

TEACHING SPORT & CLIMATE

A RESOURCE FOR SPORT MANAGEMENT PROFESSORS

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the
**SPORT
ECOLOGY**
group





EXECUTIVE SUMMARY

Given the nascent status of sport ecology as a subdomain of sport management, the development of sport ecology teaching materials is critical to the growth of the field. The Sport Ecology Group (SEG) is aware of our unique position in this space to be a leader in the creation of teaching tools that will proliferate awareness of this subject area and render its topics more accessible to the sport management community.

In light of recent conversations among academics in the sport community about the importance of addressing social issues in the classroom, The Sport Ecology Group has prepared this teaching guide for discussing climate change in sport management coursework.

This teaching guide is intended to accompany the slide deck "Ten Things You Should Know About Sport & Climate", available on The Sport Ecology Group's website

This teaching guide and accompanying slide deck were produced as a collaboration between SEG members. Its official publication date, Friday, September 27th, 2019, was selected to reflect the SEG's solidarity with the Fridays for Future campaign and the climate strikes led by students around the world.

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1. THE CLIMATE IS CHANGING

The climate is dynamic; always changing. However, the scientific community has reached > 98% consensus (IPCC, 2018) that the rate of change is faster now than ever before, due to human activity.

1.1 Talking points

- Climate is the average weather usually calculated over a 30-year time period for a particular region and time period. It is determined by patterns of temperature, precipitation (rain or snow), humidity, wind and seasons
- Typically, climate change is measured by average global surface temperature changes.
- The climate has always changed, albeit slowly. What's different now, is the climate is changing quickly.
- When humans consume resources and burn fossil fuels (e.g. carbon dioxide) into the atmosphere, we produce greenhouse gases (GHGs). GHGs are like little burning coals, constantly radiating heat in the atmosphere, and absorbing heat from the sun and reflected heat from the Earth. As GHGs collect in the atmosphere, the planet's typical cooling systems are compromised. Essentially, GHGs act as an insulation blanket on the planet, where heat can come in (from the sun, from burning products on the planet) but can't escape. Over time, this process causes the overall temperatures to rise.
- So, when people argue 'the climate has always been changing', they're right. That's just not the whole picture.
- Not every area of the world will be affected by climate change the same way

1.2 Discussion questions

- Have you witnessed any effects of climate change in your day-to-day life? Have you witnessed any impacts of climate change on other people's lives?
- Where do you get your information on climate change? How do you know this information is credible?
- When was the first time you learned about climate change? How did you feel when you learned about it? What did you do about those feelings?

1.3 Additional resources & materials

Earth Minute Videos by NASA

Bill Nye explains climate change (4:33)

Climate Change Impacts - Info sheet by the National Oceanic and Atmospheric Association

Tiny Spark Podcast: The you-sized hole in the environmental movement - an interview with Mary Annaise Heglar (National Resources Defense Council & Action Fund) & Alicia Steiger (Stanford Law School)

Climate change: six positive news stories you probably missed in 2018 (The Conversation)

Solastalgia in the Anthropocene (a video by Oxford University students)

1.4 Note on mental health

Solastalgia (commonly known as climate anxiety or environmental anxiety) is the mental and emotional distress caused by environmental change. This condition has been observed and diagnosed in students. Conversations about climate change may bring up some negative emotions, and feelings of being overwhelmed. One strategy for managing this possibility is to ensure positive, achievable action items are presented to students, such that the problem becomes understandable and the solutions, achievable.

2. SPORT IS IMPACTED BY CLIMATE CHANGE

- Storms and hurricanes are damaging facilities, low-snow winters are causing ski events to get canceled, incidence of heat stroke is going up, surfers are riding over plastic.
- Not all sport organizations and athletes are affected by climate change the same way. This is called climate vulnerability.

