

THIS IS **WHY**
GOLF

30.06.23

DIG DEEP

**SUSTAINABILITY
IN GOLF**

DIG DEEP

- 🎯 **DIG DEEP PROVIDES QUARTERLY, AUTHORISED, FACTUAL AND INSIGHT-DRIVEN PAPERS FOCUSING ON SPECIFIC SUBJECT AREAS PERTINENT TO 'WHY GOLF'.**
- 🎯 **WE DIG DEEPER – TAKING A CLOSER LOOK AT THE CONVERSATION, AND THE MOST CURRENT RESEARCH PERSPECTIVES, ON RELEVANT TOPICS OF THE TIME-SUCH AS DEI, HEALTH & WELLNESS AND SUSTAINABILITY.**



DIG DEEP



NEXT UP, WE'RE DISCUSSING THE ROLE OF ENVIRONMENTAL SUSTAINABILITY IN GOLF.



THROUGHOUT THIS REPORT, WE WILL EXPLORE THE RELATIONSHIP BETWEEN SUSTAINABILITY AND GOLF, WHERE THE SPORT IS MAKING STRIDES TO BECOME MORE ENVIRONMENTALLY FRIENDLY AND THE FUTURE OUTLOOK.



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OVERVIEW:

GOLF & SUSTAINABILITY



SUSTAINABILITY AND GOLF HAVE FOREVER HAD A SYMBIOTIC RELATIONSHIP, WITH THE SPORT BEING NESTLED AMIDST NATURAL SURROUNDINGS AND RECOGNISING ITS PROFOUND ENVIRONMENTAL IMPACT.



SUZANN PETTERSEN

SUSTAINABLE GOLF CHAMPION



Golf is a global sport connected to people and landscapes around the world – affected by and affecting climate change.



SWINGING IN HARMONY

THE INSEPARABLE LINK BETWEEN GOLF AND SUSTAINABILITY

‘A GLOBAL SPORT – WITH MILLIONS OF FOLLOWERS – SET IN NATURE AND WITH DEEP COMMUNITY ROOTS, GOLF CAN STEP FORWARD AS A LEADER FOR SUSTAINABILITY AND CLIMATE ACTION.’ – *GEO FOUNDATION FOR SUSTAINABLE GOLF*

SUSTAINABILITY IN GOLF HAS BECOME AN INCREASINGLY IMPORTANT TOPIC IN RECENT YEARS AS THE SPORT RECOGNISES ITS ENVIRONMENTAL IMPACT AND THE REQUIREMENT FOR MORE RESPONSIBLE PRACTICES.

EMBRACING THE GREEN

- 🎯 **BY EMBRACING SUSTAINABILITY, GOLF NOT ONLY ENHANCES THE PLAYING EXPERIENCE BUT ALSO BECOMES A CATALYST FOR POSITIVE ENVIRONMENTAL CHANGE.**
- 🎯 **THE FOLLOWING PRACTICES DEMONSTRATE HOW THE SPORT CAN COEXIST HARMONIOUSLY WITH NATURE, LEAVING A LASTING LEGACY FOR FUTURE GENERATIONS TO ENJOY.**



SUSTAINABLE PRACTICES ON THE FAIRWAYS

- © Critics have long since argued that golf is harsh on the environment due to the use of fertilisers, herbicides and excess water needed to maintain the course, as well as the impact of golf events.
- © **Yet, in recent years, those managing golf courses have started to embrace sustainability practices and explore and implement innovative solutions to minimise their environmental impact and preserve natural resources.**

