans and student athletes and staff on board a lot easier than it is on the academic side.” This idea held true as many universities use athletics as a way to increase overall awareness. Alluding to the point made above regarding the idea of greenwashing, this holds true in that ES initiatives are easy to market within athletics due to the nature of fan engagement, but what true changes are being made for the betterment of the environment?

Similarities among the participants related to the lack of conversation and ES practice implementation within each individual team. The majority of participants mentioned that ES is not a top priority, as Participant 3 stated, “It's not necessarily always at the forefront of my mind, but I wish it were.” It was also mentioned that in order to implement change as impactful as this, it would call for an overall change in the mindset of athletes and staff because practicing ES

comes from such practices becoming a habit. The specific habits discussed include recycling, the minimization or elimination of single-use plastics, and reducing food waste.

Each participant was asked about team ES efforts and what, if anything, is practiced regularly. Overall, the majority of participants could recognize times of sustainable practices, the most common being the use of reusable water bottles and Gatorade powder instead of individual plastic bottles. Interestingly enough, many participants noticed that such efforts were not directly practiced because of ES, but for reasons such as financial cost reduction and convenience.

Participant 8 stated “It's never a direct [idea], that we're trying to be sustainable and we're trying to do good in that part. It's this underlying idea that it's almost the right thing to do.” Participant 3 mentioned that “it’s more of a convenience thing than anything else”. It’s interesting to point out here that if universities practice sustainable efforts because of reasons other than ES, is that necessarily negative? It seems like a step in the right direction.

This thinking stems from the values, beliefs, and norms theory. This theory discusses the relationship between individual and collective values and how that directly relates to the positive indirect practice of environmental sustainability. Throughout this study, it was commonly stated that certain practices were executed that were not necessarily due to wanting to be more environmentally friendly, but the end result did just that. Participant 1 brought up ideas regarding her university’s athletic department and the conversations she is a part of regarding sustainability. “Being conservative and smart with the way we budget and spend money is really, really important here.” While discussing the implications of financial sustainability, Participant 1 also shared that her athletic department does not utilize private charters for team travel. Instead,

the university has a relationship with a local commercial airline, which athletics can use at a discounted rate. Although this participant gave this example from a financial perspective, she later realized that this also contributed to ES. This indirect application of ES shows that strong values associated with other habits or practices can have positive effects on other practices.

There were also examples that called to mind the effects of COVID-19, and how that forced athletic departments to take a step back from practicing more environmentally friendly habits. For example, Participant 8 mentioned the direct effects of COVID-19 and the changes that were made to their team's program. While discussing the reason behind using plastic bottles when the team previously used powdered Gatorade she stated, "I think that was more of a COVID implementation...having the bottles in the fridge for easy access. But now that we're out of it, it's more so gone back to powder." It was also mentioned that because of COVID-19, teams had to start using single use cups and bottles due to COVID regulations as well as trying to be as clean as possible. This had both a negative effect financially and environmentally within athletics nation-wide.

Throughout each interview, a discussion on who is responsible for creating and implementing change within each athletic department was discussed thoroughly. One-hundred percent of participants noted that someone in a position of power is responsible for promoting and implementing ES habits. This common mindset was centered around the idea that in order to change how a large system operates, the only way student-athletes and athletic department personnel will change their habits is if someone or multiple people in high positions within athletics makes the change. This could range from staff in senior level leadership positions such

as the Athletic Director. In the above example, Participant 4 mentioned the strong relationship between her athletic department's AD and the university's President when it related to ES and the positive changes being made within their athletic department overall. Participant 12 noted that "[he] thinks that's something that definitely starts from the top down for sure." He also mentioned that if someone within athletics is passionate about ES, they should be able to bring ideas to someone who holds a higher title that can put change into effect. Participant 7 also agreed with that idea and stated "I think it would have to come from somebody who felt passionately about it." Although passion is the starting point in implementing change, someone in a position of leadership and power is needed in order to get everyone involved in the movement and change long held habits.