2.1 Talking points

- Many sports are dependent on particular climate conditions. For example skiing depends on snow, sailing requires wind, golf needs a green.
- As a result, when the conditions of the environment change (e.g. flooding, increased or prolonged heat, shortened seasons, harsher storms), sport organizations are impacted.
- Increasingly, sport organizations are turning to artificial surfaces and spaces for sport. This allows for more control of the space, and the sport experience. Nonetheless, many sport venues and facilities remain outdoors.

2.2 Discussion questions

- Are any sport organizations truly immune from the impacts of climate change?
 - Encourage students to consider direct impacts (i.e. storms causing facility damage, fewer opening days, heat stroke, etc.) and indirect impacts (i.e. a stressed economy, challenges for competing organizations, travel problems for away games)
- Have you ever been in a situation where a sporting event has been canceled, delayed, or altered (e.g. different policies, timing, etc.) based on environmental conditions?
 - Encourage students to consider storm delays in football and baseball, skiing in slushy conditions, running events having extra water stations, rowing events being canceled due to high water levels, etc.

2.3 Additional resources & materials

Climate Champions Podcast - Episode 2 (Dr. Daniel Scott)

Orr, M. & Inoue, Y. (2019). Sport vs. climate: Introducing the climate vulnerability of sport organizations framework. *Sport Management Review*, 22(4), 452-463.

Bruce, I. (2009). *On Thin Ice: Winter Sports and Climate Change*. David Suzuki Foundation.

Taylor, L. (2019, August 12). Cancelled races, fainting players: How climate change is affecting sport. World Economic Forum

Climate Change and Sport - an overview by Climate Nexus

Canada's outdoor rinks are melting: So is a way of life by John Schwartz (March 12, 2018)

3. SPORT IS CONTRIBUTING TO CLIMATE CHANGE

- Sport organizations produce extraordinary amounts of waste, consume resources heavily, and promote consumption culture.
- Sport participants and fans also have a carbon footprint.
- Sport is closely tied to tourism, transport, manufacturing, and other high-impact industries.

3.1 Talking points

- All human activity has a footprint. Sport is no different.
- Watching sport on television, attending a sport event, purchasing sporting goods or merchandise, participating in sport- these all have an environmental footprint.
- Measuring the impact of sport on the environment is difficult as there is no agreement on what should be counted, and what shouldn't.

3.2 Discussion questions

- Many industry leaders agree climate change is a problem and change should be made with haste. However, most are reluctant to make those changes in their own organization, citing the demands of their job, the expectations of fans, or fears of compromising the sport experience. How far should organizations go to be more sustainable? How high a priority should this be?

3.3 Additional resources & materials

Will the Olympics' green makeover have lasting effects? By Dr. Warren Mabee (Queen's University) (The Conversation)

How sport is killing the planet by George Monbiot (The Guardian)

Big sports events have big environmental footprints. Could social licenses to operate help? By Dr. Gina S. Warren (Houston Law Center) (Forbes)

How bad is football for the environment? By Tom Usher (VICE)



4. SPORT HAS A TREMENDOUS OPPORTUNITY TO INFORM AND INSPIRE

- Sport has an unparalleled social platform
- People of all cultures, languages, religions, political affiliations, follow and participate in sport
- Sport enjoys daily global media attention
- Sport brands can influence fan behaviors

4.1 Talking points

- Sport participation and fandom transcends political, religious, linguistic, and cultural barriers
- Sport has widespread daily media attention: it's the only industry that has a daily section of the newspaper dedicated solely to its coverage
- There are entire media brands associated with sport, specifically. For example, Sports Illustrated, ESPN, Bleacher Report, CBS Sports, The Athletic, etc.
- More people follow sport than politics on a daily basis.

4.2 Discussion questions

- Should the sport sector use its social platform to engage the public on issues such as climate change, because of its size and influence? Or should the sport sector stay out of these conversations?
- Is sport different from other industries in its capacity to influence consumers, or the same?

