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# ENVIRONMENTAL RESPONSIBILITY IN SPORT

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Training Material



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Environmental responsibility in sport is crucial for mitigating environmental impact, addressing climate change, conserving natural resources, promoting health and well-being, educating and raising awareness, ensuring the long-term viability of sports, enhancing reputation and community engagement, and complying with legal and regulatory frameworks.

Coaches and sport managers play a vital role in driving sustainable change within sports organizations and empowering athletes to become environmentally responsible global citizens.

The objective of this training material is to educate and equip coaches, sport directors or sport facility managers with the knowledge, skills, and tools necessary to foster sustainability and promote eco-friendly practices within the sports community. This type of training aims to raise awareness about the environmental impacts of sports activities and to empower coaches and sport managers to take proactive steps to reduce their carbon footprint and promote sustainable practices among athletes and sports organizations.

### 1. INTRODUCTION

Environmental responsibility in sport has gained significant attention in recent years due to the growing recognition of the environmental challenges we face globally. Sports organizations and individuals involved in sports, including coaches, have a crucial role to play in addressing these challenges and promoting sustainability. Here are several reasons why environmental responsibility is important in sport:

- 1. Environmental Impact:** Sports activities can have a significant environmental impact, contributing to resource depletion, pollution, and habitat degradation. The construction and operation of sports facilities, energy consumption, water usage, waste generation, and transportation all contribute to environmental degradation. By embracing environmental responsibility, sports organizations and coaches can mitigate their impact on the environment and work towards sustainability.
- 2. Climate Change Mitigation:** Climate change is one of the most pressing global issues, and sports can both contribute to and be affected by its impacts. Rising temperatures, extreme weather events, and changing climates can disrupt sports schedules, impact athlete performance, and affect the health and safety of participants. By adopting sustainable practices, sports organizations can reduce their greenhouse gas emissions, conserve energy, and contribute to global efforts in mitigating climate change.

#### SPORT AS PART OF THE PROBLEM: MOST SPORTS ARE CLIMATE DEPENDENT

- Stadia and other grassfield sports suffer from severe droughts
- Forest fires have led to cancellations of cycling tournaments and marathons
- In turn, sport events impact the environment greatly by increased water usage and waste production
- Sport related tourism, especially at mega events, has a great impact on carbon emissions
- Sports equipment often travels thousands of miles from manufacturer to the sport clubs/shops
- Despite growing awareness of climate change, sport organisations remain ill-equipped to manage the issues related to climate change and make significant contributions.

- 3. Conservation of Natural Resources:** Sports activities require significant amounts of resources, such as water and energy. By promoting responsible resource management, coaches can help conserve these valuable resources. Water conservation measures, energy-efficient practices, and waste reduction initiatives not only benefit the environment but also lead to cost savings and long-term sustainability.

4. **Health and Well-being:** Sports and outdoor activities provide numerous health benefits to individuals. However, the environment in which sports are played significantly impacts the overall well-being of participants. Environmental degradation, such as air and water pollution, can negatively affect athlete health and performance. By protecting and preserving the environment, coaches can create healthier and safer sporting environments for athletes and spectators alike.
5. **Education and Awareness:** Sports have immense influence and reach, providing a platform to educate and raise awareness about environmental issues. Coaches can leverage their position as role models to inspire athletes, staff, and fans to adopt sustainable behaviors. By integrating environmental education and awareness into coaching practices, coaches can cultivate environmentally responsible attitudes and behaviors among athletes and promote broader societal change.
6. **Long-term Viability of Sports:** Environmental responsibility is vital for the long-term viability of sports. The availability and quality of natural resources, such as clean water and suitable playing fields, are essential for the continuation of sports activities. By embracing sustainable practices, coaches contribute to the preservation of natural environments and ensure that future generations can continue to enjoy sports.
7. **Reputation and Community Engagement:** Sports organizations that prioritize environmental responsibility enhance their reputation and appeal to environmentally conscious athletes, sponsors, and fans. By demonstrating a commitment to sustainability, coaches can attract support from stakeholders who align with their values. Additionally, engaging with the local community through environmental initiatives fosters positive relationships and promotes a sense of social responsibility.
8. **Legal and Regulatory Compliance:** Environmental regulations and guidelines are increasingly enforced to address the impact of sports activities. By adhering to these regulations, sports organizations and coaches avoid legal consequences and demonstrate their commitment to ethical practices. Environmental responsibility also aligns with the expectations of governing bodies, sponsors, and funding organizations, ensuring compliance and long-term support.

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*Anson Dorrance (University of North Carolina Women's Soccer Coach):*

*"In sports, we often talk about leaving a legacy. Let's make sure our legacy includes a commitment to environmental responsibility and making the world a better place for generations to come."*

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Coaches play a pivotal role in promoting sustainable practices within the sports community. Here are some key aspects of their role:

## ROLE OF COACHES IN PROMOTING SUSTAINABLE

Coaches have a unique position to influence and empower athletes and sports organizations to adopt sustainable practices. By integrating sustainability into their coaching philosophy, leading by example, collaborating with stakeholders, and educating athletes, coaches can play a significant role in creating a more environmentally responsible and sustainable sports culture.

1. **Raise awareness:** coaches have the opportunity to educate athletes, staff, and other stakeholders about the importance of sustainability and its relevance to sports. They can raise awareness about environmental issues, explain the impact of sports activities on the environment, and highlight the benefits of adopting sustainable practices.
2. **Leading by Example:** Coaches serve as role models for athletes and others involved in sports. By practicing and demonstrating sustainable behaviors themselves, such as conserving resources, recycling, and promoting eco-friendly transportation, coaches inspire others to follow suit.
3. **Integrating Sustainability into Training:** Coaches can incorporate sustainability principles into their training programs. For example, they can emphasize the importance of energy and water conservation during training sessions, encourage athletes to use eco-friendly equipment, and promote waste reduction practices. By integrating sustainability into the training routine, coaches instill environmental responsibility in athletes.
4. **Facility Management:** Coaches often have involvement in managing sports facilities, such as training centers and venues. They can actively engage in promoting sustainable facility management practices, including energy-efficient lighting, waste management, water conservation, and use of renewable energy sources. Coaches can collaborate with facility managers and staff to implement and monitor sustainable practices.
5. **Collaboration and Partnerships:** Coaches can collaborate with other coaches, sports organizations, local communities, and environmental groups to promote sustainable practices in sports. By sharing best practices, resources, and knowledge, coaches can collectively work towards a more sustainable sports community. They can also seek partnerships with sponsors and suppliers who align with sustainability values to ensure the use of eco-friendly products and services.
6. **Environmental Education:** Coaches can incorporate environmental education and awareness into their coaching sessions. They can explain the environmental impact

of sports activities, discuss sustainable behaviors and practices, and encourage athletes to become environmentally conscious and responsible. Coaches can use teachable moments to emphasize the importance of sustainability and encourage athletes to take action.

7. **Goal Setting and Evaluation:** Coaches can establish environmental sustainability goals for their teams or organizations. By setting measurable targets, such as reducing energy consumption or waste generation, coaches provide a clear direction for sustainable actions. They can monitor progress, evaluate the effectiveness of sustainability initiatives, and make necessary adjustments to continuously improve environmental performance.
8. **Advocacy and Communication:** Coaches can act as advocates for environmental responsibility in the sports community. They can use their influence and platforms to communicate the importance of sustainability, share success stories and case studies, and inspire others to embrace sustainable practices. Coaches can leverage social media, team meetings, newsletters, and other communication channels to spread the message of environmental responsibility.

## 2. UNDERSTANDING ENVIRONMENTAL IMPACT

Sports activities have a range of environmental impacts across various aspects of their operations. Understanding these impacts is crucial for identifying areas where sustainable practices can be implemented. Here is an overview of the environmental impact of sports activities:

1. **Energy Consumption:** Sports facilities, including stadiums, arenas, and training centers, require substantial energy for lighting, heating, cooling, and equipment operation. The energy sources used, such as fossil fuels, contribute to greenhouse gas emissions and climate change. Additionally, transportation to and from sports events also contributes to energy consumption and emissions.
2. **Water Usage:** Sports activities rely on water for irrigation of fields, maintenance of playing surfaces, and athlete hydration. The excessive or inefficient use of water can strain local water supplies and lead to water scarcity. Water-intensive sports, such as swimming or water-based activities, may have additional water-related impacts.
3. **Waste Generation:** Sports events and facilities generate significant amounts of waste, including food and beverage containers, packaging, promotional materials, and other discarded items. Improper waste management can result in pollution,

landfill usage, and harm to wildlife. Additionally, sports equipment, uniforms, and gear contribute to waste when not properly managed or recycled.

4. **Transportation:** The movement of athletes, staff, and spectators to and from sports events contributes to greenhouse gas emissions and air pollution. Private vehicles are often the primary mode of transportation, resulting in congestion, carbon emissions, and local air quality issues. Transportation impacts are particularly significant for large-scale events that attract a large number of participants and spectators.
5. **Biodiversity and Habitat Loss:** The construction and expansion of sports facilities can lead to the loss of natural habitats, including forests, wetlands, or grasslands. Deforestation for the development of stadiums or golf courses can disrupt ecosystems and contribute to the loss of biodiversity. Additionally, the alteration of natural landscapes for infrastructure development can impact wildlife habitats.
6. **Chemical Usage:** Various chemicals are used in sports activities, such as fertilizers, pesticides, and cleaning agents. Improper use or disposal of these chemicals can harm local ecosystems, water bodies, and human health. Water pollution from chemical runoff and contamination can have detrimental effects on aquatic life.
7. **Climate Change Impacts:** Sports activities are affected by climate change, including rising temperatures, changing weather patterns, and extreme events. Heatwaves, increased frequency of storms, and changes in precipitation patterns can disrupt training schedules, impact athlete performance, and compromise athlete safety. Additionally, the carbon footprint of sports contributes to climate change, creating a feedback loop of environmental impact.

## ENVIRONMENTAL IMPACTS OF SPORT

The extent of environmental impacts varies depending on factors such as the scale of sports activities, facility design, resource management practices, and the level of awareness and commitment to sustainability within the sports community. However, recognizing these impacts and implementing sustainable practices can help minimize the environmental footprint of sports activities and contribute to a more sustainable future.

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### **Erik Solér - a former Sporting Director of New York Red Bulls**

*Environmental responsibility in sport is a journey that requires ongoing commitment and innovation. By embracing sustainable practices, we can show that sports and environmental stewardship are not mutually exclusive. Together, we can create a legacy that goes beyond wins and losses, inspiring a future where the love for the game goes hand in hand with a love for our planet.*

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### 3. ENVIRONMENTAL REGULATIONS AND GUIDELINES IN SPORT

Within the European Union (EU), several environmental regulations and guidelines apply to sports activities. These regulations aim to promote sustainable practices, reduce environmental impacts, and ensure compliance with environmental standards. Here is an in-depth overview of some relevant regulations and guidelines in the EU:

1. **European Union Emission Trading Scheme (EU ETS):** The EU ETS is a cap-and-trade system that applies to large energy-consuming industries, including some sports facilities. It sets a limit on greenhouse gas emissions and requires facilities to hold allowances for each ton of CO<sub>2</sub> emitted. Sports facilities that exceed specific emission thresholds are obligated to participate in the scheme and manage their emissions accordingly.
2. **Energy Efficiency Directive (EED):** The EED sets out energy efficiency requirements for various sectors, including buildings and public infrastructure. Sports facilities fall under these regulations, which include energy efficiency obligations, energy audits, and measures to improve energy performance. Sports organizations are encouraged to implement energy management systems, prioritize energy-saving measures, and report on their energy consumption and efficiency improvements.
3. **Waste Framework Directive (WFD):** The WFD establishes a framework for waste management across the EU. It promotes waste prevention, recycling, and proper disposal practices. Sports organizations and facilities are required to manage their waste responsibly, implement waste separation and recycling programs, and adhere to waste hierarchy principles (reduce, reuse, recycle) to minimize waste generation.
4. **Packaging and Packaging Waste Directive (PPWD):** The PPWD sets recycling and recovery targets for packaging waste within the EU. Sports events and facilities that generate packaging waste, such as food and beverage containers, are subject to these regulations. Compliance involves ensuring proper waste collection, recycling, and reporting on packaging waste volumes.
5. **Water Framework Directive (WFD):** The WFD establishes a framework for the protection and sustainable use of water resources. It aims to achieve good water quality and ensure the conservation of aquatic ecosystems. Sports facilities that consume significant amounts of water for irrigation or other purposes are required to manage water resources responsibly, adopt water-efficient practices, and comply with quality standards for water discharge.
6. **REACH Regulation:** The Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation aims to protect human health and the environment from the risks posed by chemicals. Sports organizations that manufacture or import products, such as sports equipment or clothing, must

comply with REACH requirements. This includes registering and assessing the chemicals used, ensuring the safe use and handling of substances, and complying with restrictions on hazardous substances.

7. **Environmental Management Systems (EMS):** While not a specific regulation, implementing an EMS, such as the ISO 14001 standard, is an effective voluntary measure for sports organizations to demonstrate their commitment to environmental management. An EMS provides a framework for identifying and managing environmental impacts, setting objectives, implementing sustainable practices, and monitoring performance.

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*These regulations and guidelines form a regulatory framework that promotes environmental responsibility and sustainability within the sports sector. It is essential for sports organizations, including facilities, event organizers, and governing bodies, to be aware of these regulations and take proactive steps to comply with them. By embracing these regulations, sports organizations can contribute to a more sustainable future and ensure their operations align with EU environmental standards.*

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#### 4. BENEFITS OF ENVIRONMENTAL RESPONSIBILITY

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##### ENVIRONMENTAL BENEFITS OF SUSTAINABLE SPORTS PRACTICES

Sustainable sports practices refer to the adoption of environmentally-friendly approaches and strategies within the realm of sports and athletics. These practices aim to minimize the negative impact of sports activities on the environment and promote sustainability. Here are some key environmental benefits of sustainable sports practices:

**Example:** A sports stadium installs solar panels on its roof to generate clean energy, thereby reducing its reliance on fossil fuels and decreasing carbon dioxide emissions.

1. **Reduced carbon footprint:** Sustainable sports practices prioritize the reduction of greenhouse gas emissions associated with sporting events. This includes measures such as using renewable energy sources, promoting public transportation or carpooling to reduce travel emissions, and implementing energy-efficient technologies in sports facilities.

## 2. **Waste reduction and recycling:**

Sustainable sports practices emphasize waste management strategies that minimize the generation of waste and promote recycling. This includes proper waste segregation, implementing recycling programs, and encouraging the use of reusable or biodegradable products.

**Example:** Sports events provide recycling bins throughout the venue and actively educate attendees about the importance of recycling by promoting responsible waste disposal.

**Example:** A golf course adopts a water-efficient irrigation system that monitors soil moisture levels and only waters the turf when necessary, resulting in significant water savings.

3. **Water conservation:** Sustainable sports practices focus on water conservation efforts to reduce the excessive use of water resources. This can involve implementing water-efficient irrigation systems, using reclaimed water for maintenance, and raising awareness among athletes and spectators about the importance of water conservation.

## 4. **Preservation of natural habitats:**

Sustainable sports practices aim to protect and preserve natural habitats and biodiversity. This includes avoiding the construction of sports facilities in environmentally sensitive areas and implementing measures to mitigate negative impacts on ecosystems.