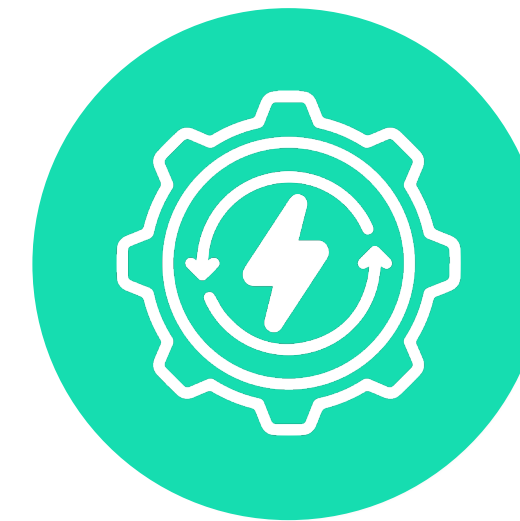
THE GOLF INDUSTRY'S ENVIRONMENTAL IMPACT CAN BE CATEGORISED INTO 7 KEY AREAS



**WATER
CONSERVATION**



**WASTE
MANAGEMENT**



**ENERGY
EFFICIENCY**



**BIODIVERSITY
AND HABITAT
CONSERVATION**



**COMMUNITY AND
EDUCATION**



**GREEN
CERTIFICATIONS**



**TECHNOLOGICAL
INNOVATIONS**

WATER CONSERVATION

- ③ **TRADITIONALLY, GOLF COURSES REQUIRE SUBSTANTIAL AMOUNTS OF WATER FOR IRRIGATION. HOWEVER, MANY COURSES ARE NOW IMPLEMENTING WATER CONSERVATION MEASURES SUCH AS USING DROUGHT-TOLERANT GRASSES, RECYCLING TREATED WASTEWATER AND OPTIMISING IRRIGATION METHODS.**

The **Costa Del Sol** is a European leader in sustainable practices, with over **45 golf courses** in the region **using recycled water** for irrigation.

SOURCE: ANDALUCÍA GOLF, 2022

WASTE MANAGEMENT

- ③ **GOLF COURSES ARE WORKING ON IMPROVING WASTE MANAGEMENT PRACTICES BY PROMOTING RECYCLING, REDUCING SINGLE-USE PLASTICS, AND IMPLEMENTING COMPOSTING PROGRAMS.**
- ③ **GOLF EVENTS ARE ALSO INCREASINGLY EMPHASING THE IMPORTANCE OF WASTE MANAGEMENT, SHINING A SPOTLIGHT ON RESPONSIBLE PRACTICES.**
- ③ **OVER THE LAST TEN YEARS, THE WASTE MANAGEMENT GOLF TOURNAMENT SUCCESSFULLY DIVERTED 100% OF TOURNAMENT WASTE THROUGH SUCH MEANS. TO DATE, THE EVENT HAS UPCYCLED 36 BILLION WATER BOTTLES THROUGH REPREEVE.**

SOURCE: WASTE MANAGEMENT, 2022

ENERGY EFFICIENCY

- ③ GOLF COURSES ARE EXPLORING WAYS TO IMPROVE ENERGY EFFICIENCY BY IMPLEMENTING RENEWABLE ENERGY SOURCES, SUCH AS SOLAR PANELS, TO POWER FACILITIES AND REDUCE RELIANCE ON NON-RENEWABLE ENERGY.
- ③ ADDITIONALLY, ENERGY-EFFICIENT LIGHTING AND EQUIPMENT, AS WELL AS SUSTAINABLE BUILDING DESIGN, ARE BEING INCORPORATED INTO COURSE INFRASTRUCTURE.
- ③ A RECENT STUDY REVEALED THAT BY CHANGING TO ELECTRIC GOLF CARTS, NOT ONLY DID A COURSE SAVE \$15,000 A YEAR IN OPERATING COSTS, BUT THEY ALSO EMITTED 90% LESS CARBON MONOXIDE THAN GAS-POWERED CARTS.

SOURCE: EPA

BIODIVERSITY AND HABITAT CONSERVATION

- ③ **GOLF COURSES ARE RECOGNIZING THE IMPORTANCE OF PRESERVING AND ENHANCING BIODIVERSITY AND NATURAL HABITATS.**

This involves creating wildlife corridors, protecting native plant and animal species, and restoring natural ecosystems within the golf course environment.

- ③ **THE OPEN VENUE, ROYAL ST GEORGE'S, IS HOME TO OVER 98% OF ALL LIZARD ORCHIDS THAT CAN BE FOUND AT ROYAL ST GEORGE'S, FACILITATING THEIR SPREAD OUT INTO THE IMMEDIATE COUNTRYSIDE.**

SOURCE: THE R&A

COMMUNITY AND EDUCATION

- ③ **SUSTAINABILITY IN GOLF EXTENDS BEYOND THE COURSE ITSELF. MANY GOLF COURSES ARE ACTIVELY ENGAGING WITH LOCAL COMMUNITIES, PROMOTING ENVIRONMENTAL EDUCATION PROGRAMS, AND SUPPORTING SOCIAL INITIATIVES.**
- ③ **THE GEO FOUNDATION RECENTLY INTRODUCED SUSTAINABILITY SCORECARDS CONTAINING 18 TIPS AND ALLOWING GOLFERS TO TRACK THEIR PROGRESS WITH TASKS SUCH AS PARTICIPATING IN COMMUNITY INITIATIVES AND AVOIDING SINGLE-USE OF PLASTIC.**