4.3 Additional resources & materials

Climate Champions Podcast - Episode 03 (Lew Blaustein)

Sustainability and sports: A winning behavior change combination? By Oliver Balch (The Guardian)

5. SPORT IS BEGINNING TO CHANGE (FOR THE BETTER)

- Many organizations have adopted certain sustainable practices (e.g. building new facilities to LEED standards, moving toward zero-waste, low-flow faucets, sensor-activated lighting, LED lights, etc.)
- Some organizations have started educating fans about climate change.

5.1 Talking points

- Nowadays, it is rare for new sport facilities to be built in North America and not seek LEED certification.
- Each year, the number of organizations implementing facility updates and upgrades to be more sustainable, is growing.
- Typically, sport organizations address one or two of the following impact areas at a time: waste, energy, water, procurement, transport.
- Often, the stated goal is to move toward carbon neutrality. However, this shift is happening slowly (more on this in point 6).
- Some important key terms:
 - Zero-waste: diverting more than 90%* of waste from the landfill. This requires composting food scraps and biodegradable materials, recycling and upcycling where possible, and reducing the overall amount of waste. (*Zero-waste does not actually mean zero waste goes to landfill, it means less than 10% of overall waste.)
 - LEED: the Leadership in Energy and Environmental Design is a program run by the United States Green Building Council that promotes sustainable construction and building maintenance principles. It is run on a points system.
 - Carbon neutral: a status of an entity (a person, an organization, a nation) where the amount of carbon emitted by the entity is matched by equal carbon offsets or carbon savings elsewhere in the world.

5.2 Discussion questions

- Have you noticed any sustainable practices in sport facilities you frequent? Think of your school sport and recreation facilities. Is there recycling? Is there LED lighting? Does the facility make use of daylight? Is the facility near a bus stop? Is there bicycle parking?
- If you had to make one recommendation for how your favorite sport organization could be more environmentally sustainable, what would you suggest?
- What might be some benefits of adopting sustainable practices?

5.3 Additional resources & materials

United States Green Building Council website

Climate Champions Podcast - Episode 4 (Dave Newport)

Greening Sports through Sustainable Materials Management (Environmental Protection Agency)

Playing for our planet: How sports win from being sustainable - A report by the Green Sports Alliance

6. MORE CHANGE IS NEEDED

- Being sustainable means more than just recycling and turning off the lights.
- We must be wary of token initiatives, and greenwashing.
- Systemic change is necessary.



6.1 Talking points

- To date, most sustainability initiatives in the sport sector are facility management and resource management oriented. This is what Lew Blaustein, lead author of Green Sports Blog, calls 'Green Sport 1.0'.
- Moving forward, greater efforts are needed in fan engagement (i.e. educating fans about climate change, encouraging fans to adopt sustainable behaviors) and environmental externalities (i.e. addressing the environmental impacts of sponsors and partner organizations, minimizing the impacts associated with sport travel). This would be 'Green Sport 2.0'
- Greenwashing refers to the intersection of two firm behaviors: poor environmental performance and positive communication about environmental performance (Delmas & Burbano, 2011). This practice is common in sport. In other words: sport organizations regularly overstate their environmental performance.

6.2 Discussion questions

- Why do you think organizations over-exaggerate their sustainability efforts?
- What would you consider 'enough' with regard to sustainability in sport?
- How can sport organizations educate their fans about sustainability and climate change?