**Example:** A hiking or trail running event establishes designated paths to prevent athletes from straying into protected areas and damaging delicate ecosystems.

**Example:** A sports team collaborates with environmental organizations to organize educational campaigns and workshops that teach athletes and fans about sustainability, climate change, and conservation efforts.

## 5. **Environmental education and awareness:**

Sustainable sports practices provide an opportunity to educate athletes, fans, and communities about environmental issues. By raising awareness and promoting sustainable behaviors, sports organizations can inspire positive changes beyond the sporting arena.

#### 6. **Promotion of eco-friendly materials:**

Sustainable sports practices encourage the use of eco-friendly materials in sports equipment and facilities. This includes using recycled or recyclable materials, promoting sustainable manufacturing processes, and supporting companies that prioritize environmentally-friendly practices.

**Example:** Sports brands manufacture athletic apparel using recycled materials such as plastic bottles or repurposed fabrics, reducing the reliance on virgin resources and decreasing waste generation.

**BY INCORPORATING SUSTAINABLE SPORTS PRACTICES, THE SPORTS INDUSTRY CAN PLAY A SIGNIFICANT ROLE IN MITIGATING ENVIRONMENTAL IMPACTS, RAISING AWARENESS, AND INSPIRING POSITIVE CHANGE FOR A MORE SUSTAINABLE FUTURE.**

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### ECONOMIC AND SOCIAL BENEFITS OF GOING GREEN IN SPORTS

Going green in sports not only provides environmental benefits but also offers various economic and social advantages. Here are specific examples of these benefits:

#### **Economic Benefits:**

1. **Cost savings:** Implementing sustainable practices in sports can lead to significant cost savings in the long run. Energy-efficient technologies, such as LED lighting and solar power, can reduce energy consumption and lower utility bills for sports facilities.

**Example:** A sports stadium replaces its traditional lighting fixtures with energy-efficient LED lights, resulting in reduced electricity costs by up to 50%.

2. **Revenue generation:** Going green can attract environmentally-conscious sponsors, partners, and fans who are willing to support sustainable initiatives. This can lead to new sponsorship opportunities and increased revenue streams for sports organizations.

**Example:** A cycling race partners with a renewable energy company as a sponsor, promoting their green energy solutions and generating additional income for the event.

3. **Enhanced brand value and reputation:** Adopting sustainable practices in sports can enhance the brand value and reputation of sports organizations. It demonstrates their commitment to environmental responsibility, which can attract positive media coverage, public support, and sponsorship opportunities.

**Example:** A sports team implements sustainable practices throughout their operations and communicates these efforts to the public, resulting in a boost in their brand image and increased fan loyalty.

### **Social Benefits:**

1. **Health and well-being:** Green sports initiatives can promote a healthier and more active lifestyle among participants and spectators. Encouraging activities in natural settings and providing green spaces can contribute to improved physical and mental well-being.

**Example:** A community sports center incorporates green spaces and promotes outdoor activities, encouraging people to connect with nature while participating in sports.

2. **Community engagement:** Green sports initiatives provide opportunities for community engagement and involvement. It brings people together, fostering a sense of community and collective action towards sustainability goals.

**Example:** A sports organization collaborates with local schools and community groups to organize environmental cleanup events, engaging the community in environmental stewardship.

3. **Education and awareness:** Green sports practices can educate and raise awareness among athletes, fans, and the wider community about environmental issues and the importance of sustainability. It serves as a platform to inspire positive change and encourage individuals to adopt more sustainable behaviors.

**Example:** A sports event hosts sustainability workshops and educational sessions, providing information about recycling, energy conservation, and other eco-friendly practices to athletes and fans.

4. **Social inclusivity:** Green sports initiatives can promote social inclusivity by providing access to sports and recreational activities for diverse populations. It ensures that sustainability efforts benefit and involve people from all backgrounds and abilities.

**Example:** A sports facility implements accessibility measures, such as wheelchair ramps and inclusive programming, to ensure that individuals with disabilities can participate in sports and enjoy green spaces.

BY EMBRACING SUSTAINABILITY IN SPORTS, ORGANIZATIONS CAN NOT ONLY CONTRIBUTE TO A HEALTHIER PLANET, BUT ALSO REAP ECONOMIC BENEFITS, ENHANCE THEIR BRAND VALUE, AND FOSTER POSITIVE SOCIAL CHANGE WITHIN THEIR COMMUNITIES.

## 5. BUILDING A SUSTAINABILITY MINDSET

### CREATING AWARENESS AND MINDSET SHIFT AMONG COACHES

A sustainability mindset in sport coaches refers to the integration of social, environmental, and economic considerations into their coaching practices, decision-making, and interactions with athletes, staff, and the broader community. This approach seeks to balance the immediate needs of competitive success with long-term considerations for the well-being of people and the planet.

#### Key Elements of a Sustainability Mindset:

**1. Environmental Awareness:** A sustainable coach recognizes the impact of sports on the environment and seeks to minimize negative consequences. This can be done by implementing eco-friendly practices, such as reducing waste, conserving energy, and supporting environmentally responsible initiatives within their organization.

**2. Social Responsibility:** Coaches with a sustainability mindset are aware of their influence on athletes and the community. They promote a culture of respect, inclusion, and fairness, and address issues such as discrimination, harassment, and bullying.

**3. Economic Viability:** Sustainable coaches understand the need for financial stability and work to ensure their organization's long-term economic viability. This may include responsible budgeting, investment in long-term infrastructure, and support for revenue-generating activities that align with the organization's values.

**4. Holistic Athlete Development:** A focus on developing the whole athlete, not just their physical skills,

### SUSTAINABILITY MINDSET

By adopting a sustainability mindset, sport coaches can contribute to a healthier, more equitable, and environmentally responsible sports culture, while fostering the development of well-rounded athletes who are capable of making a positive impact both on and off the field.

is crucial. This includes fostering a growth mindset, promoting mental well-being, and teaching life skills that will benefit athletes beyond their sports careers.

**5. Collaboration and Partnerships:** Sustainable coaches recognize the importance of working together with other stakeholders to achieve common goals. This can involve partnering with other organizations to share resources, knowledge, and expertise, as well as supporting local and global initiatives that align with sustainability principles.

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#### HOW SPORT COACHES CAN DEVELOP A SUSTAINABILITY MINDSET

**1. Education:** Participate in workshops, seminars, or online courses to learn about sustainability and how it can be applied to coaching.

**2. Reflect on Personal Values:** Assess personal values and beliefs, and consider how they align with the principles of sustainability.

**3. Set Goals:** Establish specific, measurable, achievable, realistic, and time-bound (SMART) goals for incorporating sustainability principles into coaching practices.

**4. Share Knowledge:** Engage in conversations with athletes, fellow coaches, and staff about the importance of sustainability and how it can be integrated into the sports environment.

**5. Mentorship and Networking:** Seek out mentors or other coaches who have successfully integrated sustainability principles into their coaching, and learn from their experiences.

**6. Evaluate and Adjust:** Regularly assess progress toward sustainability goals and make adjustments as needed.

#### 6. CASE STUDIES OF SPORTS ORGANIZATIONS LEADING IN ENVIRONMENTAL RESPONSIBILITY

**1. Forest Green Rovers Football Club:** Forest Green Rovers, a football club in the English Football League, has made significant efforts to become the world's first carbon-neutral football club. The organization has implemented various sustainability initiatives, including having an organic pitch, using renewable energy sources, and serving vegan food at their stadium. Forest Green Rovers also partnered with environmental organizations to raise awareness about climate change and promote sustainability in the sports industry.

**2. Green Sports Alliance:** The Green Sports Alliance is a nonprofit organization that works with sports teams, leagues, and venues to promote environmental responsibility. They have collaborated with various sports organizations, including the National Hockey League (NHL) and Major League Baseball (MLB), to implement sustainable practices. For example, the NHL launched the "NHL Green" initiative to reduce the league's



environmental impact through energy conservation, waste reduction, and water conservation.

**3. Seattle Mariners:** The Seattle Mariners, a professional baseball team in Major League Baseball, have taken significant steps to reduce their environmental footprint. They have implemented composting and recycling programs at their stadium, installed energy-efficient lighting systems, and reduced water consumption through innovative irrigation systems. The Mariners also educate fans about sustainability and the importance of environmental responsibility during games and events.

**4. Formula E:** Formula E is an all-electric motorsport championship that focuses on promoting sustainable mobility and reducing carbon emissions in the racing industry. The organization uses electric race cars powered by renewable energy sources, such as solar and wind power. Formula E races are held in urban locations to raise awareness about air pollution and the potential of electric vehicles in reducing carbon emissions.

**5. US Open Tennis Championships:** The US Open Tennis Championships have made significant efforts to become more sustainable. They have implemented recycling and composting programs, installed energy-efficient lighting systems, and partnered with local organizations to promote public transportation and reduce traffic congestion during the event. The US Open has also worked towards reducing water consumption by using efficient irrigation systems and promoting water conservation practices.

**THESE EXAMPLES ILLUSTRATE HOW SPORTS ORGANIZATIONS ARE TAKING PROACTIVE STEPS TO REDUCE THEIR ENVIRONMENTAL IMPACT AND PROMOTE SUSTAINABILITY. BY IMPLEMENTING INNOVATIVE INITIATIVES AND RAISING AWARENESS AMONG FANS AND STAKEHOLDERS, THESE ORGANIZATIONS ARE LEADING THE WAY IN ENVIRONMENTAL RESPONSIBILITY WITHIN THE SPORTS INDUSTRY.**

## **7. ASSESSMENT: ENVIRONMENTAL AWARENESS SELF-ASSESSMENT QUIZ TO EVALUATE COACHES' UNDERSTANDING OF ENVIRONMENTAL IMPACT AND RESPONSIBILITY**

*1. Do you understand the concept of sustainability and its relevance in the sports industry?*

- a) Yes, I have a clear understanding of sustainability and its importance in sports.
- b) I have a basic understanding of sustainability, but I would like to learn more about its relevance in the sports industry.
- c) No, I am not familiar with the concept of sustainability.



*2. Are you knowledgeable about the environmental impact of sports activities, such as energy consumption and waste generation?*

- a) Yes, I am well-informed about the environmental impact of sports activities and strive to minimize it.
- b) I have some knowledge about the environmental impact of sports activities, but I could learn more about specific areas.
- c) No, I am not aware of the environmental impact of sports activities.

*3. Do you actively promote eco-friendly practices, such as recycling and energy conservation, to your athletes and staff?*

- a) Yes, I actively promote and encourage eco-friendly practices among my athletes and staff.
- b) I try to promote eco-friendly practices, but I could do more to educate and encourage sustainable behaviors.
- c) No, I do not actively promote eco-friendly practices among my athletes and staff.

*4. Have you incorporated sustainable training methods or equipment into your coaching practices?*

- a) Yes, I have actively sought out and implemented sustainable training methods or equipment.
- b) I am aware of sustainable training methods or equipment, but I have not yet incorporated them into my coaching practices.
- c) No, I am not familiar with sustainable training methods or equipment.

*5. Are you aware of the environmental certifications or standards for sports facilities, such as LEED or ISO 20121?*

- a) Yes, I am familiar with environmental certifications or standards for sports facilities and strive to meet them.
- b) I have heard of environmental certifications or standards, but I need to learn more about their requirements and benefits.
- c) No, I am not aware of environmental certifications or standards for sports facilities.

*6. Do you encourage your athletes to appreciate and respect nature through outdoor activities or environmental education?*

- a) Yes, I actively encourage my athletes to engage in outdoor activities and appreciate nature.
- b) I have mentioned the importance of outdoor activities and nature appreciation, but I could do more to promote it among my athletes.
- c) No, I do not actively encourage my athletes to engage in outdoor activities or appreciate nature.

*7. Do you collaborate with environmental organizations or initiatives to promote sustainability in sports?*

- a) Yes, I actively collaborate with environmental organizations or initiatives to promote sustainability in sports.
- b) I am aware of environmental organizations or initiatives, but I have not yet collaborated with them.
- c) No, I do not collaborate with environmental organizations or initiatives related to sports.

*8. Have you implemented waste reduction strategies, such as proper recycling and composting, in your sports facility?*

- a) Yes, I have implemented waste reduction strategies, such as recycling and composting, in my sports facility.
- b) I am aware of waste reduction strategies, but I have not yet implemented them in my sports facility.
- c) No, I have not implemented any waste reduction strategies in my sports facility.

*9. Are you familiar with sustainable transportation options for sports events, such as promoting public transportation or carpooling?*

- a) Yes, I am familiar with sustainable transportation options and actively promote them for sports events.
- b) I have heard of sustainable transportation options, but I need to learn more about their implementation and benefits.
- c) No, I am not familiar with sustainable transportation options for sports events.

*10. Do you educate your athletes and staff about the importance of environmental responsibility and sustainable practices?*

- a) Yes, I regularly educate my athletes and staff about the importance of environmental responsibility and sustainable practices.
- b) I occasionally mention the importance of environmental responsibility and sustainable practices, but I could do more to educate them.
- c) No, I do not actively educate my athletes and staff about environmental responsibility or sustainable practices.

*11. Have you implemented water conservation measures, such as efficient irrigation systems or promoting water-saving practices, in your coaching practices?*

- a) Yes, I have implemented water conservation measures, such as efficient irrigation systems or promoting water-saving practices.
- b) I am aware of water conservation measures, but I have not yet implemented them in my coaching practices.
- c) No, I have not implemented any water conservation measures in my coaching practices.

*12. Do you consider the environmental impact when selecting venues for training or competitions?*

- a) Yes, I actively consider the environmental impact when selecting venues for training or competitions.
- b) I take the environmental impact into account to some extent, but I could do more to prioritize sustainable venues.
- c) No, I do not consider the environmental impact when selecting venues for training or competitions.

*13. Are you familiar with sustainable energy solutions, such as solar panels or energy-efficient lighting, for sports facilities?*

- a) Yes, I am familiar with sustainable energy solutions and have implemented them in my sports facility.
- b) I have heard of sustainable energy solutions, but I need to learn more about their implementation and benefits.
- c) No, I am not familiar with sustainable energy solutions for sports facilities.

### *Scoring:*

For each "a" answer, give yourself 2 points.

For each "b" answer, give yourself 1 point.

For each "c" answer, give yourself 0 points.

### *Interpretation:*

**24-26 POINTS:** Congratulations! You have a high level of environmental awareness and actively promote sustainability in your coaching practices.

**13-23 POINTS:** You have some awareness of environmental responsibility, but there is room for improvement. Consider learning more about sustainable practices and implementing them in your coaching.

**0-12 POINTS:** You have limited environmental awareness and do not actively promote sustainability in your coaching practices. It is important to educate yourself about

sustainability and explore ways to incorporate eco-friendly practices into your coaching.

**THIS QUIZ IS JUST A SELF-ASSESSMENT TOOL AND IS NOT MEANT TO BE A COMPREHENSIVE EVALUATION. IT CAN HELP YOU IDENTIFY AREAS WHERE YOU CAN IMPROVE YOUR ENVIRONMENTAL AWARENESS AS A SPORT COACH.**

## 8. SETTING ENVIRONMENTAL GOALS

### ASSESSING A SPORT ORGANIZATION'S ENVIRONMENTAL PERFORMANCE

Assessing a sport organization's environmental performance involves evaluating its impact on the environment and its efforts to minimize that impact. Here are steps to assess a sport organization's environmental performance:

**1. Define the assessment criteria:** Determine the specific criteria and indicators to assess the organization's environmental performance. This can include areas such as energy consumption, water usage, waste management, greenhouse gas emissions, sustainable procurement, and community engagement.