SOURCE: GEO, 2022

GREEN CERTIFICATION

- ① **GOLF COURSES ARE INCREASINGLY ACTIVELY PURSUING GREEN CERTIFICATIONS, SUCH AS AUDUBON INTERNATIONAL'S CERTIFIED SANCTUARY PROGRAM OR THE GOLF ENVIRONMENT ORGANIZATION'S (GEO) ONCOURSE® PROGRAM.**
- ① **THESE CERTIFICATIONS PROVIDE A FRAMEWORK FOR GOLF COURSES TO ASSESS AND IMPROVE THEIR ENVIRONMENTAL PERFORMANCE WHILE DEMONSTRATING THEIR COMMITMENT TO SUSTAINABILITY.**

TECHNOLOGICAL INNOVATIONS

- 🎯 New technological innovations offer exciting opportunities to further sustainable practices in golf. Ranging from the use of [drones to satellite imagery](#), various modernisations allow golf courses to [better manage their use of resources](#) and track ecological indicators.
- 🎯 Furthermore, advancements in [data-driven analytics and artificial intelligence](#) can aid in identifying further improvements in the sport relating to the environment.



UTILISING PROVEN JDLINK™ TECHNOLOGY FROM JOHN DEERE'S AGRICULTURE DIVISION IN TANDEM WITH THE INTEGRATION OF CLOUD-BASED MANAGEMENT SOFTWARE AND ELECTRIFIED MACHINES, COURSE OWNERS AND MANAGERS WILL HAVE THE POWER TO CREATE A MORE EFFICIENT AND SUSTAINABLE FUTURE.

SOURCE: THE GOLF BUSINESS



**ENVIRONMENTAL AND SOCIAL
STEWARDSHIP HAS ALWAYS
BEEN CLOSE TO THE HEART OF
GOLF. GREAT GOLF RESPECTS
ITS SURROUNDINGS AND
HONOURS THE NATURAL
ENVIRONMENT.”**

INTERNATIONAL GOLF FEDERATION ON ETHICS IN GOLF

ECO- CONSCIOUS GOLFERS



**WITH OVER 283 MILLION GOLF FANS
ACROSS THE WORLD, EQUALLING 11% OF
THE POPULATION, GOLF CAN LEAD THE
CHARGE AGAINST GLOBAL WARMING AND
BRING ABOUT MEANINGFUL CHANGE.**