6.3 Additional resources & materials

Casper, J. M., McCullough, B. P., & Pfahl, M.E. (2019). Examining environmental fan engagement initiatives through values and norms with intercollegiate sport fans. *Sport Management Review*

What is circular economy? An infographic by the Ellen MacArthur Foundation

Fifa accused of greenwashing in World Cup carbon offset scheme by Chloé Farand (Climate Home News)

7. SUSTAINABLE CHANGE IN ORGANIZATIONS REQUIRES A FULL COURT PRESS

- Management must buy-in
- Employees must buy-in
- Volunteers must buy-in
- External stakeholders must buy-in

7.1 Talking points

- It can be difficult to effect change without support from decision makers in an organization since they have the power to make changes.
- Yet, the most important stakeholders are (often) going to be your “champions” and highly engaged individuals and organizations rather than your most important decision-makers.
- Make sustainability part of your entire organization’s mission and operation. Invite everyone to have a seat at the table on this topic and collaborate.
- You do not need to know everything or be able to provide, produce, or service every aspect of environmental sustainability. This is where sponsors and other key stakeholders can come in and lighten the collective load. Play to everyone’s strengths. Look to competitors and peers to see how they are successfully (or unsuccessfully) integrating environmental sustainability.
- Start the buy-in process with simple, easy-to-grasp, non-resource-intensive changes to organizational procedures, and then work your way up to the larger projects that require capital and funding.
- Remember that employees, volunteers, and fans may have different motivations to engage. You need to learn what those motivations, desires, and needs are for each stakeholder group. When people do not want to buy-in, it may be for a variety of reasons. Quite often that is due to a lack of knowledge on the topic.

7.2 Discussion questions

- What are some resources that sport organizations and sport stakeholders can access related to environmental sustainability?
- What are some of the tangible and intangible benefits that environmentally sustainable practices offer for sport organizations?
- Are there risks or drawbacks as well?
- What are the motivations that each stakeholder groups might have to “go green?”
- What are some simple, easy-to-grasp, non-resource intensive changes to organizational procedures a sport organization could make as they take their first step towards going green?

7.3 Additional resources & materials

5 Ways to Create a Culture of Sustainability in Any Company

Ross, W. J., Leokpey, B., & Mercado, H. U. (2018 - online). Governance of Olympic environmental stakeholders. *Journal of Global Sport Management*.

How to Motivate People Toward Sustainability by Maya Fischhoff (Network for Business Sustainability)

8. ATHLETES ARE GOOD ADVOCATES

- Athletes (especially outdoor athletes) experience the effects of climate change on a daily basis (hotter weather, less snow, plastic in the ocean, eroded trails and playing surfaces).
- Mohammed Ali (civil rights), Billie Jean King (women's sport, pay equity), USWNT (pay equity) have shown sport can spark conversations.

8.1 Talking points

- Athletes are typically well-respected, highly visible members of society.
- There are many examples of athletes who have used their platform as public figures to elevate and advance public awareness of social issues. Examples include Mohammed Ali, Billie Jean King, the USWNT, Colin Kaepernick, and more.
- Currently, there are several athletes advocating for the planet and the climate crisis. Examples include Daniel Yule (Swiss professional skier), Ovie Mughelli (former NFL), Joey McColm (NASCAR driver), Hannah Mills (Team GB sailing), Malcolm Brogdon (Milwaukee Bucks).
- Athletes of outdoor sports often bear witness to environmental changes, which makes them apt advocates for natural environments.
- There are a couple of organizations whose missions are to educate and train athletes in climate advocacy: Protect our Winters, EcoAthletes

8.2 Discussion questions

- Do athletes have a responsibility to use their platform for good?
- How does social media change the scope of influence an athlete might have?
- What knowledge do athletes need to advocate effectively for the climate?
- What tools or avenues can athletes leverage to educate the public about climate change?

8.3 Additional resources & materials

Climate Champions Podcast - Episode 07 (Ovie Mughelli)

Olympic champion Hannah Mills speaks up for climate

Sport4Climate Athlete's Pledge

9. SEVERAL INDUSTRY ASSOCIATIONS AND NON-PROFIT ORGANIZATIONS ARE WORKING ON THIS PROBLEM

- Sport and Sustainability International
- Protect our Winters
- Green Sports Alliance
- Sport Environment Alliance
- EcoAthletes
- UN Climate Action Group

9.1 Talking points

- Many organizations have in-house sustainability officers, so increasingly, working in sport sustainability is a viable career option.
- Other organizations have hired external consultants (e.g. New York Yankees hired climatologist Allen Hershkowitz to advise on climate-related challenges and sustainability initiatives; many organizations consult the Council for Responsible Sport or LEED points-based systems to guide their efforts).
- Industry associations have emerged in all parts of the world to guide sustainability efforts in the sport sector (e.g. Green Sports Alliance in North America, Sport and Sustainability International in Europe, BASIS in the UK, Sport Environment Alliance in Australia, etc.)