**2. Collect data:** Gather relevant data and information on the organization's environmental practices and performance. This may involve reviewing utility bills, waste management records, transportation logs, and any other available data sources.

**3. Evaluate compliance:** Assess the organization's compliance with relevant environmental laws, regulations, and industry standards. Determine if the organization is meeting all legal requirements and identify any areas of non-compliance.

**4. Conduct a baseline assessment:** Establish a baseline for the organization's environmental performance by measuring its current practices and impacts. This provides a starting point for future comparisons and improvements.

**5. Set performance targets:** Determine specific targets and goals for the organization to strive towards in terms of environmental performance. These targets should be realistic, measurable, and aligned with the organization's sustainability objectives.

### ENVIRONMENTAL PERFORMANCE

By assessing a sport organization's environmental performance, it becomes possible to identify areas for improvement, set targets, and implement practices that reduce the organization's environmental impact.

This not only benefits the environment but also enhances the organization's reputation, attracts environmentally conscious sponsors and partners, and aligns with the growing demand for sustainable practices in the sports industry.

**6. Analyze performance data:** Analyze the collected data to identify trends, areas of strength, and areas that require improvement. Look for patterns in energy usage, waste generation, water consumption, and other relevant factors.

**7. Identify areas for improvement:** Based on the analysis, identify specific areas where the organization can enhance its environmental performance. This could include implementing energy-saving measures, reducing water usage, improving waste management, or adopting sustainable procurement practices.

**8. Develop an action plan:** Create an action plan that outlines the steps, responsibilities, and timelines for implementing the identified improvements. Ensure that the plan is practical, feasible, and aligned with the organization's resources and capabilities.

**9. Monitor progress:** Regularly monitor and track the organization's progress towards its environmental performance targets. This can involve setting up a system to collect and analyze ongoing data, conducting periodic assessments, and reporting on progress to stakeholders.

**10. Communicate and engage stakeholders:** Share the organization's environmental performance results and progress with key stakeholders, such as staff, athletes, sponsors, and fans. Engage stakeholders in discussions and initiatives to further improve environmental performance and promote sustainability.

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## ESTABLISHING REALISTIC AND MEASURABLE GOALS FOR ENVIRONMENTAL RESPONSIBILITY

Establishing realistic and measurable goals for environmental responsibility in sport is crucial to track progress and ensure accountability.

Setting realistic and measurable goals is an ongoing process. Continuously evaluate and update your goals as you make progress and new opportunities arise. By establishing clear goals and tracking your organization's environmental impact, you can make meaningful strides towards environmental responsibility in sport.

Here are some examples of realistic and measurable goals for environmental responsibility in sport:

### 1. Reduce energy consumption:

**Goal:** Decrease overall energy consumption in sports facilities by 20% within the next two years.

**Measurement:** Track and analyze energy bills and usage data regularly to monitor progress towards the reduction goal.

### 2. Increase recycling rates:

**Goal:** Achieve a recycling rate of 50% for all waste generated during sporting events within the next year.

**Measurement:** Conduct waste audits and measure the percentage of waste diverted from landfill through recycling efforts.

### **3. Implement sustainable transportation options:**

**Goal:** Increase the use of public transportation, cycling, and carpooling by athletes, staff, and spectators by 30% within the next three years.

**Measurement:** Conduct surveys or use ticketing data to track transportation choices and calculate the percentage increase.

### **4. Improve water conservation:**

**Goal:** Reduce water consumption in sports facility irrigation systems by 25% within the next year.

**Measurement:** Install water meters and monitor usage regularly to track progress towards the reduction goal.

### **5. Promote eco-friendly merchandise:**

**Goal:** Ensure that 75% of merchandise sold at sporting events is made from sustainable materials (e.g., organic cotton, recycled materials) within the next two years.

**Measurement:** Work with suppliers and track the percentage of sustainable materials used in merchandise inventory.

### **6. Minimize food waste:**

**Goal:** Implement food waste reduction strategies and achieve a 50% reduction in food waste generated during sporting events within the next year.

**Measurement:** Conduct audits to measure the weight or volume of food waste generated and track progress towards the reduction goal.

### **7. Enhance facility sustainability:**

**Goal:** Achieve LEED certification or a similar environmental certification for sports facility design and operations within the next three years.

**Measurement:** Implement sustainable design principles, track energy efficiency, waste management, and water usage to meet certification criteria.

### **8. Educate athletes and staff:**

**Goal:** Provide environmental education and training to all athletes and staff members, ensuring that 90% of them have a basic understanding of sustainability within the next year.

**Measurement:** Conduct pre- and post-training surveys to assess knowledge levels and track the percentage of participants who gain a basic understanding of sustainability.

**THESE GOALS SHOULD BE TAILORED TO YOUR SPECIFIC SPORTS ORGANIZATION'S NEEDS, RESOURCES, AND CAPABILITIES. IT'S IMPORTANT TO SET TARGETS THAT ARE ACHIEVABLE WITHIN A REASONABLE TIMEFRAME AND CAN BE EFFECTIVELY MEASURED TO TRACK PROGRESS.**

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## IDENTIFYING AREAS FOR IMPROVEMENT WITHIN THE COACH'S SPHERE OF INFLUENCE REGARDING ENVIRONMENTAL RESPONSIBILITY

To identify areas for improvement within the coach's sphere of influence regarding environmental responsibility, consider the following aspects of coaching and sports operations:

### 1. Training sessions and competitions:

- Energy consumption: Assess energy usage during training sessions, such as lighting, heating, and cooling systems, and explore ways to optimize energy efficiency.
- Waste management: Evaluate waste generation, such as plastic bottles or food packaging, and implement recycling and waste reduction strategies.
- Water usage: Identify opportunities to reduce water consumption, such as efficient irrigation systems or encouraging athletes to use water responsibly.

### 2. Equipment and gear:

- Sustainable materials: Explore options for using sports equipment and gear made from sustainable or recycled materials.
- Equipment lifespan: Encourage proper maintenance and care of equipment to extend its lifespan and reduce the need for frequent replacements.

### 3. Transportation:

- Athlete travel: Promote sustainable transportation options for athletes, such as carpooling or using public transportation when traveling to competitions or training sessions.
- Team travel: Consider the environmental impact of team travel and explore ways to minimize carbon emissions, such as using more fuel-efficient vehicles or offsetting carbon emissions.

### 4. Facilities and venues:

- Energy efficiency: Evaluate energy usage in sports facilities and identify opportunities for energy-efficient lighting, HVAC systems, and insulation.

## SUSTAINABLE EQUIPMENT

Ajax Amsterdam, a well-known football club in the Netherlands, has been a pioneer in adopting sustainable practices. The club has partnered with adidas to create jerseys made from recycled ocean plastic. These jerseys are part of adidas' initiative to reduce plastic waste and promote sustainability in sportswear. Ajax's adoption of such eco-friendly materials aligns with their commitment to being environmentally conscious.



- Water conservation: Implement water-saving measures, such as low-flow fixtures or water-efficient irrigation systems, in sports facilities.

- Waste management: Improve waste management practices within sports facilities, including recycling programs and proper disposal of hazardous materials.

#### **5. Education and awareness:**

- Athlete and staff education: Provide environmental education to athletes and staff, raising awareness about sustainability and encouraging environmentally responsible behaviors.

- Community engagement: Engage with the local community to promote environmental responsibility and encourage fans and spectators to adopt sustainable practices.

#### **6. Collaboration and partnerships:**

- Environmental organizations: Collaborate with environmental organizations or initiatives to share resources, knowledge, and best practices for environmental responsibility in sports.

- Sponsorship and suppliers: Work with sponsors and suppliers that align with sustainable practices and prioritize environmentally friendly products and services.

## **COLLABORATION AND PARTNERSHIPS**

### **Sport Lisboa e Benfica (SL Benfica) - Águas do Maranhão (Portugal):**

In Portugal, SL Benfica, a prominent football club, entered into a partnership with Águas do Maranhão, a bottled water company. What sets this partnership apart is that Águas do Maranhão is committed to environmental sustainability and ethical practices. The water bottles used by the company are made from 100% recycled plastic, and the company actively supports reforestation projects. This aligns with SL Benfica's efforts to promote sustainable practices and environmental responsibility.

**BY IDENTIFYING AREAS FOR IMPROVEMENT WITHIN THESE SPHERES OF INFLUENCE, COACHES CAN ACTIVELY CONTRIBUTE TO ENVIRONMENTAL RESPONSIBILITY IN SPORTS. FOCUS ON IMPLEMENTING PRACTICAL CHANGES THAT ALIGN WITH THE RESOURCES AND CAPABILITIES OF YOUR SPORTS ORGANIZATION, WHILE ALSO CONSIDERING LONG-TERM SUSTAINABILITY GOALS.**

## **9. ACTION PLANNING**

**DEVELOPING AN ACTION PLAN TO INTEGRATE ENVIRONMENTAL RESPONSIBILITY INTO COACHING PRACTICES. IDENTIFYING KEY STRATEGIES AND TACTICS.**

Developing an action plan to integrate environmental responsibility into sport coaching practices involves several steps:



**1. Assess current practices:** Evaluate your current coaching practices and identify areas where environmental responsibility can be integrated. Consider energy usage, waste management, transportation, facility operations, and athlete education.

**2. Set goals:** Based on the assessment, set specific and measurable goals for integrating environmental responsibility into your coaching practices. These goals should align with your organization's values and resources.

**3. Create an action plan:** Develop a detailed action plan that outlines the steps needed to achieve your goals. Break down the plan into specific tasks, assign responsibilities, and establish timelines for completion.

**4. Implement sustainable training methods:**

Integrate sustainable training methods into your coaching practices. This could include incorporating energy-efficient equipment, utilizing eco-friendly training aids, or implementing sustainable warm-up and cool-down routines.

**5. Promote waste reduction and recycling:** Implement waste reduction strategies during training sessions and competitions. Encourage athletes and staff to minimize waste generation, recycle materials, and properly dispose of hazardous or non-recyclable items.

**6. Optimize energy usage:** Identify opportunities to reduce energy consumption during training sessions and in sports facilities. This may involve using energy-efficient lighting, optimizing HVAC systems, or encouraging athletes to practice energy-saving behaviors, such as turning off lights when not in use.

**7. Encourage sustainable transportation:** Promote sustainable transportation options for athletes and staff. Encourage carpooling, the use of public transportation, or cycling to training sessions and competitions. Consider organizing transportation schedules to minimize carbon emissions.

**8. Educate athletes and staff:** Provide education and training to athletes and staff about environmental responsibility. Raise awareness about the importance of sustainability, explain the actions being taken, and encourage them to adopt eco-friendly practices in their daily lives.

**9. Collaborate with stakeholders:** Engage with athletes, staff, parents, and other stakeholders to foster a culture of environmental responsibility. Encourage their participation, feedback, and ideas for improving sustainability practices within the sports organization.

**10. Monitor and evaluate progress:** Regularly assess progress towards your goals. Track data related to energy consumption, waste generation, recycling rates, and other

## ONGOING PROCESS

Integrating environmental responsibility into sport coaching practices is an ongoing process. Continuously evaluate and refine your action plan as you learn and adapt to new sustainability practices and opportunities. Regularly review and update your goals to ensure they remain relevant and aligned with your organization's values and objectives.

relevant metrics. Use this information to evaluate the effectiveness of your actions and identify areas for improvement.

**11. Communicate and celebrate success:** Share the progress and achievements of your environmental responsibility initiatives with athletes, staff, parents, and the wider community. Celebrate milestones, recognize individuals or teams that have contributed, and use success stories to inspire others to adopt sustainable practices.

## MODULE 2: SUSTAINABLE OPERATIONS IN SPORTS FACILITIES

### 1. SUSTAINABLE FACILITIES AND INFRASTRUCTURE

Promoting environmentally-friendly designs for sports facilities involves considering sustainability principles from the initial planning stages to the construction and ongoing operations. Here are some key aspects to focus on:

#### 1. Energy efficiency:

- Incorporate energy-efficient designs, such as utilizing natural lighting, optimizing insulation, and employing energy-efficient HVAC systems.
- Install renewable energy systems like solar panels or wind turbines to generate clean energy and reduce reliance on non-renewable sources.

#### 2. Water conservation:

- Implement water-saving measures, such as using low-flow fixtures, water-efficient irrigation systems, and rainwater harvesting.
- Incorporate landscaping designs that minimize water usage, such as native plants that require less irrigation.

#### 3. Waste management:

- Design waste management systems that facilitate recycling, composting, and proper disposal of hazardous materials.
- Incorporate waste reduction strategies, such as using durable and reusable materials, and encouraging the use of refillable water bottles.

### ENVIRONMENTALLY-FRIENDLY DESIGN FOR SPORTS FACILITY

#### Aviva Stadium (Dublin, Ireland):

Aviva Stadium incorporates several sustainable elements such as a natural ventilation system that utilizes wind pressure to circulate fresh air, reducing the need for mechanical cooling. Rainwater harvesting systems are also used for pitch irrigation and restroom facilities.

#### Friends Arena (Stockholm, Sweden):

This stadium is one of the world's greenest arenas with solar panels that generate electricity, rainwater harvesting systems for irrigation and plumbing, and energy-efficient LED lighting. It is certified by the international standard ISO 14001 for environmental management.

#### **4. Sustainable materials:**

- Prioritize the use of sustainable and eco-friendly materials during construction, such as recycled materials, responsibly sourced wood, and low-emission building materials.
- Consider the lifecycle of materials, including their production, transportation, and end-of-life disposal.

#### **5. Accessibility and inclusivity:**

- Ensure the facility design is accessible and inclusive for all individuals, including those with disabilities. Incorporate ramps, elevators, accessible seating areas, and appropriate signage.

#### **6. Natural habitat preservation:**

- Design sports facilities with minimal impact on natural habitats and ecosystems. Preserve existing trees and vegetation, create green spaces, and consider wildlife-friendly landscaping practices.

#### **7. Water and energy monitoring systems:**

- Install monitoring systems to track water and energy consumption within the facility. This data can help identify areas for improvement and optimize resource usage.

#### **8. Sustainable transportation infrastructure:**

- Include infrastructure for sustainable transportation options, such as bicycle parking areas, electric vehicle charging stations, and accessible public transportation connections.

#### **9. Education and signage:**

- Use educational signage throughout the facility to promote environmental responsibility and provide information on sustainable practices to visitors, athletes, and staff.
- Incorporate educational displays or interactive exhibits that highlight the facility's sustainable features and promote environmental awareness.

#### **10. Certification and recognition:**

- Pursue environmental certifications, such as LEED (Leadership in Energy and Environmental Design), to validate the facility's sustainability efforts and demonstrate commitment to environmental responsibility.
- Seek recognition from environmental organizations or sports governing bodies that prioritize sustainability, which can enhance the facility's reputation and attract environmentally-conscious events or sponsors.