Interestingly enough, a few participants also mentioned that Student Athlete Development (SAD) would be a good starting point in creating change related to ES. SAD is a group of athletic department staff who plan events for student-athletes year-round. Their goal is to enhance the student athlete experience while also making the surrounding community a better place by encouraging student-athlete engagement. Participant 11 mentioned that "since they do a lot of education, [and bring in] speakers, they could get somebody to come here and do that." A common theme among the participants as well as other research shows that lack of knowledge and education is a huge proponent in why sustainability practices are lacking. Participant 3 also touched on this idea as she said that "student athlete development probably has a role to play and that is from an education standpoint, because I don't think it's something that I'm super well versed and educated in because I know there's much more that we can do." Although many



smaller universities do not have a SAD staff, this would be a good place to start because they are more easily accessible and approachable compared to Athletic Directors, initially. Once people are educated, the hope is that real change can begin to happen.

*External Factors That Affect Sustainability Practices - Geographic Location and Cultural Differences*

While conducting interviews with the twelve participants, it became clear that external factors such as geographic location and personal practices or habits influenced each participant's mindset and ES efforts. The heat map, Figure 4.3, shows the geographic breakdown of where participants were located by state in the United States.

Geographically, the Pacific, Mountain, West Coast, East Coast, Southern, and Midwest Regions were represented in this study. Throughout the interviews, all participants noted that geographic location played an important role in how they viewed and practiced ES. For example, Participant 1 noted that where she grew up geographically set the tone for her values surrounding ES. Once she moved to her university's location, her mindset was completely different. "I grew up where it's just a different pace of life and different cultural practices. Now, I am certainly thinking about those things [ES] more living here, just out of the common cultural values here of appreciation and respect for the land." She also mentioned that "you're more conscious of your trail, picking up after yourself and reusing things." Being around a community that holds ES and its practices in high regard causes a changed perception and potentially habits regarding ES.