9.2 Discussion questions

- What are the benefits of joining an industry association dedicated to the natural environment?
- How do these organizations inspire and inform the sport sector to act on climate change?
- If you had to host an industry conference on climate change, what would you name your conference? What topics would be covered?

9.3 Additional resources & materials

Climate Champions Podcast - Episode 01 (Green Sports Alliance)

Sport for Climate Action - UN Climate Change

Protect our Winters website

Sport and Sustainability International website

10. YOU MUST BE PART OF THE SOLUTION

- Learn about the climate crisis.
- Calculate your carbon footprint and consider ways to reduce it.
- Advocate for the planet at school, at work, at sport events, in the streets, at the polls, and in your community.



10.1 Talking points

- The countries with the highest carbon emissions per capita are: the USA, Canada, South Korea, Russia.
- Change will not look the same for everybody. A single parent with four kids might need a car to get everybody to school on time. But, that person could start composting and recycling at home, and switch to all LED lighting. For businesspeople who travel frequently for work, it may be unrealistic to cut out flying altogether, but perhaps those people can purchase carbon offsets, or take trains.
- It's ok to not be perfect about sustainability right away. The goal is to improve, and to commit to perpetual improvement.

10.2 Discussion questions

- Using the '99 ways for university students to be more environmentally sustainable' checklist, consider which options may be most achievable for you in the short term, and in the long term.
- According to the Yale Climate Opinions Map, most Americans want to talk about climate change. What is holding back these conversations?
 - How can you broach this conversation with your friends or family?
 - How willing are you to change your behavior for climate change?

10.3 Additional resources & materials

99 ways for students to be more environmentally sustainable (next page)

99 ways for students to be more environmentally sustainable

There is an unfortunate and inaccurate perception that sustainable behaviors are expensive, and difficult to implement. The Sport Ecology Group is resolved that it is indeed possible for all sport fans, participants, and industry members to adopt sustainable behaviors, and do their part for the planet. As the future leaders of the sport sector, we believe this commitment starts with university students.



To assist with your transition to more sustainable living, we've compiled a list of sustainable behaviors for students. As a bonus, those with a star (*) will also save you money!

1. Repurpose plastic containers
2. Repurpose glass jars
3. Return wine and beer bottles
4. Limit use of hot water* by keeping showers short
5. Use cloths instead of paper towel*
6. Use LED lightbulbs instead of incandescent bulbs*
7. Put on extra layers instead of turning on the heat*
8. Shut the blinds and turn on a fan in the room you're using, instead of turning on the A/C*
9. Open the windows to let in fresh air
10. Turn the lights off when you leave the room*
11. Turn the lights off when daylight is sufficient*
12. Unplug chargers, lights, and appliances when not in use*
13. Purchase recycled toilet paper
14. Plan your meals carefully, follow instructions for portion sizes
15. Decide what you want before opening the refrigerator door
16. Compost food scraps wherever possible
17. Use recycled containers to store food, instead of plastic bags.
18. Choose beeswax or parchment paper instead of plastic wrap