**BY PROMOTING ENVIRONMENTALLY-FRIENDLY DESIGNS FOR SPORTS FACILITIES, WE CAN CREATE SPACES THAT MINIMIZE ENVIRONMENTAL IMPACT, PROVIDE A HEALTHIER ENVIRONMENT FOR ATHLETES AND SPECTATORS, AND CONTRIBUTE TO A MORE SUSTAINABLE FUTURE.**

## 2. WASTE MANAGEMENT AND RECYCLING

Implementing effective waste management practices at sports venues is crucial for reducing environmental impact and promoting sustainability. Here are some examples of strategies that can be employed:

**1. Recycling stations:** Install clearly labeled recycling stations throughout the venue, including in common areas, spectator seating areas, and back-of-house spaces. Provide separate bins for different types of recyclable materials, such as plastic, glass, paper, and aluminum.

**2. Composting:** Implement composting programs for food waste generated at the venue. Set up designated composting bins in food preparation areas, concession stands, and dining areas. Partner with local composting facilities or organizations to ensure proper disposal and use of the composted material.

**3. Waste sorting and separation:** Train staff to properly sort and separate waste materials. Ensure that waste collected in different areas of the venue is appropriately segregated into recycling, composting, and landfill streams. Clearly label waste bins and provide training materials to educate staff on waste separation guidelines.

**4. Bottle and can redemption programs:** Introduce bottle and can redemption programs to encourage spectators to return their empty beverage containers. Set up redemption stations where individuals can receive a refund or other incentives for returning their bottles and cans.

**5. Reduced packaging and single-use items:** Work with vendors and concessionaires to minimize packaging and single-use items. Encourage the use of eco-friendly alternatives, such as biodegradable or compostable food containers and utensils. Promote the use of refillable water bottles and offer water refill stations throughout the venue.

**6. Waste audits and data tracking:** Conduct regular waste audits to assess the types and quantities of waste generated at the venue. Use this data to identify areas for improvement and set waste reduction targets. Track waste diversion rates and monitor progress towards waste management goals.

**7. Education and signage:** Display clear signage throughout the venue to educate spectators about waste management practices and encourage their participation. Provide information on what can be recycled or composted, and the benefits of proper waste disposal. Use digital displays, posters, and announcements to reinforce these messages.

**8. Vendor and supplier partnerships:** Collaborate with vendors and suppliers to promote sustainable practices. Encourage them to use eco-friendly packaging, provide recycling options, and support waste reduction initiatives. Consider partnering with vendors that prioritize sustainability and offer environmentally responsible products and services.

**9. Volunteer engagement:** Recruit and train volunteers to assist with waste management efforts during events. Assign volunteers to recycling stations, composting areas, or waste sorting stations to guide spectators and ensure proper waste disposal.

**10. Continuous improvement and evaluation:** Regularly review waste management practices and evaluate their effectiveness. Seek feedback from spectators, staff, and vendors to identify areas for improvement. Implement changes based on lessons learned and emerging best practices.

**BY IMPLEMENTING THESE WASTE MANAGEMENT PRACTICES, SPORTS VENUES CAN SIGNIFICANTLY REDUCE WASTE SENT TO LANDFILLS, PROMOTE RECYCLING AND COMPOSTING, AND CREATE A MORE SUSTAINABLE ENVIRONMENT FOR ATHLETES, SPECTATORS, AND STAFF.**

### 3. WATER CONSERVATION

Implementing effective water conservation measures at sports venues is essential for reducing water usage and promoting sustainability. Here are some examples of strategies that can be implemented:

**1. Efficient irrigation systems:** Install water-efficient irrigation systems, such as drip irrigation or smart irrigation controllers, that optimize water usage based on weather conditions, soil moisture, and plant water needs. Use sensors to detect rainfall and automatically adjust irrigation schedules accordingly.

**2. Native and drought-tolerant landscaping:** Design landscapes using native plants and grasses that require less water and are adapted to the local climate. Incorporate drought-tolerant landscaping techniques, such as xeriscaping, to minimize the need for irrigation. Mulch around plants to retain moisture and reduce evaporation.

**3. Water-efficient fixtures:** Install water-efficient fixtures throughout the venue, including low-flow toilets, urinals, and faucets in restrooms. Use sensor-activated faucets to reduce water waste from taps being left running. Consider waterless urinals in high-traffic areas to save significant amounts of water.

**4. Rainwater harvesting:** Implement rainwater harvesting systems to capture and store rainwater for irrigation purposes. Install rain barrels or cisterns to collect water from rooftops and other surfaces. Use this stored water for landscape irrigation or other non-potable uses within the venue.

**5. Leak detection and repair:** Regularly inspect plumbing systems for leaks and promptly repair any identified issues. Implement a leak detection program that includes regular monitoring and maintenance of water supply lines, fixtures, and equipment. Encourage staff to report any leaks or water-related issues they notice.

**6. Education and awareness:** Educate staff, athletes, and spectators about the importance of water conservation. Provide information on water-saving practices, such as turning off faucets when not in use, reporting leaks, and using water responsibly.

Display educational signage and engage in awareness campaigns to promote responsible water use.

**7. Water monitoring and analytics:** Install water meters and monitoring systems to track water usage within the venue. Analyze the data to identify patterns, trends, and areas where water conservation measures can be further improved. Set water reduction targets and regularly monitor progress.

**8. Behavior change initiatives:** Encourage water-saving behaviors among staff, athletes, and spectators. Promote simple actions like taking shorter showers, using water-efficient appliances, and reporting any water wastage. Recognize and reward individuals or teams that actively participate in water conservation efforts.

**9. Collaboration with suppliers and vendors:** Work with suppliers and vendors to ensure they prioritize water conservation in their products and services. Encourage the use of water-efficient equipment, such as high-efficiency dishwashers or laundry machines. Collaborate with concessionaires to minimize water usage in food and beverage preparation.

**10. Continuous improvement and evaluation:** Regularly review water conservation practices and evaluate their effectiveness. Seek feedback from staff, athletes, and spectators to identify areas for improvement. Implement changes based on lessons learned and emerging best practices.

**BY IMPLEMENTING THESE WATER CONSERVATION MEASURES, SPORTS VENUES CAN SIGNIFICANTLY REDUCE WATER CONSUMPTION, PROTECT WATER RESOURCES, AND CREATE A MORE SUSTAINABLE ENVIRONMENT FOR ALL STAKEHOLDERS INVOLVED.**

#### 4. ENERGY EFFICIENCY

Implementing effective energy-saving practices in sports facilities is crucial for reducing energy consumption, lowering operational costs, and promoting sustainability. Here are some examples of strategies that can be implemented:

#### AMSTERDAM ARENA

The Amsterdam ArenA, the home of the football club Ajax, is powered by more than 4,200 solar panels and one wind turbine. The main building comprises an impressive energy-generating escalator and the stadium has also installed an energy storage system powered by second-life batteries from used electric vehicles.

The xStorage Buildings system from used Nissan LEAF batteries not only provides backup power for the stadium but also distributes energy to the surrounding neighborhood when needed, to alleviate pressure on the grid.

Rainwater from the stadium roof is collected and re-used to water the grass field, significantly reducing consumption of valuable freshwater. Residual heat is used to keep frost off the playing field, a move that requires no additional energy to be wasted.

Fans are encouraged to reduce their travel emissions by using active mobility, electric vehicles or trains. The car park offers free charging points and every visitor is entitled to discounts on train tickets.



- 1. Energy-efficient lighting:** Replace traditional lighting fixtures with energy-efficient alternatives, such as LED lights. LED lighting consumes less energy, has a longer lifespan, and provides better illumination. Install motion sensors or timers to automatically turn off lights in unoccupied areas.
- 2. Natural lighting optimization:** Maximize the use of natural lighting by incorporating large windows, skylights, or light tubes in the facility's design. Utilize daylight sensors to adjust artificial lighting levels based on available natural light, reducing the need for excessive artificial lighting during daylight hours.
- 3. HVAC system optimization:** Regularly maintain and optimize heating, ventilation, and air conditioning (HVAC) systems. Implement programmable thermostats to adjust temperatures based on occupancy and optimize energy usage. Upgrade to energy-efficient HVAC equipment and ensure proper insulation to minimize energy loss.
- 4. Energy management systems:** Install energy management systems to monitor and control energy usage within the facility. These systems can provide real-time data on energy consumption, identify areas of high energy usage, and enable remote control of energy-consuming equipment.
- 5. Renewable energy integration:** Install renewable energy systems, such as solar panels or wind turbines, to generate clean energy on-site. These systems can offset a portion of the facility's energy demand and reduce reliance on fossil fuels.
- 6. Energy-efficient equipment:** Choose energy-efficient equipment for various operations within the facility, such as fitness equipment, kitchen appliances, and audiovisual systems. Look for ENERGY STAR certified products that meet high energy efficiency standards.
- 7. Insulation and weatherization:** Ensure the facility is well-insulated to prevent energy loss and maintain comfortable indoor temperatures. Seal air leaks, insulate walls and roofs, and install energy-efficient windows. This will reduce the need for excessive heating or cooling, saving energy.
- 8. Smart power management:** Implement smart power management systems to control and optimize the usage of electrical devices and equipment. These systems can automatically power down or enter energy-saving modes during periods of inactivity or non-peak hours.
- 9. Education and awareness:** Educate staff, athletes, and spectators about the importance of energy conservation and encourage energy-saving behaviors. Promote actions like turning off lights and equipment when not in use, using energy-efficient appliances, and reporting any energy-related issues.
- 10. Continuous improvement and evaluation:** Regularly assess energy consumption patterns, track energy usage data, and evaluate the effectiveness of energy-saving measures. Set energy reduction targets and monitor progress towards achieving them. Identify and implement new energy-saving technologies or practices as they become available.

**BY IMPLEMENTING THESE ENERGY-SAVING PRACTICES, SPORTS FACILITIES CAN SIGNIFICANTLY REDUCE ENERGY CONSUMPTION, LOWER OPERATIONAL COSTS, AND CONTRIBUTE TO A MORE SUSTAINABLE FUTURE.**

## **5. PROMOTING BIODIVERSITY AND GREEN SPACES**

Creating and maintaining green spaces around sports facilities not only enhances the aesthetic appeal but also promotes environmental sustainability and provides numerous benefits to athletes, spectators, and the local community. Here are some best examples for creating and maintaining green spaces:

**1. Native plant landscaping:** Incorporate native plants and grasses in the green spaces surrounding the sports facility. Native species are adapted to local climate conditions, require less water, and provide habitat for local wildlife.

**2. Biodiversity enhancement:** Design green spaces to support biodiversity by including a variety of plant species that attract pollinators and provide food and shelter for birds and insects. Incorporate features like birdhouses, butterfly gardens, or bee-friendly plantings.

**3. Rain gardens and bioswales:** Create rain gardens and bioswales in green spaces to manage stormwater runoff effectively. These features help filter and absorb rainwater, reducing the strain on drainage systems and preventing water pollution.

**4. Tree planting and preservation:** Plant trees strategically around the sports facility to provide shade, improve air quality, and reduce heat island effects.

**5. Irrigation efficiency:** Install water-efficient irrigation systems, such as drip irrigation or smart controllers, to minimize water waste. Use rain sensors or soil moisture sensors to optimize irrigation schedules based on actual plant water needs.

**6. Sustainable maintenance practices:** Adopt sustainable maintenance practices

for green spaces, such as using organic fertilizers and natural pest control methods. Avoid or minimize the use of chemical pesticides and herbicides that can harm the environment.

**7. Permeable surfaces:** Use permeable materials for walkways, patios, and parking areas to allow rainwater to penetrate the ground rather than creating runoff. Permeable surfaces help recharge groundwater, reduce flooding, and prevent water pollution.

**8. Nature trails and recreational areas:** Incorporate nature trails and recreational areas within the green spaces to encourage physical activity and provide opportunities for people to connect with nature. Install benches, picnic areas, and fitness stations to enhance the overall experience.

**9. Educational signage and interpretation:** Install educational signage throughout the green spaces to provide information about the plants, wildlife, and environmental features present.

**10. Community involvement:** Engage the local community in the creation and maintenance of green spaces. Organize volunteer events, educational workshops, or community gardening programs to foster a sense of ownership and stewardship among community members.



ONGOING MAINTENANCE AND REGULAR MONITORING ARE ESSENTIAL TO KEEP GREEN SPACES HEALTHY AND VIBRANT. REGULARLY ASSESS THE CONDITION OF PLANTS, ADDRESS ANY PEST OR DISEASE ISSUES PROMPTLY, AND ADJUST MAINTENANCE PRACTICES AS NEEDED TO ENSURE THE LONG-TERM SUCCESS OF THE GREEN SPACES AROUND SPORTS FACILITIES.

## SINGAPORE SPORTS HUB: PROMOTING BIODIVERSITY AND GREEN SPACES

The **Singapore Sports Hub** is an excellent example of a sports venue that prioritizes biodiversity and green spaces within a bustling urban environment. This state-of-the-art complex hosts a variety of sports events, concerts, and entertainment activities while integrating sustainability and nature-friendly design.

### Key Features:

1. **Kallang Basin Waterfront:** The Sports Hub is situated along the Kallang Basin waterfront and features lush greenery, parks, and waterfront promenades. These spaces provide visitors and athletes with opportunities to connect with nature and enjoy outdoor activities.
2. **Biodiversity Gardens:** The complex boasts various biodiversity gardens, including the **Water Sports Centre Garden** and the **Sports Hub Lawn Bowl Green**, which showcase a range of native plants and attract local wildlife.
3. **Roof Garden:** The National Stadium's roof is designed as a vast roof garden with native plants, contributing to rainwater absorption, temperature regulation, and habitat creation for birds and insects.
4. **Water Management:** The Singapore Sports Hub incorporates sustainable water management practices, including rainwater harvesting and treatment systems that help maintain the water quality of the Kallang Basin.
5. **Community Engagement:** The Sports Hub hosts educational programs, workshops, and events that promote environmental awareness and biodiversity conservation. These initiatives engage the community and encourage a deeper appreciation for nature.
6. **Native Plant Landscaping:** Native plant species are used throughout the Sports Hub's landscape design. These plants are well-suited to the local climate and require less water and maintenance.
7. **Green Roof and Vertical Gardens:** In addition to the National Stadium's roof garden, the complex features vertical gardens and green walls that enhance the aesthetic appeal and provide additional habitat for plants and wildlife.
8. **Efficient Energy Use:** The Sports Hub incorporates energy-efficient lighting, cooling systems, and smart building management to reduce its energy consumption and environmental impact.

### Environmental Impact:

The Singapore Sports Hub's commitment to biodiversity and green spaces has positive environmental impacts, including:

- Providing habitats for local flora and fauna, contributing to urban biodiversity.
- Enhancing the overall aesthetic appeal of the venue and its surroundings.
- Mitigating the urban heat island effect through green roofs and plantings.
- Encouraging sustainable water management and reducing runoff into the Kallang Basin.
- Engaging the community in nature-centric activities and education.

## 6. CASE STUDIES OF SPORTS FACILITIES IMPLEMENTING SUSTAINABLE PRACTICES

Many sports facilities have taken proactive steps to implement sustainable practices that reduce their environmental impact and promote sustainability. Here are some notable examples:

**1. Mercedes-Benz Stadium (Atlanta, USA):** The stadium has achieved LEED Platinum certification, the highest level of sustainability certification. It incorporates features like a 4,000-panel solar canopy, a 680,000-gallon rainwater collection system for irrigation and toilet flushing, energy-efficient LED lighting, and a comprehensive waste management program.