SOURCE: GWI, 2022

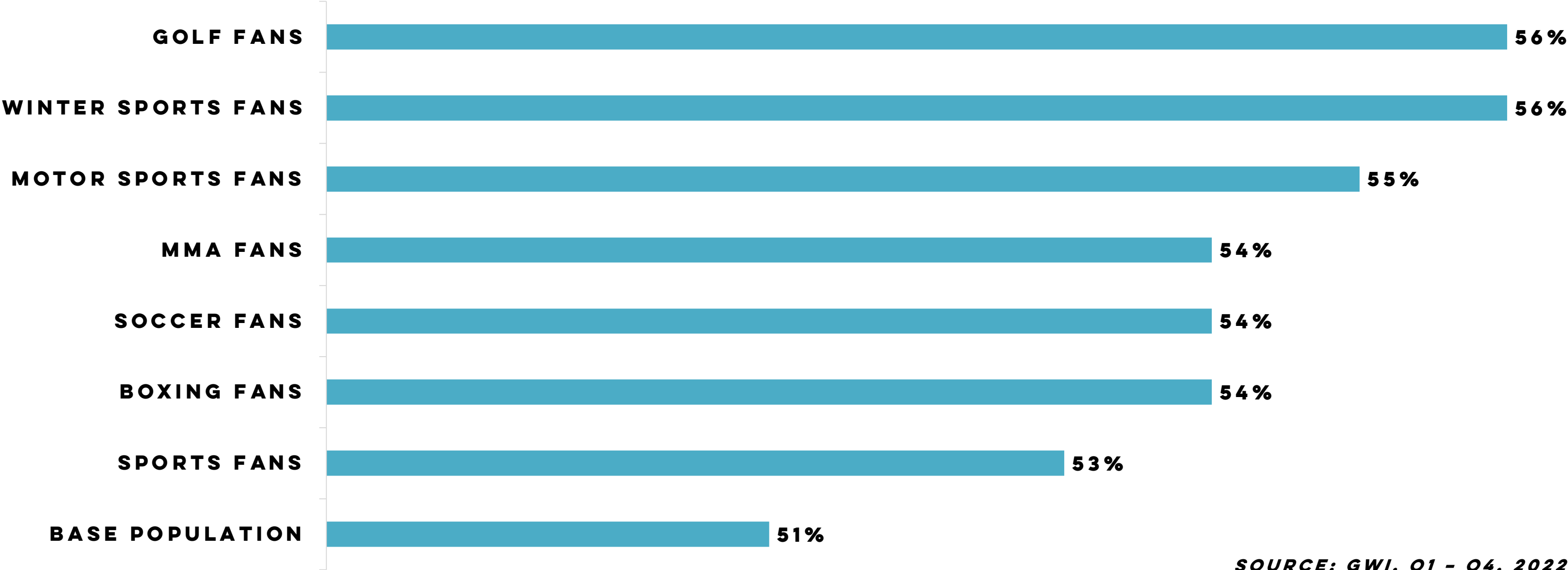


GOLF FANS ARE CONSIDERED AN ENVIRONMENTALLY FRIENDLY AUDIENCE

- 🎯 56% OF GOLF FANS WOULD PAY MORE FOR AN ECO-FRIENDLY PRODUCT.
- 🎯 80% OF GOLF FANS WOULD PAY MORE FOR TECHNOLOGY IF IT'S MORE ENERGY EFFICIENT.
- 🎯 41% OF GOLF FANS WANT BRANDS TO BE ECO-FRIENDLY.
- 🎯 52% OF GOLF FANS ALWAYS TRY TO RECYCLE, COMPARED TO 47% OF GENERAL SPORTS FANS.
- 🎯 50% OF GOLF FANS SAY THAT HELPING THE ENVIRONMENT IS IMPORTANT TO THEM, COMPARED TO 45% OF THE BASE POPULATION.

Source: GWI, Q1-Q4, 2022

% OF THE POPULATION WHO WOULD PAY MORE FOR AN ECO-FRIENDLY PRODUCT



SOURCE: GWI, Q1 - Q4, 2022



**GOLF HAS HUGE POTENTIAL TO BE A
SUSTAINABILITY LEADER. GOLF
COURSES FEATURE RICH
BIODIVERSITY, WHICH MAKES THEM
RICH ECOSYSTEM SANCTUARIES.”**

CAMILLE CHEVALIER, LET PROFESSIONAL

INITIATIVES TO IMPROVE THE GAME

- 🎯 **THE GOLFING COMMUNITY HAS TAKEN MAJOR STRIDES TOWARDS ADOPTING SUSTAINABLE INITIATIVES AND PRACTICES.**
- 🎯 **FROM MAJOR TOURNAMENTS TO GOVERNING BODIES, SIGNIFICANT EFFORTS HAVE BEEN MADE TO HARMONISE THE SPORT WITH THE ENVIRONMENT AND CREATE A MORE SUSTAINABLE FUTURE.**



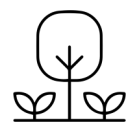
THE R&A



Since the introduction of [Golf Course 2030](#) ten years ago, over [£1 million](#) has been awarded to [international research](#) projects by The R&A.



Its aim is to help organisations [manage the impact of climate change and prepare for future regulations](#) that could impact the golf industry.



Through [The initiative](#), The R&A are working collaboratively with Natural Resources Institute Finland (LUKE) to [support biodiversity in golf courses](#).



GOLF COURSE 2030 IS HELPING TO DEVELOP NEW APPROACHES TO GOLF'S MOST DIFFICULT SUSTAINABILITY CHALLENGES AND WE ARE FOCUSED ON THE NEED FOR PRACTICAL OUTPUTS DELIVERED IN AN ENGAGING WAY FOR THE INDUSTRY TO USE.

Arlette Anderson, Director of Sustainable Golf

THE R&A



THE USGA



In the next **15 years**, the organisation has committed over **\$30 million to address issues** commonly faced by golf courses such as reducing water usage economically and managing natural resources **through technology**.

Additionally, initiatives include:

- Launch a 'water resilience playbook' for the golf industry
- Promote and support emerging research practices
- Help facilitate the implementation of new strategies that may contain barriers to entry



THE USGA IS READY TO NOT ONLY CONTRIBUTE OUR VOICE, BUT ALSO OUR RESOURCES AND EXPERTISE, TO HELP OUR GOLF COURSE PARTNERS AND ENSURE GOLF'S FUTURE.

Mike Whan, CEO of the USGA

THE OPEN



The 150th Open at St Andrew's introduced the Open Water Initiative presented by MasterCard, which included nearly **50 on-site water refill points**, as well as donating sales of all reusable bottles purchased by spectators.