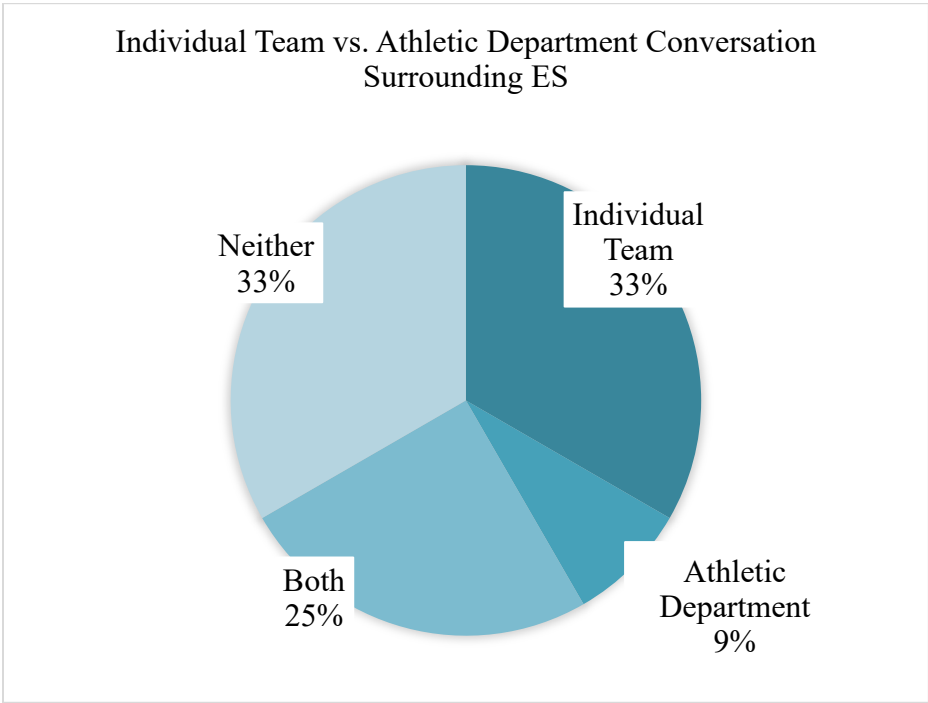


Figure 4.2

Participant 3 also shared her experiences geographically and culturally, and how her upbringing shaped her view on certain ES practices. Regarding food waste, Participant 3 shared that “I struggle personally in college athletics with that, specifically because of the volume of food we have and how much I spend on it and how much is wasted.” Growing up on the East Coast and working in the Southern Region, cultural differences in location differed completely. “We always had recycling at our house, our county came and picked it up for you. Even in college, we had recycling dorms.” This became a common practice for her because of the convenience. Now working in another location, she mentioned that “I don’t have to recycle at my apartment anymore. So I just don’t because it’s not convenient... I just don’t do it. And that’s very lazy, honestly.” This calls to mind the idea around convenience, which has been touched on by other participants above. Many times, the mindset surrounding recycling or reducing food waste and single use plastics is “if it’s a habit, you’ll do it”. Here, it is shown that a participant that once practiced recycling regularly for multiple years stopped because it no longer was convenient for her. This shows us that in order for real change to occur, ES practices should be convenient and easily accessible for people.

To elaborate more on the idea of convenience, participant 9 opened up about his struggles regarding recycling at work and at home. “I don’t do a good job of recycling at home because in my apartment building, we have a bin that collects both [trash and recycling], but I’m not going through my stuff and picking everything apart.” While conducting this interview, participant 9 mentioned that “I’m not going to recycle if I don’t see a recycling bin. I’m not going out of my way to throw a plastic water bottle away if there’s a trash can [near me].” This further

emphasizes the importance of convenience and accessibility when it comes to ES practices in the workplace and at home.

Conversations surrounding different ES practices within each region also arose. Participant 1 mentioned that she grew up in the East Coast where rules around ES, such as recycling and minimizing single use plastics were little to none. When she moved to the Pacific region, she noticed an ample number of changes that quickly forced her to practice more sustainable habits. For example, she explained that on the East Coast, forgetting reusable grocery bags is not a big deal because stores allow customers to use plastic bags. In the Pacific Region, plastic bags and straws are outlawed, so in order to shop efficiently, many people bring reusable bags. If you forget those bags, you are forced to pay for new ones or carry items yourself. Participant 1 mentioned that this is “forcing you to get into those better habits.” Speaking on culture specifically, many conversations arose regarding personal values that are taught and upheld throughout life.

Breaking habits is difficult and takes practice as well as a societal reset. Participant 1 made the statement that “a big part of sustainability is ingrained in the culture.” Here, we see a strong emphasis on cultural habits that have shaped the mindset of people who live in the specific region but have grown up surrounded by an entirely different environment with contrasting values and practices. This shows us the possibility of changed habits regarding ES and how being surrounded by better practices and differing mindsets can change the way one views and implements ES in their everyday lives.