**2. Allianz Arena (Munich, Germany):** The stadium uses a cutting-edge translucent membrane outer skin that allows natural light to illuminate the interior, reducing the need for artificial lighting. It also has a rainwater harvesting system for irrigation, energy-efficient lighting, and an innovative cooling system that relies on groundwater.

**3. The Green Sports Hub (Minneapolis, USA):** This sports complex was designed with sustainability in mind. It features rooftop solar panels, rainwater collection systems, energy-efficient lighting, and a geothermal heating and cooling system. The facility also promotes sustainable transportation by providing bike racks and electric vehicle charging stations.

**4. Melbourne Cricket Ground (Melbourne, Australia):** The stadium has implemented various sustainability initiatives, including recycling programs, water-efficient fixtures, and energy-efficient lighting. It also focuses on waste diversion through composting and recycling efforts, reducing the amount of waste sent to landfills.

**5. Levi's Stadium (Santa Clara, USA):** The stadium is known for its sustainable features, such as a 27,000-square-foot green roof, solar panels that generate renewable energy, and water-efficient fixtures. It also emphasizes sustainable transportation by providing bike valet services, electric vehicle charging stations, and easy access to public transportation.

**6. Tokyo 2020 Olympic Games venues (Tokyo, Japan):** The organizers of the Tokyo 2020 Olympic Games implemented several sustainable practices across multiple venues. These include using renewable energy sources, implementing waste reduction and recycling programs, and prioritizing the use of sustainable materials in construction and infrastructure.

**7. Ricoh Arena (Coventry, UK):** The stadium has installed a combined heat and power (CHP) plant that generates electricity and captures waste heat for heating and hot water. It also has rainwater harvesting systems, LED lighting, and a comprehensive waste management program that focuses on recycling and composting.

**8. Johan Crujff ArenA (Amsterdam, Netherlands):** The stadium has implemented a range of sustainability measures, including an energy storage system that uses recycled electric vehicle batteries, a smart grid system that optimizes energy usage, and LED

lighting with dynamic controls. It also has a rainwater collection and storage system for irrigation.

**THESE EXAMPLES DEMONSTRATE THAT SPORTS FACILITIES CAN PLAY A SIGNIFICANT ROLE IN SUSTAINABILITY BY IMPLEMENTING ENERGY-EFFICIENT TECHNOLOGIES, WASTE MANAGEMENT PRACTICES, RENEWABLE ENERGY SYSTEMS, AND PROMOTING SUSTAINABLE TRANSPORTATION. BY DOING SO, THEY INSPIRE OTHERS AND CONTRIBUTE TO A MORE SUSTAINABLE FUTURE.**

## **7. ASSESSMENT: SUSTAINABLE OPERATIONS CHECKLIST**

A **checklist** to assess the sustainability practices of sports facilities:

### **Energy Efficiency:**

- Energy-efficient lighting systems (e.g., LED lights)
- Use of renewable energy sources (solar panels, wind turbines)
- Energy-efficient HVAC systems and controls
- Insulation and weatherization measures
- Use of energy management systems and monitoring tools

### **Water Conservation:**

- Water-efficient fixtures (low-flow toilets, faucets, showers)
- Use of rainwater harvesting systems
- Efficient irrigation systems (drip irrigation, smart controllers)
- Native and drought-tolerant landscaping
- Leak detection and repair programs

### **Waste Management:**

- Comprehensive recycling programs for various waste streams (paper, plastic, glass, etc.)
- Composting facilities for organic waste
- Reduction of single-use plastics (bottles, cups, utensils)
- Waste diversion initiatives (diverting waste from landfills)
- Collaboration with waste management partners

### **Transportation:**

- Accessible public transportation options
- Bike racks, bike-sharing programs, or bike lanes
- Electric vehicle charging stations
- Carpooling or rideshare programs
- Promotion of sustainable transportation options to staff, athletes, and spectators

**Sustainable Materials:**

- Use of sustainable building materials (recycled, renewable, locally sourced)
- Eco-friendly paints, adhesives, and sealants
- Green procurement policies (prioritizing products with eco-labels or certifications)
- Reduction of packaging waste and use of eco-friendly packaging materials

**Community Engagement:**

- Educational programs on sustainability and environmental stewardship
- Volunteer opportunities for the local community to participate in sustainability initiatives
- Events and activities that promote environmental awareness
- Collaboration with local organizations and stakeholders on sustainability projects

**Monitoring and Reporting:**

- Regular monitoring of energy and water consumption
- Tracking waste diversion rates and recycling metrics
- Reporting on sustainability initiatives and progress
- Setting sustainability targets and goals
- Conducting periodic audits and assessments to identify areas for improvement

**BY USING THIS CHECKLIST, SPORTS FACILITIES CAN ASSESS THEIR CURRENT SUSTAINABILITY PRACTICES, IDENTIFY AREAS FOR IMPROVEMENT, AND DEVELOP A ROADMAP FOR IMPLEMENTING MORE SUSTAINABLE INITIATIVES.**

**8. STRATEGIES FOR COACHES TO PROMOTE AND SUPPORT SUSTAINABLE OPERATIONS IN SPORTS FACILITIES**

Here are some strategies coaches can implement to collaborate effectively with facility managers and staff:

**1. Educate and Raise Awareness:** Coaches can educate their athletes, staff, and facility managers about the importance of sustainability and its impact on the environment. This can be done through team meetings, workshops, or training sessions dedicated to sustainability topics.

**2. Lead by Example:** Coaches can set an example by adopting sustainable practices themselves. This can include using reusable water bottles, recycling, and promoting eco-friendly transportation options like carpooling or biking to games and practices.

**3. Collaborate with Facility Managers:** Coaches should establish open lines of communication with facility managers to discuss sustainability goals and initiatives. Regular meetings can be held to discuss strategies, share ideas, and track progress.

**4. Incorporate Sustainability into Training:** Coaches can integrate sustainability into their training programs. For example, they can encourage athletes to turn off lights and equipment when not in use, and emphasize the importance of conserving water during practices and competitions.

**5. Advocate for Sustainable Facility Upgrades:** Coaches can work with facility managers to identify areas where sustainable upgrades can be made, such as installing energy-efficient lighting or water-saving fixtures. They can also advocate for the use of renewable energy sources like solar panels.

**6. Promote Waste Reduction and Recycling:** Coaches can implement recycling programs and encourage athletes and staff to reduce waste by using reusable water bottles, cups, and food containers. They can also collaborate with facility managers to ensure proper waste segregation and disposal.

**7. Involve Athletes in Sustainability Initiatives:** Coaches can empower their athletes to actively participate in sustainability initiatives. This can include organizing volunteer activities like community clean-ups or tree planting, or involving athletes in awareness campaigns.

**8. Recognize and Reward Sustainable Practices:** Coaches can recognize and reward athletes and staff who actively engage in sustainable practices. This can be done through acknowledgment during team meetings, certificates, or other forms of recognition.

**9. Monitor and Evaluate Progress:** Coaches should work closely with facility managers and staff to monitor and evaluate the progress of sustainability initiatives. Regular assessments can help identify areas for improvement and track the overall impact of sustainable practices.

**BY COLLABORATING WITH FACILITY MANAGERS AND STAFF, COACHES CAN CREATE A CULTURE OF SUSTAINABILITY WITHIN SPORTS FACILITIES. THROUGH EDUCATION, LEADERSHIP, AND ACTIVE ENGAGEMENT, COACHES CAN INSPIRE ATHLETES AND CONTRIBUTE TO THE OVERALL SUSTAINABILITY EFFORTS OF THE FACILITY.**

## MODULE 3: SUSTAINABLE TRAINING AND COMPETITION PRACTICES

### 1. GREEN EQUIPMENT AND APPAREL

Coaches have the power to make sustainable choices when it comes to selecting equipment and apparel for their sports teams. Here are some strategies they can implement:

**1. Research Sustainable Brands:** Coaches can conduct research to identify sports equipment and apparel brands that prioritize sustainability. Look for brands that use eco-friendly materials, have ethical manufacturing practices, and take steps to reduce their environmental impact. Look for companies that have certifications like Bluesign, which ensures the use of environmentally friendly materials and responsible manufacturing practices.

## EXAMPLES:

1. **Adidas:** As a leading sportswear company, Adidas has committed to sustainability through initiatives like its "End Plastic Waste" campaign, which focuses on reducing plastic waste in the oceans. They also work on creating products using recycled materials and promoting sustainable manufacturing practices.
2. **Puma:** Puma is known for its "Forever Better" sustainability strategy, which aims to reduce carbon emissions, water usage, and waste throughout its supply chain. They have also launched sustainable product lines, such as shoes made from recycled materials.
3. **Patagonia:** Although not originally an EU company (headquartered in the United States), Patagonia is active in the European market and is highly recognized for its environmental advocacy. The company promotes repair and reuse of its products, donates a percentage of its profits to environmental causes, and encourages responsible consumption.
4. **Decathlon:** This French sports equipment and apparel retailer emphasizes sustainability through its "Eco-Design" approach, focusing on creating products that are durable, repairable, and made with less environmental impact. They also have a program for recycling used sports equipment.
5. **Ecoalf:** A Spanish brand that specializes in sustainable fashion and accessories, Ecoalf collaborates with sports teams to create eco-friendly uniforms and apparel made from recycled materials, such as plastic bottles and discarded fishing nets.
6. **Icebreaker:** While based in New Zealand, Icebreaker operates in the EU market and is renowned for its ethically sourced and sustainable merino wool products. The company places emphasis on transparency and traceability in its supply chain.
7. **Molten:** A Belgian sports equipment manufacturer, Molten has introduced eco-friendly initiatives such as recycling basketballs and reducing plastic usage in its packaging.
8. **Nature & Découvertes:** A French outdoor and adventure sports retailer, Nature & Découvertes focuses on offering eco-friendly and sustainable products for outdoor enthusiasts.
9. **Joola:** A German table tennis equipment company, Joola is known for its efforts to produce eco-friendly table tennis tables and promote sustainable practices in the sport.
10. **Arcteryx:** Although based in Canada, Arcteryx operates extensively in the EU and is recognized for its commitment to sustainable design, ethical sourcing, and minimizing its environmental footprint.

- 2. Consider Equipment Lifespan:** When choosing equipment, coaches can consider the durability and lifespan of the products. Opting for high-quality, long-lasting equipment reduces the need for frequent replacements, which in turn reduces waste.
- 3. Prioritize Recycled and Upcycled Materials:** Look for equipment and apparel made from recycled or upcycled materials. For example, some brands produce sports apparel using recycled plastic bottles or repurposed materials.
- 4. Choose Eco-Friendly Materials:** Coaches can select equipment and apparel made from eco-friendly materials such as organic cotton, bamboo, or hemp. These materials are more sustainable compared to conventional materials like synthetic fabrics.
- 5. Opt for Non-Toxic and Low-Impact Options:** Consider equipment and apparel that are free from harmful chemicals and dyes. Choosing products with low environmental impact reduces the release of pollutants during production and disposal.
- 6. Support Local and Fair Trade:** Coaches can prioritize purchasing equipment and apparel from local manufacturers or fair-trade certified brands. This supports local economies and ensures fair wages and working conditions for workers.
- 7. Encourage Equipment Recycling and Donation:** Coaches can establish programs to recycle or donate equipment that is no longer in use. This reduces waste and provides opportunities for others to benefit from the equipment.
- 8. Reduced Packaging:** Consider brands that minimize packaging waste. Excess packaging contributes to unnecessary waste, so choosing products with minimal or eco-friendly packaging can help reduce environmental impact.
- 9. Longevity and Durability:** Prioritize equipment and apparel that are designed to be durable and long-lasting. Products that withstand wear and tear over time reduce the need for frequent replacements, resulting in less waste.
- 10. Collaborate with Sustainable Suppliers:** Coaches can build relationships with suppliers who share their commitment to sustainability. Seek out suppliers who have sustainability initiatives in place and actively work towards reducing their environmental impact.
- 11. Educate Athletes on Sustainable Choices:** Coaches can educate their athletes on the importance of sustainable equipment and apparel choices. By raising awareness and promoting eco-conscious attitudes, athletes can make informed decisions when purchasing their own sports gear.

**BY MAKING SUSTAINABLE CHOICES IN EQUIPMENT AND APPAREL SELECTION, COACHES CAN CONTRIBUTE TO REDUCING THE ENVIRONMENTAL IMPACT OF THEIR SPORTS TEAMS. ADDITIONALLY, THEY CAN INSPIRE ATHLETES TO ADOPT MORE SUSTAINABLE PRACTICES BOTH ON AND OFF THE FIELD.**



## 2. SUSTAINABLE TRANSPORTATION

Sport coaches can play a vital role in promoting eco-friendly transportation options for athletes and spectators. Here are some strategies they can implement:

**1. Encourage Carpooling:** Coaches can encourage athletes and spectators to carpool to practices, games, and events. They can facilitate communication between team members to organize carpooling schedules and ensure that transportation is shared among multiple individuals.

**2. Provide Public Transportation Information:** Coaches can provide information on public transportation options available to athletes and spectators. This can include sharing schedules, routes, and any discounts or special arrangements for sports events.

**3. Bike-Friendly Initiatives:** Coaches can promote biking as a sustainable transportation option. They can encourage athletes and spectators who live nearby to bike to practices or games. Coaches can also work with facility managers to ensure bike racks or storage areas are available at sports venues.

**4. Walk or Run to Practices:** If feasible, coaches can encourage athletes who live in close proximity to the sports facility to walk or run to practices. This not only promotes eco-friendly transportation but also serves as a warm-up or cool-down exercise.

**5. Arrange Shuttle Services:** For events or competitions held at a location away from the regular sports facility, coaches can coordinate shuttle services to transport athletes and spectators. This can help reduce the number of individual cars on the road.

**6. Promote Remote Viewing Options:** Coaches can explore the possibility of live streaming games or events for spectators who cannot physically attend. By promoting remote viewing options, coaches can reduce the need for long-distance travel and encourage eco-friendly alternatives.

**7. Partner with Local Transportation Providers:** Coaches can establish partnerships with local transportation providers, such as bus companies or rideshare services, to offer discounted or dedicated transportation services for athletes and spectators attending sports events.

**8. Educate on Environmental Impact:** Coaches can educate athletes and spectators about the environmental impact of transportation choices, emphasizing the benefits of choosing eco-friendly options. This can be done through team meetings, announcements, or educational campaigns.

**9. Lead by Example:** Coaches can lead by example and choose eco-friendly transportation options themselves. Demonstrating sustainable practices and sharing personal experiences can inspire athletes and spectators to follow suit.