19. Freeze extra food for later (make sure it's tightly wrapped or in a container)
20. Reduce how often you run the dishwasher*
21. Reduce how often you run the washing machine*
22. Wash clothing in cold water*
23. Hang-dry your clothes instead of using the dryer*
24. If using the dryer, use dryer balls (much better than dryer sheets!)
25. Choose natural cleaning agents, ditch the chemical cleaning agents
26. Pay all your bills electronically
27. Unsubscribe to all junk mail
28. Donate any housewares you no longer use
29. Buy second-hand housewares and furniture where possible
30. Purchase only enough groceries for the next few days, so nothing goes bad
31. Skip the plastic bags, choose paper bags or reusable bags*
32. Buy more produce than meats and cheeses*
33. Shop at the bulk food store for dry foods, spices, baking materials, when possible*
34. Shop at the farmer's market for produce, when possible
35. Shop local
36. Combine multiple errands into one trip
37. Order your food online, for delivery (this is like the public transit of grocery shopping: one car on the road, going to-and-from the grocery store, instead of many)
38. Host clothing exchanges with friends*
39. Buy second-hand clothing*
40. Donate used clothing to second-hand shops
41. Repurpose any non-recyclable clothing into rags
42. Buy fewer items of good quality clothing, rather than multiple items of cheaply made clothing (remember: durable is sustainable!)
43. Learn how to identify sustainable materials
44. Shop from sustainable brands
45. Shop from women-owned and minority-owned brands

46. When possible, walk
47. When walking is too far, cycle
48. Subscribe to bike-sharing programs if you don't own a bicycle
49. If a bus or light rail is available, take public transit
50. If taking a car is necessary, car pool
51. If flying is necessary, purchase the carbon offsets
52. When flying, take your own trash off the flight (airlines typically don't recycle or compost; you can!)
53. When planning a trip, consider visiting nearby destinations instead of far-away places
54. At hotels, if possible, share rooms
55. At hotels, reuse towels
56. At hotels, opt to not have your room cleaned each day
57. Use a digital calendar, rather than paper
58. Print fewer readings; do them online
59. Check the library before buying books
60. Purchase e-books instead of print books
61. Sell your used books
62. Use fewer notebooks
63. Only purchase school supplies made from recycled materials
64. Be conscientious of your screen time; if you don't need it, put it in 'sleep mode' so it stops consuming energy
65. Close the extra tabs on your web browser; especially those that will automatically upload, download, stream, or update content
66. Turn the brightness down on your laptop or phone
67. Conserve energy by turning the wifi off on your device when not in use
68. Build in enough time between classes to walk to your next class
69. Bring your own coffee
70. Bring your own water bottle
71. Ask your professor whether the lights in the classroom are necessary, or if daylight will suffice
72. Join a sustainability-oriented club. If none exist, start one.
73. Take a sustainability-oriented course. If none exists, ask the librarian for reading material.
74. Learn about the sustainability measures being implemented by your university.

75. Choose sustainable transport to get to your gym, pool, field, etc.
76. Purchase sports drink powder in bulk, rather than individual bottles or sachets*
77. Keep your post-workout shower short
78. Use your neighbourhood and nearby sport facilities, rather than traveling far*
79. Stay on the trails and designated sporting spaces, leave all spaces as clean (or cleaner) than you found them
80. Bring recycling bags and composting bags to your tailgate
81. Do not drive to sporting events; take public transit
82. Get your tickets digitally
83. Skip the straws at the concessions
84. Choose snacks that don't come in plastic wrapping
85. Ask the staff at sport stadiums what sustainability measures are in place, then tell a friend
86. If viewing from home, watch the game with friends, instead of having multiple people watching on multiple devices
87. Call your government representatives to voice your concern about climate change
88. Attend demonstrations and marches
89. Participate in community clean-ups, park clean-ups
90. Participate in tree planting initiatives
91. Participate in a community garden; if none exist in your area, start one
92. Volunteer for an environmental NGO
93. Challenge your employers to be more sustainable
94. Vote in every election for which you are eligible
95. Use environmentally-friendly search engines
96. Talk to your friends and family about climate change, and what you're doing about it
97. Share this list with friends and family
98. Hold your loved ones accountable for their environmental footprints
99. Commit to consistent improvement.