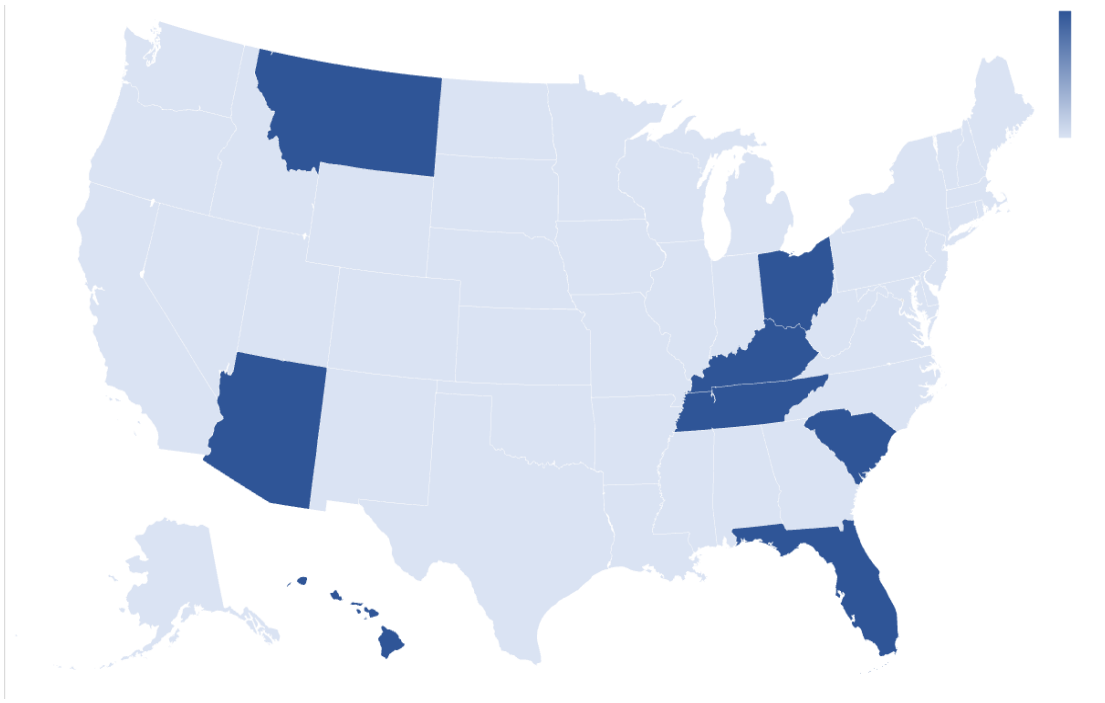


Figure 4.3: Geographic Spread of Working Locations of Participants

## CHAPTER V - DISCUSSION

### *Discussion*

After interviewing twelve athletic department staff members who held Director of Operations titles at different universities around the country, it became clear that the common themes surrounding the lack of ES practices were accessibility/convenience, differing cultural values based on geographic location and lack of knowledge or education. From these results, we learn that even though some DOs, or team operations personnel, care about ES and the practices associated with it, many times those are not practiced in athletics because athletic departments do not make it a priority. It's also seen through these interviews that athletic departments do not educate their staff on ES practices and how a change in things like using powdered Gatorade rather than plastic bottles or switching to reusable water bottles rather than plastic on the road, can make a difference. For DOs, or those who managed team operations, to implement ES practices that change overall habits and team culture, there needs to be a change made at the top that then trickles down to the entire department. It is difficult to create change and encourage athletes to practice better habits when DOs have so many more responsibilities when it comes to overall team well-being and organizational responsibilities.

The divide between definitions of sustainability within male and female participants was interesting due the fact that all participants were aware they were being questioned on environmental sustainability, as stated in the consent form, prior to being interviewed. This suggests a gendered focus for the operations personnel that might come from societal gendered stereotypes, especially those related to male and female roles in athletics. This is important to note before looking at anything other findings because this also relates to lack of exposure,

awareness, and/or knowledge about ES. Understanding this helps us realize the importance of educating athletic department personnel on ES so they can define and recognize it in the future.

Geographic differentiation was another compelling find as many of the participants noted that where they are located affects the way they practice and think about ES. The majority of participants grew up in a different geographic region than the one they currently work in, which led to interesting findings regarding changes in mindset and practices. While one participant noted her strong ES practices growing up, she noticed her change in attitude and practice when working in a place that does not foster an environment for ES practices. However, another participant mentioned the lack of awareness surrounding ES growing up, but now works in a place that cultivates positive ES habits daily. This helped me come to the realization that ES culture, mindset, and practices in certain geographic locations might play a large role in how people see ES themselves. This is important because from here, we can educate people on ES initiatives in their perspective regions. Hopefully from there, they feel compelled to make changes that could be better for the community.