**BY PROMOTING AND ENCOURAGING ECO-FRIENDLY TRANSPORTATION OPTIONS, COACHES CAN CONTRIBUTE TO REDUCING CARBON EMISSIONS AND PROMOTING SUSTAINABILITY WITHIN THEIR SPORTS PROGRAMS. THEY CAN CREATE A CULTURE OF ENVIRONMENTAL CONSCIOUSNESS AND INSPIRE ATHLETES AND SPECTATORS TO MAKE CONSCIOUS CHOICES FOR TRANSPORTATION.**



### 3. NUTRITION AND SUSTAINABLE FOOD CHOICES

Sport coaches have the opportunity to educate athletes about sustainable food choices, which can have a positive impact on the environment and athletes' overall health. Here are some strategies coaches can implement:

- 1. Provide Nutritional Education:** Coaches can educate athletes about the environmental impact of food choices and the importance of sustainable eating. This can include discussions on the benefits of plant-based diets, locally sourced foods, and reducing food waste.
- 2. Emphasize Whole Foods:** Encourage athletes to consume whole, unprocessed foods that are minimally packaged. These foods are often healthier and have a lower environmental impact compared to heavily processed or packaged alternatives.
- 3. Promote Plant-Based Options:** Educate athletes about the benefits of incorporating more plant-based foods into their diets. Encourage them to include fruits, vegetables, legumes, and whole grains as the foundation of their meals. Discuss the environmental benefits of reducing meat consumption and offer plant-based meal ideas.
- 4. Support Local and Seasonal Foods:** Emphasize the importance of supporting local farmers and reducing the carbon footprint associated with long-distance food transportation. Encourage athletes to choose seasonal fruits and vegetables, as they are often fresher and require fewer resources to produce.
- 5. Reduce Food Waste:** Educate athletes about the impact of food waste on the environment. Encourage them to practice portion control, properly store leftovers, and participate in initiatives such as composting or donating excess food to reduce waste.
- 6. Discuss Sustainable Seafood Choices:** Teach athletes about sustainable seafood options and the importance of avoiding overfished species. Encourage them to choose seafood that is sustainably sourced and certified by organizations.
- 7. Engage in Farm-to-Table Initiatives:** Collaborate with local farms or community-supported agriculture (CSA) programs to provide athletes with access to fresh, locally sourced produce. This can include organizing visits to local farms, supporting farmers' markets, or incorporating farm-to-table initiatives within the team's nutrition plan.
- 8. Invite Guest Speakers:** Organize guest speakers, such as nutritionists, sustainable food experts, or environmental advocates, to educate athletes about sustainable food choices. These experts can provide valuable insights and answer any questions athletes may have.
- 9. Lead by Example:** As a coach, practice what you preach by making sustainable food choices yourself. Share your personal experiences and the positive impact it has had on your health and the environment. Athletes are more likely to adopt sustainable practices when they see their coach leading by example.

**BY EDUCATING ATHLETES ABOUT SUSTAINABLE FOOD CHOICES, COACHES CAN EMPOWER THEM TO MAKE INFORMED DECISIONS THAT ALIGN WITH THEIR VALUES AND CONTRIBUTE TO A HEALTHIER AND MORE SUSTAINABLE FUTURE.**

#### **4. WASTE REDUCTION IN TRAINING AND COMPETITION**

Coaches can implement several strategies to minimize waste during training sessions and competitions. Here are some effective approaches:

- 1. Reusable Water Bottles:** Encourage athletes to bring their own reusable water bottles instead of using single-use plastic bottles. Provide water stations or refill stations to make it convenient for athletes to refill their bottles during breaks.
- 2. Use Reusable Equipment:** Whenever possible, use reusable equipment instead of disposable options. For example, use cloth towels instead of paper towels for cleaning and provide reusable cones or markers instead of disposable ones.
- 3. Limit Paper Usage:** Minimize the use of paper by utilizing digital platforms for communication, like email or team management apps. Instead of printing handouts or schedules, share information electronically.
- 4. Responsible Snack and Meal Planning:** Encourage athletes to bring their own snacks and meals in reusable containers or bags. Avoid individually packaged snacks and opt for bulk options. If providing food during competitions, choose caterers or vendors that prioritize sustainable practices and use eco-friendly packaging.
- 5. Recycling and Waste Separation:** Set up clearly labeled recycling bins and waste separation stations at training sessions and competition venues. Educate athletes on what can be recycled and the importance of proper waste disposal.
- 6. Composting:** If possible, implement a composting system for organic waste generated during training sessions or competitions. This can include food scraps, grass clippings, or other compostable materials.
- 7. Donation or Reuse Programs:** Create a system for donating or reusing equipment that is no longer needed. This can include collecting and redistributing used equipment to other teams or local sports programs, or partnering with organizations that accept donations.
- 8. Sustainable Merchandise:** If selling merchandise like t-shirts or other items, choose sustainable options made from organic or recycled materials. Avoid excess packaging and consider offering incentives for customers who bring their own reusable bags.
- 9. Collaborate with Facilities:** Work with training facilities and competition venues to ensure they have sustainable practices in place, such as recycling programs and energy-efficient systems.
- 10. Educate Athletes:** Continuously educate athletes about the importance of waste reduction and sustainability. Foster a culture of environmental consciousness and encourage athletes to take responsibility for their actions.

**BY IMPLEMENTING THESE STRATEGIES, COACHES CAN SIGNIFICANTLY REDUCE WASTE DURING TRAINING SESSIONS AND COMPETITIONS. THEY CAN ALSO INSTILL ECO-CONSCIOUS HABITS IN ATHLETES, PROMOTING A SUSTAINABLE MINDSET THAT EXTENDS BEYOND THE SPORTS FIELD.**

## **5. SUSTAINABLE EVENT MANAGEMENT**

Sport coaches can incorporate sustainable practices into event planning and management to reduce the environmental impact of sports events. Here are some strategies to consider:

- 1. Venue Selection:** Choose event venues that prioritize sustainability, such as those with LEED certification or eco-friendly practices. Look for venues with energy-efficient systems, waste management programs, and sustainable transportation options nearby.
- 2. Waste Management:** Implement effective waste management practices during events. Set up clearly labeled recycling and composting stations throughout the venue. Minimize the use of single-use items and provide reusable or compostable alternatives for food and beverage service.
- 3. Sustainable Catering:** Collaborate with caterers who prioritize sustainable practices. Choose local and organic food options, minimize food waste, and opt for reusable or compostable dinnerware and utensils. Communicate sustainability expectations to the caterer and encourage them to source ingredients responsibly.
- 4. Energy Efficiency:** Reduce energy consumption during events by using energy-efficient lighting, turning off unnecessary equipment, and utilizing natural light whenever possible. Consider renewable energy sources, such as solar or wind power, for event electricity needs.
- 5. Water Conservation:** Encourage water conservation measures, such as using water-efficient fixtures, promoting hand sanitizer stations instead of excessive handwashing, and monitoring water usage during event setup and cleanup.
- 6. Transportation:** Promote sustainable transportation options for event attendees, such as public transportation, carpooling, or cycling. Provide information on public transportation routes and schedules, and arrange shuttle services from nearby transit hubs.
- 7. Digital Communication:** Minimize paper usage by utilizing digital communication for event promotion, registration, and information sharing. Use email, social media, and event websites to disseminate information instead of printing and distributing paper materials.
- 8. Sponsorship and Partnerships:** Seek out sponsors and partners who align with sustainability goals. Look for companies that prioritize eco-friendly practices and offer sustainable products or services. Collaborate with them to promote sustainability at the event and showcase their commitment to environmental responsibility.

**9. Education and Engagement:** Use the event as an opportunity to educate attendees about sustainability and inspire them to adopt eco-friendly practices. Incorporate signage, information booths, or workshops that highlight sustainable initiatives and provide tips for sustainable living.

**10. Post-Event Evaluation:** Conduct a post-event evaluation to assess the success of sustainability initiatives and identify areas for improvement. Gather feedback from attendees and stakeholders to learn from their experiences and make adjustments for future events.

**BY INCORPORATING SUSTAINABLE PRACTICES INTO EVENT PLANNING AND MANAGEMENT, SPORT COACHES CAN CONTRIBUTE TO REDUCING THE ENVIRONMENTAL IMPACT OF SPORTS EVENTS. THEY CAN ALSO INSPIRE ATHLETES, ATTENDEES, AND OTHER STAKEHOLDERS TO ADOPT MORE SUSTAINABLE BEHAVIORS IN THEIR DAILY LIVES.**

## **6. CASE STUDIES OF SPORTS ORGANIZATIONS IMPLEMENTING SUSTAINABLE TRAINING AND COMPETITION PRACTICES**

**1. Forest Green Rovers (Football/Soccer):** Forest Green Rovers, a professional football club in England, has gained global recognition for its commitment to sustainability. They have adopted numerous eco-friendly practices, including having an entirely vegan menu at their stadium, using solar panels to generate energy, and maintaining an organic pitch without the use of chemicals. They are also working towards becoming the world's first carbon-neutral football club.

**2. Green Sports Alliance:** The Green Sports Alliance is a non-profit organization that works with sports teams, venues, and leagues to promote sustainable practices. They have partnered with various organizations, including the NBA, NHL, and NFL, to implement initiatives like waste reduction, energy efficiency, and water conservation in sports events. They provide resources and guidance to help sports organizations implement sustainable practices.

**3. Formula E (Motorsport):** Formula E is an all-electric racing series that prioritizes sustainability. They use electric cars powered by renewable energy sources, such as wind and solar. They also work towards minimizing the environmental impact of their events by promoting recycling and waste reduction, as well as offsetting carbon emissions.

**4. Dutch Cycling Federation (Cycling, Netherlands):** The Dutch Cycling Federation is dedicated to promoting sustainable practices in cycling. They have implemented initiatives like encouraging cycling as a mode of transportation, promoting bike-sharing programs, and supporting the development of cycling infrastructure. They also prioritize waste reduction and recycling during their cycling events.

**5. AS Roma (Football/Soccer, Italy):** AS Roma, an Italian football club, has implemented sustainable practices in their training and competition operations. They have installed solar panels at their training facility to generate renewable energy. They also promote waste reduction and recycling at their stadium, Stadio Olimpico, and have implemented water-saving technologies.

**6. UEFA (Union of European Football Associations):** UEFA, the governing body for football in Europe, has taken steps towards sustainability in their competitions. They have implemented the UEFA Green 2020 strategy, which aims to minimize the environmental impact of their events. This includes promoting waste reduction, energy efficiency, and responsible water management in their stadiums and operations.

**7. Tokyo 2020 Olympics:** The Tokyo 2020 Olympics made sustainability a central theme of their planning and operations. They aimed to minimize the environmental impact through initiatives like using renewable energy sources, promoting public transportation and cycling, and implementing a comprehensive waste management system. They also incorporated recycled materials in the construction of venues and medals.

**8. SailGP:** SailGP is a global sailing championship that is committed to sustainability. They have implemented measures to reduce their carbon footprint, such as using electric vehicles and biofuels for their support fleet. They also focus on waste reduction, recycling, and engaging fans in sustainability efforts through educational campaigns and events.

**9. Seattle Mariners (MLB):** The Seattle Mariners have taken steps to reduce their environmental impact at their home stadium, T-Mobile Park. They have implemented energy-efficient lighting, water-saving technologies, and a comprehensive recycling and composting program. They also promote sustainable transportation options for fans, including bike parking facilities and discounted public transportation passes.

**THESE EXAMPLES DEMONSTRATE HOW SPORTS ORGANIZATIONS OF VARIOUS SIZES AND DISCIPLINES HAVE SUCCESSFULLY IMPLEMENTED SUSTAINABLE PRACTICES IN THEIR TRAINING AND COMPETITION OPERATIONS. FROM ADOPTING VEGAN MENUS TO REDUCING CARBON EMISSIONS AND PROMOTING WASTE REDUCTION, THESE INITIATIVES HIGHLIGHT THE POTENTIAL FOR SPORTS ORGANIZATIONS TO LEAD THE WAY IN SUSTAINABILITY AND INSPIRE FANS AND ATHLETES ALIKE.**

## **7. ASSESSMENT: SUSTAINABLE TRAINING PRACTICES EVALUATION**

An evaluation tool to assess the sustainability of training and competition practices:

### **1. Energy Efficiency:**

- Are energy-efficient practices implemented, such as using LED lighting, energy-efficient appliances, and optimizing energy consumption?
- Are renewable energy sources, such as solar panels or wind turbines, utilized?
- Are measures in place to reduce energy waste, like turning off lights and equipment when not in use?

## **2. Waste Management:**

- Is there a comprehensive waste management system in place, including recycling, composting, and proper disposal of hazardous materials?
- Are athletes and staff educated on waste reduction practices and encouraged to minimize waste generation?
- Are reusable or compostable alternatives used for food and beverage service?

## **3. Water Conservation:**

- Are water-saving technologies implemented, such as low-flow fixtures and water-efficient irrigation systems?
- Are measures taken to minimize water waste, such as monitoring water usage, fixing leaks promptly, and promoting responsible water use among athletes and staff?

## **4. Sustainable Transportation:**

- Is sustainable transportation encouraged for athletes, staff, and spectators, such as promoting public transportation, carpooling, or cycling?
- Are there facilities for bicycle parking or electric vehicle charging stations?
- Is information provided on sustainable transportation options and incentives offered to encourage their use?

## **5. Responsible Sourcing:**

- Are sustainable and ethically sourced materials used for equipment, uniforms, and merchandise?
- Are food and beverage options sourced locally and/or organically?
- Are partnerships established with suppliers and vendors who prioritize sustainability?

## **6. Environmental Education and Engagement:**

- Are athletes, staff, and spectators educated on sustainable practices and encouraged to adopt them?
- Are educational materials, signage, or workshops provided to promote sustainability during training and competitions?
- Are initiatives in place to engage athletes and fans in sustainability efforts, such as tree planting campaigns or beach cleanups?

## **7. Monitoring and Evaluation:**

- Is there a system in place to monitor and evaluate the sustainability initiatives and their effectiveness?
- Are regular assessments conducted to identify areas for improvement and implement necessary changes?

- Are feedback mechanisms in place to gather input from athletes, staff, and spectators on sustainability practices?

**THIS EVALUATION TOOL CAN BE USED AS A CHECKLIST OR QUESTIONNAIRE TO ASSESS THE SUSTAINABILITY OF TRAINING AND COMPETITION PRACTICES. IT HELPS IDENTIFY STRENGTHS AND AREAS FOR IMPROVEMENT, GUIDING ORGANIZATIONS IN THEIR EFFORTS TO BECOME MORE SUSTAINABLE IN THEIR OPERATIONS.**

## MODULE 4: ENVIRONMENTAL EDUCATION AND AWARENESS

### 1. IMPORTANCE OF ENVIRONMENTAL EDUCATION

Sport coaches should integrate education on environmental responsibility into their training practices for several reasons:

**1. Environmental Impact:** Sports activities can have significant environmental impacts, such as energy consumption, waste generation, and carbon emissions. By educating coaches on environmental responsibility, they become aware of these impacts and can take proactive measures to minimize them. This helps reduce the ecological footprint of sports and contributes to a more sustainable future.

**2. Role Modeling:** Coaches have a unique position of influence over athletes. By integrating education on environmental responsibility into their training practices, coaches can serve as role models and inspire athletes to adopt sustainable behaviors both on and off the field. This not only benefits the environment but also instills a sense of responsibility and stewardship in athletes.

**3. Holistic Development:** Sports coaching is not just about physical skill development; it is also about nurturing well-rounded individuals. By incorporating education on environmental responsibility, coaches contribute to the holistic development of athletes by instilling values of sustainability, empathy for the environment, and a sense of social responsibility.

**4. Health and Well-being:** Environmental responsibility in sports is closely tied to the health and well-being of athletes and the broader community. By educating coaches on sustainable practices, they can create healthier training environments with cleaner air, reduced exposure to harmful substances, and greater emphasis on outdoor activities that connect athletes with nature.

**5. Competitive Advantage:** In today's world, sustainability is becoming increasingly important and valued by individuals, organizations, and sponsors. By integrating education on environmental responsibility, coaches can position their teams and athletes as leaders in sustainability, which can enhance their reputation, attract sponsors, and create a competitive advantage.