Another driving factor throughout this process was concluding who is responsible for implementing ES changes or initiatives within athletics. All the participants mentioned that someone who holds a position of power needs to implement change for an entire athletic department to comply. One specific university that was a part of this study mentioned the strong relationship between their Athletic Director and University President. Together, they were able to create incredible ES initiatives and implement them throughout the last year, making the university better. This suggests that those in power were able to implement magnanimous changes. Many DOs expressed their concern for being able to implement change because of the ample number of responsibilities they hold. Unfortunately, ES falls towards the bottom of their

list. Some participants made suggestions such as having a person with a specific title in athletics for ES while others believed Athletic Directors or Student Athlete Development personnel should take control of such initiatives and education.

One of the most important findings to come from this research was the idea of convenience. None of the participants mentioned that they did not care about the environment or had any negative remarks towards the possibility of implementing ES practices in their own lives and in athletics. This is integral in moving forward with ES because all participants mentioned the idea of convenience. Most notably, participants mentioned that they would recycle or use less single use plastics if it was convenient for them. If recycling bins or reusable materials were not readily available, some participants were not going out of their way to practice ES. This drives the idea that education and awareness are important in helping people see the consequences of poor ES habits, and what effective habits can do for overall societal sustainability and well-being. Once education begins and ES is made more available and convenient, this research suggests that people will implement ES in their daily lives, at home and at work.

Lastly, the implementation of Green Teams is an important first step in tackling this issue. Previously, questions have arose regarding who is responsible for implementation, but the first step is education and creating awareness on ES. Although, the creation of GTs is important, athletic departments need to ensure that they have representation present, so they are contributing to the cause. If we start here, we would be able to spread awareness and slowly create change. This is also important because of the power athletics hold on a university campus. If athletic departments are sitting in on ES conversation and make changes, it might be easier to get fans and athletes engaged as well. With this, it slowly becomes a community wide initiative and that's when real change might happen.



### *Recommendations*

Sharing the findings from this study with Athletic Directors across the nation would be beneficial in highlighting the importance of a large change such as implementing more ES practices and how doing that starts with someone who holds a position of power. This idea of power and change holds true across the board, especially because each DO that was interviewed made it a point to mention. It would also be important to mention the economic benefit that could affect the university, such as lowered costs on travel and on single use supplies throughout each team. Another recommendation is the importance of change on a smaller scale. One person can make a difference because if each DO was to encourage an ES practice, such as recycling, this has the potential to change other people's mindsets and habits. Overall, one person can influence others to be better, which can induce a chain effect.

Looking at the bigger picture, college athletics is changing daily, which means new ideas are forming and new topics are becoming more influential. Name, Image and Likeness (NIL) is an example of how one idea created an entirely new position and initiative within athletics nationwide. Why cannot the same be done for ES? To start, universities that have the resources to hire sustainability experts should do so in hopes to create lasting change that will only benefit the overall community in the long run. Even before that step, every university should implement Green Teams and make sure athletic department personnel are involved with creating ideas and events in order to push ES campus-wide.

As mentioned in the review of literature, intergenerational equity, which is the idea of not harming future generations with the practices and habits seen within society, relates to the importance of creating change now. Nationwide, athletics are viewed to bring people together and for entertainment purposes, which means a myriad of people are involved and influenced by

athletics. If changes were to be made within athletics now, it would cause for influential environmental and economic impact in the future that would benefit all those who will later be involved.

### *Conclusions & Study Limitations*

The limitations that arose from this study mainly came from the interview pool. First, it was encouraged by the research team to broaden the search halfway through the interview process due to the non-response and lack of communication between the Director of Operations for SEC swimming and diving teams, even after using all public domain resources while trying to contact potential participants. With this, due to wanting to stay consistent with interviewing different DOs, it was decided to expand the search to all NCAA Division I DOs, which ended up being the most successful plan. This made the interview process challenging, especially because the interview pool eventually had much more sports included than swimming and diving teams.