**6. Cost Savings:** Many sustainable practices, such as energy efficiency and waste reduction, also result in cost savings. By educating coaches on these practices, they can identify opportunities to reduce operational costs while minimizing the environmental impact of their training practices.



**7. Global Responsibility:** As global citizens, coaches have a responsibility to contribute to a more sustainable future. By integrating education on environmental responsibility, coaches play their part in addressing pressing environmental challenges, such as climate change and resource depletion. This collective effort can have a significant impact on the overall sustainability of the sports industry.

**IN SUMMARY, INTEGRATING EDUCATION ON ENVIRONMENTAL RESPONSIBILITY INTO TRAINING PRACTICES IS ESSENTIAL FOR COACHES TO MINIMIZE THE ENVIRONMENTAL IMPACT OF SPORTS, SERVE AS ROLE MODELS FOR ATHLETES, CONTRIBUTE TO HOLISTIC ATHLETE DEVELOPMENT, PROMOTE HEALTH AND WELL-BEING, GAIN A COMPETITIVE ADVANTAGE, ACHIEVE COST SAVINGS, AND FULFILL THEIR GLOBAL RESPONSIBILITY.**

## 2. EDUCATIONAL WORKSHOPS AND TRAINING SESSIONS

When designing and delivering environmental education sessions for athletes, sport coaches can follow these steps:

### 1. Assess the Needs

- Begin by assessing the knowledge and awareness levels of the athletes regarding environmental responsibility.
- This will help identify knowledge gaps and tailor the education sessions accordingly.

### 2. Set Clear Objectives:

- Determine the specific objectives of the education sessions.
- These could include increasing awareness about environmental issues, promoting sustainable behaviors, or understanding the athlete's role in environmental responsibility.

### 3. Develop Engaging Content:

- Create content that is informative, interactive and engaging.
- Use a variety of teaching methods such as presentations, videos, group discussions, case studies, and hands-on activities to keep athletes actively involved and interested.

### 4. Cover Relevant Topics

- Cover a range of topics related to environmental responsibility, such as energy conservation, waste management, water usage etc.
- Tailor the topics to the specific sport and its associated environmental impacts.

### 5. Relate to Athlete's Experience

- Make the content relatable to athletes by using examples and scenarios from the sports world.
- Show how sustainable practices can directly benefit athletes, such as improving performance, reducing costs, or creating healthier training environments.

### 6. Provide Practical Tips and Strategies

- Offer practical tips and strategies that athletes can implement in their daily lives and training routines to promote environmental responsibility.
- For example, encourage the use of reusable water bottles, recycling, carpooling, or using energy-efficient equipment.

### 7. Encourage Discussion and Questions

- Create an open and safe space for athletes to ask questions and engage in discussions.
- Encourage them to share their own experiences, ideas, and challenges related to environmental responsibility.

### 8. Foster Personal Connection

- Help athletes develop a personal connection to the environment by highlighting the beauty and benefits of nature.
- Encourage them to spend time outdoors, appreciate natural resources, and understand the importance of preserving them.

### 9. Provide Resources and References

- Share additional resources, such as websites, articles, and books, that athletes can explore for further information on environmental responsibility.
- This empowers athletes to continue learning and taking action beyond the education sessions.

### 10. Follow-up and Evaluation

- Follow up with athletes after the education sessions to reinforce key messages and assess the impact of the sessions.
- Gather feedback and evaluate the effectiveness of the education sessions to make improvements for future sessions.

**THE GOAL IS TO MAKE THE EDUCATION SESSIONS ENGAGING, RELEVANT, AND IMPACTFUL. BY DESIGNING AND DELIVERING EFFECTIVE ENVIRONMENTAL EDUCATION SESSIONS, COACHES CAN INSPIRE ATHLETES TO BECOME ACTIVE ADVOCATES FOR ENVIRONMENTAL RESPONSIBILITY IN THEIR SPORTS AND BEYOND.**

### 3. COMMUNICATION AND OUTREACH STRATEGIES

Sport coaches can utilize various communication channels to raise environmental awareness among athletes. Here are some examples:

**1. Team Meetings:** Use regular team meetings as a platform to discuss environmental responsibility. Dedicate a portion of the meeting to sharing information, updates, and tips on sustainable practices. Encourage athletes to ask questions and share their own ideas and experiences related to environmental responsibility.

**2. Email Newsletters:** Send out regular email newsletters to athletes, coaches, and parents, focusing on environmental topics. Provide educational content, highlight success stories, and share upcoming events or initiatives related to environmental responsibility. Include practical tips and resources that athletes can implement in their daily lives.

**3. Social Media:** Utilize social media platforms, such as Facebook, Instagram, or Twitter, to share educational content, raise awareness, and engage with athletes. Post infographics, videos, or articles on sustainable practices and encourage athletes to share their own eco-friendly actions using dedicated hashtags.

**4. Team Websites or Blogs:** Create a dedicated section on the team's website or blog to showcase environmental responsibility. Share articles, interviews, or case studies that highlight the team's commitment to sustainability. Provide resources, links, and recommendations for further reading on environmental topics.

**5. Team Apps:** If your team uses a dedicated communication or management app, utilize it to share information on environmental responsibility. Post updates, reminders, and challenges related to sustainable practices. Encourage athletes to track their progress and engage in discussions within the app.

**6. Workshops and Presentations:** Organize workshops or presentations specifically focused on environmental responsibility. Invite guest speakers, sustainability experts, or athletes engaged in environmental initiatives to deliver talks. Use visuals, interactive activities, and real-life examples to engage athletes and foster discussion.

**7. One-on-One Conversations:** Engage in one-on-one conversations with athletes to discuss environmental responsibility. Use training sessions or individual meetings to address their questions, concerns, or suggestions related to sustainability. This personalized approach allows for a deeper understanding and connection with the athletes.

**8. Partnership with Environmental Organizations:** Collaborate with local environmental organizations or initiatives to raise awareness. Invite representatives to deliver presentations or workshops, participate in community events, or organize joint projects. This partnership can provide access to additional resources and expertise.

**9. Competitions and Challenges:** Organize friendly competitions or challenges that promote sustainable practices. For example, challenge athletes to reduce their carbon footprint, document their eco-friendly actions, or come up with creative ways to recycle or upcycle sports equipment. Offer incentives or rewards to encourage participation.

**10. Parent Engagement:** Involve parents in raising environmental awareness by hosting parent education sessions or including sustainability topics in parent newsletters. Encourage parents to support their children's eco-friendly actions and provide resources for them to implement sustainable practices at home.

**BY UTILIZING VARIOUS COMMUNICATION CHANNELS, SPORT COACHES CAN EFFECTIVELY RAISE ENVIRONMENTAL AWARENESS AMONG ATHLETES. IT IS IMPORTANT TO ADAPT THE COMMUNICATION STRATEGY TO THE PREFERENCES AND NEEDS OF THE ATHLETES AND THEIR FAMILIES, ENSURING THAT THE MESSAGE IS CLEAR, ENGAGING, AND ACTIONABLE.**

#### 4. SOCIAL MEDIA AND MARKETING FOR SUSTAINABILITY

Sport coaches can leverage social media platforms to promote environmental responsibility among athletes in the following ways:

**1. Educational Content:** Share educational content on sustainable practices, environmental issues, and the impact of sports on the environment. Use infographics, videos, or blog posts to provide easily digestible information and tips for athletes to adopt eco-friendly behaviors.

**2. Athlete Spotlights:** Highlight athletes who are actively engaged in environmental responsibility. Share their stories, initiatives, and tips on how they incorporate sustainability into their sporting practices. This promotes role modeling and inspires other athletes to follow suit.

**3. Challenges and Campaigns:** Create challenges or campaigns that encourage athletes to take specific eco-friendly actions and share them on social media using dedicated hashtags. For example, challenge athletes to #SkipTheStraw, #PlasticFreeChallenge, or #GreenTransportationChallenge. Encourage them to tag teammates and friends to participate as well.

**4. Behind-the-Scenes Sustainability:** Showcase the team's commitment to environmental responsibility by sharing behind-the-scenes content. Highlight sustainable practices within the team, such as recycling efforts, energy-efficient facilities, or eco-friendly equipment choices. This gives athletes and followers a glimpse into the team's sustainable efforts.

**5. Collaboration with Environmental Organizations:** Collaborate with local environmental organizations or initiatives and share their content or events on social media. This helps raise awareness about their work and provides athletes with opportunities to get involved in community environmental initiatives.

**6. Interactive Polls and Quizzes:** Engage athletes through interactive polls or quizzes related to environmental responsibility. Ask questions about sustainable practices,

carbon footprints, or eco-friendly choices. This encourages athletes to think critically and learn while interacting with the content.

**7. Athlete-generated Content:** Encourage athletes to share their own eco-friendly actions and initiatives on social media. Create a space where they can showcase their sustainable practices, such as using reusable water bottles, composting, or reducing single-use plastics. Acknowledge and amplify their efforts to inspire others.

**8. Q&A Sessions or Live Videos:** Host live Q&A sessions or video streams on social media platforms to address athletes' questions about environmental responsibility. This allows for real-time interaction and provides an opportunity to have a meaningful dialogue about sustainability.

**9. Partner Spotlights:** Feature partners or sponsors who are committed to environmental responsibility. Highlight their sustainable practices, initiatives, or products that align with the team's values. This promotes the importance of collaboration and showcases the team's commitment to partnering with environmentally conscious organizations.

**10. Engage with Followers:** Respond to comments, messages, or mentions related to environmental responsibility. Engage in conversations with athletes, followers, and parents to provide guidance, answer questions, or share additional resources. This fosters a sense of community and shows that the team values the input and engagement of its followers.

Seattle Seahawks - a professional American football team in the National Football League

The team's "Go Green" initiative is a comprehensive program aimed at reducing the environmental impact of their operations and encouraging their fans to adopt eco-friendly behaviors. Here's how they used social media to promote environmental responsibility:

1. **Content Sharing:** The Seahawks regularly share content on their social media platforms, such as Facebook, Twitter, and Instagram, highlighting their green initiatives. They post photos and videos showing players, staff, and fans participating in environmentally friendly activities, like recycling, clean-up events, and using sustainable transportation.
2. **Educational Campaigns:** The team uses their social media presence to educate their followers about various environmental issues. They share informative posts about energy conservation, water preservation, waste reduction, and more. These posts often include tips on how fans can make a positive impact on the environment.
3. **Partnerships and Collaborations:** The Seahawks collaborate with local environmental organizations, government agencies, and businesses to further promote their green initiatives. They use their social media channels to highlight these partnerships, amplifying the message and expanding their reach.

4. **Fan Engagement:** The Seahawks engage with their fans by encouraging them to share their own eco-friendly practices on social media using specific hashtags related to their "Go Green" campaign. This creates a sense of community and encourages fans to participate in environmental efforts.
5. **Event Promotion:** The team uses social media to promote their annual "Green Game," during which they focus on raising awareness about environmental issues. They share event details, encourage fans to attend, and showcase the sustainable practices they implement during the game.
6. **Behind-the-Scenes Content:** The Seahawks offer glimpses into their sustainability efforts behind the scenes. They share posts about the eco-friendly features of their stadium, such as solar panels and composting programs.
7. **Interactive Content:** To engage their audience, the team uses interactive content like polls, quizzes, and challenges related to environmental responsibility. This encourages fans to learn more and take action.

**BY LEVERAGING SOCIAL MEDIA PLATFORMS EFFECTIVELY, SPORT COACHES CAN RAISE AWARENESS ABOUT ENVIRONMENTAL RESPONSIBILITY, INSPIRE ATHLETES TO ADOPT SUSTAINABLE PRACTICES, AND ENGAGE FOLLOWERS IN MEANINGFUL CONVERSATIONS ABOUT SUSTAINABILITY. IT IS IMPORTANT TO CONSISTENTLY SHARE RELEVANT AND ENGAGING CONTENT WHILE ENCOURAGING ACTIVE PARTICIPATION FROM ATHLETES AND FOLLOWERS.**

## **5. COLLABORATION WITH STAKEHOLDERS**

Sport coaches can build partnerships with local environmental organizations, collaborate with sponsors and suppliers to promote sustainable products, and engage with the local community to create a positive environmental impact in the following ways:

1. **Local Environmental Organizations:** Reach out to local environmental organizations and establish partnerships or collaborations. Work together to develop initiatives, events, or campaigns that promote environmental responsibility within the sports community. This could include joint workshops, clean-up drives, or educational programs.
2. **Sponsor and Supplier Collaboration:** Engage with sponsors and suppliers who share a commitment to sustainability. Collaborate with them to promote and use sustainable products and services. For example, work with a sponsor who provides eco-friendly uniforms or partner with a supplier who offers environmentally friendly equipment options.
3. **Sustainable Sponsorships:** Seek out sponsorships from companies or organizations that have strong environmental values and initiatives. Align the team or athlete's brand with sponsors who prioritize sustainability. This not only promotes environmental responsibility but also creates a positive image for the team and its sponsors.



**4. Community Engagement:** Engage with the local community to create a positive environmental impact. Organize community events such as tree-planting drives, beach or park clean-ups, or educational workshops for community members. Involve athletes and their families in these initiatives to promote a sense of shared responsibility.

**5. Environmental Awareness Campaigns:** Launch environmental awareness campaigns in collaboration with sponsors, suppliers, and local environmental organizations. Use social media, traditional media, and community events to raise awareness about environmental issues and promote sustainable practices. Encourage athletes and community members to actively participate in these campaigns.

**6. Eco-Friendly Facilities and Operations:** Work with facility managers and administrators to implement sustainable practices within sports facilities. This could include energy-efficient lighting, recycling programs, water conservation measures, or sustainable transportation options. Showcase these initiatives to athletes, sponsors, and the local community as examples of the team's commitment to environmental responsibility.

**7. Educational Workshops and Presentations:** Collaborate with local environmental organizations or experts to conduct educational workshops or presentations for athletes, coaches, parents, and the local community. Cover topics such as sustainable practices, environmental conservation, and the impact of sports on the environment. These workshops can inspire and empower individuals to make positive changes in their own lives.

**8. Volunteer Opportunities:** Encourage athletes, coaches, and team staff to volunteer for local environmental initiatives. This could involve participating in community clean-ups, assisting with environmental education programs, or supporting environmental events. By actively participating in such initiatives, the team can make a tangible impact and contribute to the local community.

**9. Fundraising for Environmental Causes:** Organize fundraising events or campaigns to support local environmental causes or organizations. This not only raises funds but also raises awareness about the importance of environmental responsibility. Engage athletes, parents, and the local community in these fundraising efforts.

**10. Collaborative Projects:** Initiate collaborative projects with schools, clubs, or other sports teams in the local community to promote environmental responsibility. This could include joint initiatives like recycling programs, sharing best practices, or organizing community events that focus on environmental conservation.

**BY BUILDING PARTNERSHIPS WITH LOCAL ENVIRONMENTAL ORGANIZATIONS, COLLABORATING WITH SPONSORS AND SUPPLIERS, AND ENGAGING WITH THE LOCAL COMMUNITY, SPORT COACHES CAN CREATE A POSITIVE ENVIRONMENTAL IMPACT AND INSPIRE ATHLETES AND THE WIDER COMMUNITY TO EMBRACE SUSTAINABILITY. THESE EFFORTS CONTRIBUTE TO A MORE ENVIRONMENTALLY CONSCIOUS SPORTS CULTURE AND FOSTER A SENSE OF RESPONSIBILITY TOWARDS THE PLANET.**



## 6. CASE STUDIES OF SPORTS ORGANIZATIONS IMPLEMENTING EFFECTIVE ENVIRONMENTAL EDUCATION AND AWARENESS INITIATIVES

Here are some examples of sports organizations implementing effective environmental education and awareness initiatives in the EU and worldwide:

**1. UEFA (Union of European Football Associations):** UEFA has launched several sustainability initiatives, including the UEFA Foundation for Children, which promotes environmental awareness and education among young football players. They also implemented the UEFA Green Guide, which provides guidelines for sustainable stadium design and operations.

**2. International Olympic Committee (IOC):** The IOC has implemented various environmental initiatives, such as the Olympic Movement's Agenda 21, which focuses on sustainable development and environmental responsibility. They also launched the Olympic Forest Project, which supports reforestation efforts in different regions.

**3. World Surf League (WSL):** The WSL has a sustainability program called "Pure." This initiative aims to reduce the organization's environmental footprint and raise awareness about ocean conservation among surfers and fans. They also organize beach clean-ups and promote sustainable practices at their events.

**4. Formula E:** Formula E is an all-electric racing series dedicated to promoting sustainable mobility and raising awareness about climate change. They actively engage with fans through their "Race Against Climate Change" campaign, which encourages individuals to take action and reduce their carbon footprint.

**5. Green Sports Alliance:** The Green Sports Alliance is a global organization that works with sports teams, leagues, and venues to promote sustainability and environmental responsibility. They provide resources, best practices, and support to help sports organizations implement sustainable initiatives.

**6. NBA Green:** The National Basketball Association (NBA) has a comprehensive environmental program called NBA Green. This initiative focuses on reducing the league's carbon footprint, promoting recycling and waste reduction, and educating fans about environmental responsibility through campaigns and events.

**7. SailGP:** SailGP is a global sailing championship that prioritizes sustainability. They have partnered with organizations like 11th Hour Racing to implement sustainable practices, promote ocean conservation, and raise awareness about the impact of plastic pollution.

**8. World Wildlife Fund (WWF) and International Cricket Council (ICC):** The WWF and ICC have collaborated on the "Cricket for Good" initiative, which aims to raise awareness about environmental issues, promote sustainability in cricket, and engage fans in conservation efforts.

**9. Green Sports Switzerland:** Green Sports Switzerland is an organization that promotes sustainability in Swiss sports. They work with sports organizations, venues,

and athletes to implement sustainable initiatives and raise awareness about environmental responsibility.

**10. Olympic Games Tokyo 2020:** The Tokyo 2020 Olympic Games implemented several sustainability initiatives, including using renewable energy, promoting recycling and waste reduction, and incorporating sustainable materials in their infrastructure. They also launched educational programs to raise awareness about environmental issues among athletes and visitors.

**THESE EXAMPLES DEMONSTRATE THE COMMITMENT OF SPORTS ORGANIZATIONS TO ENVIRONMENTAL EDUCATION AND AWARENESS, SHOWCASING INITIATIVES THAT PROMOTE SUSTAINABLE PRACTICES, ENGAGE FANS AND ATHLETES, AND CONTRIBUTE TO A MORE ENVIRONMENTALLY CONSCIOUS SPORTS CULTURE.**

## **7. ASSESSMENT: ENVIRONMENTAL EDUCATION AND AWARENESS EVALUATION**

### **1. Goal Alignment:**

- Are the goals and objectives of the environmental education and awareness program clearly defined and aligned with the organization's overall sustainability objectives?
- Are the goals specific, measurable, attainable, relevant, and time-bound (SMART)?

### **2. Program Content and Delivery:**

- Is the program content relevant, accurate, and up-to-date?
- Are the materials and resources used engaging and accessible to the target audience?
- Is the program delivered in an interactive and participatory manner?
- Are different learning styles and preferences considered in the program delivery?

### **3. Participant Engagement:**

- Are participants actively engaged in the program activities and discussions?
- Are participants demonstrating an understanding of the environmental issues and concepts being taught?
- Are participants able to apply the knowledge and skills gained from the program in their daily lives?

### **4. Behavior Change:**

- Are participants adopting sustainable behaviors and practices as a result of the program?
- Are participants able to articulate the reasons behind their behavior change and the impact it has on the environment?
- Are participants able to influence others and spread awareness about environmental responsibility?

## **5. Stakeholder Feedback:**

- Are athletes, parents, and other stakeholders providing positive feedback about the program?
- Are stakeholders able to identify specific changes or improvements resulting from the program?
- Are stakeholders satisfied with the program's content, delivery, and overall effectiveness?

## **6. Monitoring and Evaluation:**

- Is there a system in place to monitor and track the progress of the program?
- Are regular evaluations conducted to assess the effectiveness of the program?
- Are adjustments made to the program based on the feedback and evaluation results?

## **7. Sustainability Integration:**

- Is the environmental education and awareness program integrated into the overall organizational culture and practices?
- Are there mechanisms in place to ensure the long-term sustainability and continuity of the program?

## **8. Collaboration and Partnerships:**

- Are there collaborations with local environmental organizations, sponsors, or other stakeholders to enhance the program's impact?
- Are partnerships leveraged to access additional resources, expertise, or funding for the program?

## **9. Communication and Outreach:**

- Is there a communication plan in place to promote the program and engage the wider community?
- Are there measurable outcomes related to the reach and impact of the program's communication efforts?

## **10. Continuous Improvement:**

- Is there a process for gathering feedback and suggestions for program improvement?
- Are adjustments made to the program based on lessons learned and emerging best practices in environmental education and awareness?

**THIS EVALUATION TOOL CAN BE USED TO ASSESS THE EFFECTIVENESS OF ENVIRONMENTAL EDUCATION AND AWARENESS PROGRAMS IMPLEMENTED BY SPORT COACHES. IT COVERS VARIOUS ASPECTS, INCLUDING GOAL ALIGNMENT, PROGRAM CONTENT AND DELIVERY, PARTICIPANT ENGAGEMENT, BEHAVIOR CHANGE, STAKEHOLDER FEEDBACK, MONITORING AND EVALUATION, SUSTAINABILITY INTEGRATION, COLLABORATION AND PARTNERSHIPS, COMMUNICATION AND OUTREACH, AND CONTINUOUS IMPROVEMENT.**

## 8. INTEGRATION INTO COACHING PRACTICES

- 1. Incorporate environmental themes into team discussions:** Start conversations with athletes about environmental issues and their impact on sports, such as climate change's effect on playing conditions or the importance of protecting natural resources for future generations.
- 2. Use relevant examples during training:** When providing instructions or feedback during training sessions, use examples that highlight the importance of sustainability and environmental responsibility. For instance, discuss the benefits of energy-efficient movements or the impact of waste reduction on the environment.
- 3. Organize eco-friendly challenges:** Create challenges or competitions that encourage athletes to adopt sustainable practices. For example, challenge them to reduce their water consumption during training sessions or to use reusable water bottles instead of single-use plastic bottles.
- 4. Promote responsible waste management:** Teach athletes about proper waste management and recycling practices. Provide recycling bins at training facilities and encourage athletes to actively participate in recycling efforts by disposing of waste correctly.
- 5. Encourage eco-friendly transportation:** Promote environmentally friendly transportation options such as carpooling, cycling, or public transportation to training sessions and competitions. Highlight the positive impact of reducing carbon emissions and traffic congestion.
- 6. Engage athletes in environmental projects:** Involve athletes in environmental projects within the community, such as tree planting, beach clean-ups, or habitat restoration. This hands-on experience will deepen their understanding of environmental issues and the importance of conservation.
- 7. Showcase sustainable equipment and products:** Introduce athletes to sustainable equipment options or eco-friendly sports products. Explain the benefits of using these products, such as reducing carbon emissions or supporting ethical manufacturing practices.
- 8. Explore nature-based training sessions:** Take advantage of nearby natural spaces for training sessions whenever possible. Exposing athletes to the natural environment can foster a deeper appreciation for nature and encourage a sense of environmental stewardship.
- 9. Collaborate with local environmental organizations:** Partner with local environmental organizations to provide educational workshops or guest speakers during coaching sessions. This collaboration can offer athletes valuable insights and perspectives on environmental issues.
- 10. Lead by example:** Coaches should model sustainable behaviors and practices in their own actions, such as using reusable water bottles, minimizing paper waste, or

conserving energy. Athletes are more likely to adopt sustainable habits when they see their coaches leading by example.

**BY INTEGRATING ENVIRONMENTAL EDUCATION INTO COACHING SESSIONS, COACHES CAN RAISE AWARENESS, INSPIRE ATHLETES TO BECOME ENVIRONMENTALLY RESPONSIBLE, AND CONTRIBUTE TO A MORE SUSTAINABLE SPORTS CULTURE.**

## MODULE 5: MONITORING, EVALUATION, AND CONTINUOUS IMPROVEMENT

### 1. ESTABLISHING PERFORMANCE INDICATORS

When identifying key performance indicators (KPIs) for environmental responsibility in sports and setting benchmarks and targets, coaches can consider the following:

**1. Carbon footprint reduction:** Measure and track the carbon emissions associated with team activities, such as travel, facility energy usage, and equipment production. Set targets to reduce carbon emissions over a specific time period, aiming for a smaller carbon footprint.

**2. Waste reduction:** Monitor the amount of waste generated during training sessions, competitions, and events. Establish targets to reduce waste through recycling, composting, and implementing waste reduction strategies like using reusable water bottles and minimizing single-use plastics.

**3. Water conservation:** Measure water usage during training sessions and competitions, including showers, irrigation, and equipment cleaning. Set benchmarks to reduce water consumption by implementing water-saving practices and promoting awareness among athletes.

**4. Energy efficiency:** Track energy consumption in training facilities, including lighting, heating, and cooling systems. Set targets to improve energy efficiency by implementing energy-saving technologies, utilizing natural light, and promoting energy-conscious behaviors.

**5. Sustainable transportation:** Monitor the team's transportation practices, including travel to competitions and training sessions. Set goals to reduce carbon emissions by encouraging carpooling, using public transportation, or transitioning to electric vehicles.

**6. Environmental education and awareness:** Assess the level of environmental knowledge and awareness among athletes and track their progress over time. Set targets to improve environmental literacy through educational initiatives, workshops, and regular communication about sustainability practices.

**7. Biodiversity preservation:** Evaluate the team's impact on local ecosystems and biodiversity. Set goals to support conservation efforts, such as preserving natural habitats, minimizing disturbances during outdoor training sessions, and participating in restoration projects.

**8. Community engagement:** Measure the team's involvement in environmental initiatives within the community. Set benchmarks to increase participation in

environmental projects, such as volunteering for environmental organizations, organizing community clean-ups, or promoting environmental awareness campaigns.

**9. Sustainable purchasing:** Assess the team's procurement practices, including sports equipment, uniforms, and supplies. Set targets to prioritize sustainable and eco-friendly products, such as those made from recycled materials or produced using ethical manufacturing practices.

**10. Reporting and transparency:** Establish a system for regular reporting and communication of environmental performance. Set targets to improve transparency by sharing progress, achievements, and challenges with stakeholders, athletes, and the wider sports community.

**BY IDENTIFYING THESE KEY PERFORMANCE INDICATORS AND SETTING BENCHMARKS AND TARGETS, COACHES CAN GUIDE THEIR TEAMS TOWARDS GREATER ENVIRONMENTAL RESPONSIBILITY IN SPORTS. REGULAR MONITORING AND EVALUATION OF THESE METRICS WILL HELP TRACK PROGRESS, IDENTIFY AREAS FOR IMPROVEMENT, AND FOSTER A CULTURE OF SUSTAINABILITY WITHIN THE TEAM.**

## **2. CONDUCTING ENVIRONMENTAL AUDITS**

Conducting environmental audits in sports organizations involves a systematic assessment of the organization's environmental impact and performance. Here is a step-by-step process for conducting environmental audits:

**1. Establish the scope and objectives:** Define the scope of the environmental audit, including the specific areas and activities to be assessed. Set clear objectives, such as identifying environmental risks, evaluating compliance with regulations, or improving sustainability practices.

**2. Assemble a team:** Form a team of individuals who have expertise in environmental management, sustainability, and auditing. This team can include internal staff, external consultants, or a combination of both.

**3. Gather information:** Collect relevant data and information about the organization's environmental aspects and impacts. This may include energy consumption, water usage, waste generation, carbon emissions, chemical usage, and compliance with environmental regulations.

**4. Identify legal and regulatory requirements:** Determine the applicable environmental laws, regulations, and standards that the organization must comply with. This can include local, regional, and national regulations, as well as industry-specific guidelines.

**5. Conduct site visits and inspections:** Visit the organization's facilities and assess the environmental practices and conditions on-site. This may involve inspecting waste management systems, energy usage, water conservation measures, and the overall environmental performance.

**6. Evaluate environmental management systems:** Review the organization's environmental policies, procedures, and management systems. Assess the

effectiveness of these systems in addressing environmental risks, promoting sustainability, and ensuring compliance.

**7. Analyze data and identify areas for improvement:** Analyze the collected data and information to identify areas where the organization can improve its environmental performance. This may involve identifying inefficiencies, areas of excessive resource consumption, or non-compliance with environmental regulations.

**8. Develop recommendations and action plans:** Based on the findings of the audit, develop actionable recommendations for improving environmental performance. These recommendations should be specific, measurable, achievable, relevant, and time-bound (SMART). Create action plans with clear steps, responsibilities, and timelines for implementation.

**9. Communicate the findings:** Prepare a comprehensive report summarizing the audit findings, including strengths, weaknesses, opportunities, and recommended actions. Present the report to key stakeholders, such as management, staff, and relevant departments.

**10. Implement and monitor improvements:** Execute the action plans and monitor the progress of the recommended improvements. Regularly track and evaluate the organization's environmental performance, ensuring that the necessary changes are implemented and sustained over time.

**CONDUCTING ENVIRONMENTAL AUDITS SHOULD BE AN ONGOING PROCESS, REGULARLY REPEATED TO ASSESS PROGRESS AND IDENTIFY NEW AREAS FOR IMPROVEMENT. BY CONDUCTING AUDITS, SPORTS ORGANIZATIONS CAN ENHANCE THEIR ENVIRONMENTAL PERFORMANCE, REDUCE THEIR ECOLOGICAL FOOTPRINT, AND DEMONSTRATE THEIR COMMITMENT TO SUSTAINABILITY.**



An orange geometric graphic consisting of several overlapping triangles and polygons, creating a dynamic, abstract shape in the top left corner of the page.

Sports hold a unique place in our society – they inspire, unite, and captivate us like few other things can. Yet, this powerful platform comes with a responsibility that extends far beyond the final whistle. Environmental responsibility in sport isn't just a trend or a buzzword; it's a moral imperative and an urgent necessity. It's also an opportunity to showcase leadership and innovation. From incorporating renewable energy sources in stadiums to creating zero-waste events, the sports industry can serve as a model for sustainable practices.

The most profound reason for embracing environmental responsibility in sports is the lesson it imparts about our interconnectedness. Just as a team must work together to achieve victory, humanity must collaborate to protect our planet. Sports show us that success is sweeter when shared, losses are easier to bear when faced together, and challenges are surmountable through unity.

By applying this lesson to our environmental efforts, we can overcome the greatest challenge of our time – climate change.

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### **Disclaimer**

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