Because the desired data collection method was interviews, the research team was at the mercy of other people's schedules. It was difficult to contact potential participants in athletics, especially those whose sports are currently in season. Multiple people reached out early in the process who were not able to participate at first, but who expressed interest and wanted to be contacted on a later date. With this, an unexpected waiting period arose before data collection commenced. This limitation could not be overcome because interviews were integral in this study in order to capture the data needed to make claims towards the lack of awareness and accessibility towards ES in athletic departments.

### *Future Research*

This topic is integral in understanding environmental sustainability and the direct effects it has within athletic departments nation-wide. Previous research has established the creation of university Green Teams as well as the lack of ES presence overall, but it is now more apparent that athletic departments are far behind the ES curve. This research also further emphasizes the disconnect between athletic departments and on campus personnel. While it was seen that most campuses have sustainability offices and on campus initiatives, athletic departments were not involved with such discussion and implementation. It is integral in future research to close this gap and provide ways for all campus departments to work together in this movement for ES.

For a follow-up study, the goal would be to target Division II and Division III schools to analyze and differences and similarities between that and Division I programs. It would be beneficial to speak with DOs from the same sports already interviewed to compare themes, ideas, and team cultures. The same questions would be asked as before to gain more insight on what other DOs do, especially those who might have more responsibility due to the nature of smaller school organizational structures. It would also be interesting to interview DOs from different geographic locations and compare that to the initial study.

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## APPENDICES

### *Interview Questions*

Below are the interview questions that each participant was asked throughout their individual interviews. Some questions were built on or added based on follow-up questions and ideas brought up throughout conversation.

1. Please state your name, job title and how long you have been employed at (university).
2. In your own words, can you describe sustainability and what it means to you, if applicable?
3. Do your personal beliefs on sustainability affect the way you do your job? Please explain.
4. Does your athletic department have conversations regarding sustainability efforts? If so, who was involved and what was discussed? If not, do you think this is important to implement moving forward?
5. What do you know about sustainability efforts within the “swimming and diving team”, if applicable?
6. What steps or actions have been put in place to ensure sustainability within the team, if any?
7. Regarding the type of waste you see on team travel, what do you think can be eliminated or reduced, and how? (If applicable)
8. What holds you back or discourages you from practicing sustainability efforts within the team? (ex. My town/campus doesn't have a recycling program, I don't know where to purchase reusable materials, etc).
9. Who is responsible for implementing sustainability practices within the AD?
10. Did where you grow up geographically affect your sustainability habits?

## VITA

Anna Harder was born in Reston, Virginia in 1999 and spent the majority of her life in Ewa Beach, Hawai'i. She grew up surrounded by the water and became a competitive swimmer. After graduating from Damien Memorial high school as the Salutatorian in 2017, she went on to Saint Louis University where she was a part of the Division I swimming and diving team, Gamma Phi Beta Sorority, and the professional business fraternity Delta Sigma Pi. There, she received a Bachelor of Science degree in Marketing and an Asian Studies minor, as well as a Japanese minor from Washington University in St. Louis. After graduation, she had the opportunity to attend graduate school at The University of Tennessee, Knoxville. Here, she served as an assistant academic counselor with Tennessee athletics in the Thornton Center while pursuing a Master of Science degree in Recreation & Sport Management. Throughout her time at Tennessee, she grew to understand the importance of sustainability and the impact that athletic departments nationwide have on the overall well-being of our environment. After noticing the lack of research, awareness, and education in this field, Anna felt compelled to study the disconnect between NCAA athletic teams and their prospective athletic departments. Her research team presented some of their preliminary findings at the 2023 Applied Sport Management Association Conference. In the future, Anna hopes to build upon her findings to further understand this disconnect and create change within the NCAA as a whole. She also hopes to stay connected to athletics while actively implementing positive changes in mindset and practice regarding environmental sustainability.