Donations went to The Priceless Planet Coalition to plant more than **20,000 trees for vital reforestation projects globally**.



Powered by Temporary EV charging units, **Mercedes-Benz Electric Vehicles** are used to transport players and personnel.



65-70% of all produce is sourced within 150 miles of St Andrews, as well as only using RSPCA-assured meat and eggs.



THE OPEN IS A MAJOR GLOBAL SPORTING EVENT AND WITH THE SUPPORT OF OUR PATRONS AND DELIVERY PARTNERS, WE ARE CONTINUALLY STRIVING TO DO MORE TO PLAY OUR PART IN PROTECTING THE FUTURE OF OUR PLANET.

Arlette Anderson, Director of Sustainable Golf

THE OPEN, 2022

THE OPEN

The Open Water initiative is turning the tide on ocean pollution.

The Open is leading the way in eliminating single-use plastic water bottles by working with Bluewater and utilising their innovative SuperiorOsmosis™ technology to provide free purified, chilled local water during the Championship.

IMG

SUSTAINABLE GOLF WEEK

DRIVING THE GREEN



Hosted by GEO Foundation for Sustainable Golf and its partners, Sustainable Golf Week **aims to drive the green agenda forward** and ignite conversations.



It serves as a vital catalyst, encouraging the industry to push boundaries and **explore innovative ways to minimise the environmental footprint** of the sport.

GEO FOUNDATION FOR
SUSTAINABLE GOLF

Jonathan Smith, Executive Director of GEO Foundation for Sustainable Golf



**SUSTAINABLE GOLF WEEK PROVIDES
AN OPPORTUNITY FOR PEOPLE
ACROSS THE SPORT TO CONNECT
AROUND A COMMON PURPOSE - TO
MAKE SURE THAT GOLF BECOMES
ESTABLISHED AS A CREDIBLE
GLOBAL LEADER IN SUSTAINABILITY
AND CLIMATE ACTION.**

AUDUBON INTERNATIONAL'S



COOPERATIVE SANCTUARY PROGRAM



Audubon International is an award-winning education and certification program that **assesses courses to see how environmentally friendly they are**, specifically in providing needed habitats for insects and birds.



The program has already accredited around **2,000 golf courses** across 34 countries, a **38% increase** in golf courses signing up over the last decade.



**YOUNGER FAMILIES THESE DAYS
WANT TO BE ASSURED THAT
THEY ARE BRINGING THEIR
FAMILIES TO A GOLF COURSE OR
RESORT THAT IS IMPLEMENTING
SUSTAINABLE PRACTICES**

Frank LaVardera, Audubon International Director of Environmental Programs for Golf.

THE HERO DUBAI DESERT CLASSIC



80% of the area between the 11th and 15th holes is powered by solar panels.



In a matter of days, over 5 tonnes of glass is recycled.



The tournament diverted over 120,000 single-use plastic bottles from landfill.



100% USE OF B20 biodiesel throughout the event.



The vinyl from the hospitality stands is used to create other items.



THE HERO DUBAI DESERT CLASSIC ENVIRONMENTAL INITIATIVES BEING IMPLEMENTED WILL HELP US DELIVER A MORE SUSTAINABLE TOURNAMENT, WORKING IN LINE WITH INITIATIVES LIKE DUBAI'S CLEAN ENERGY STRATEGY 2050 TO MITIGATE CLIMATE BREAKDOWN.

Simon Corkill, Executive Tournament Director



DUBAI DESERT CLASSIC, 2023



HONDA LPGA



Paper usage at the event was significantly **reduced using e-tickets**, rather than physical printouts.



Vinyl that otherwise would have been thrown away was **repurposed into deck chairs and bins** to be used for future events.



An adidas **water refill station** was strategically placed in the fan village to encourage spectators to bring their own water.



Carbon footprint monitoring took place during the event to measure and limit its impact.



WE WILL JOIN FORCES WITH SPONSORS AND PARTNERS TO BUILD A COMPREHENSIVE SUSTAINABILITY PLAN, AIMING TO ACHIEVE THE BEST SOLUTIONS AND TOURNAMENT INITIATIVES IN SUSTAINABILITY.

Winnie Heng, VP & Managing Director, IMG Thailand



WASTE MANAGEMENT PHOENIX OPEN



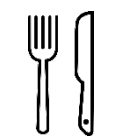
At least 90% of waste generated during the event is diverted from landfills



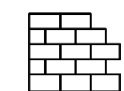
100% renewable energy



368m gallons of water restored since 2015



4,060 lbs of unused food donated to local non-profits

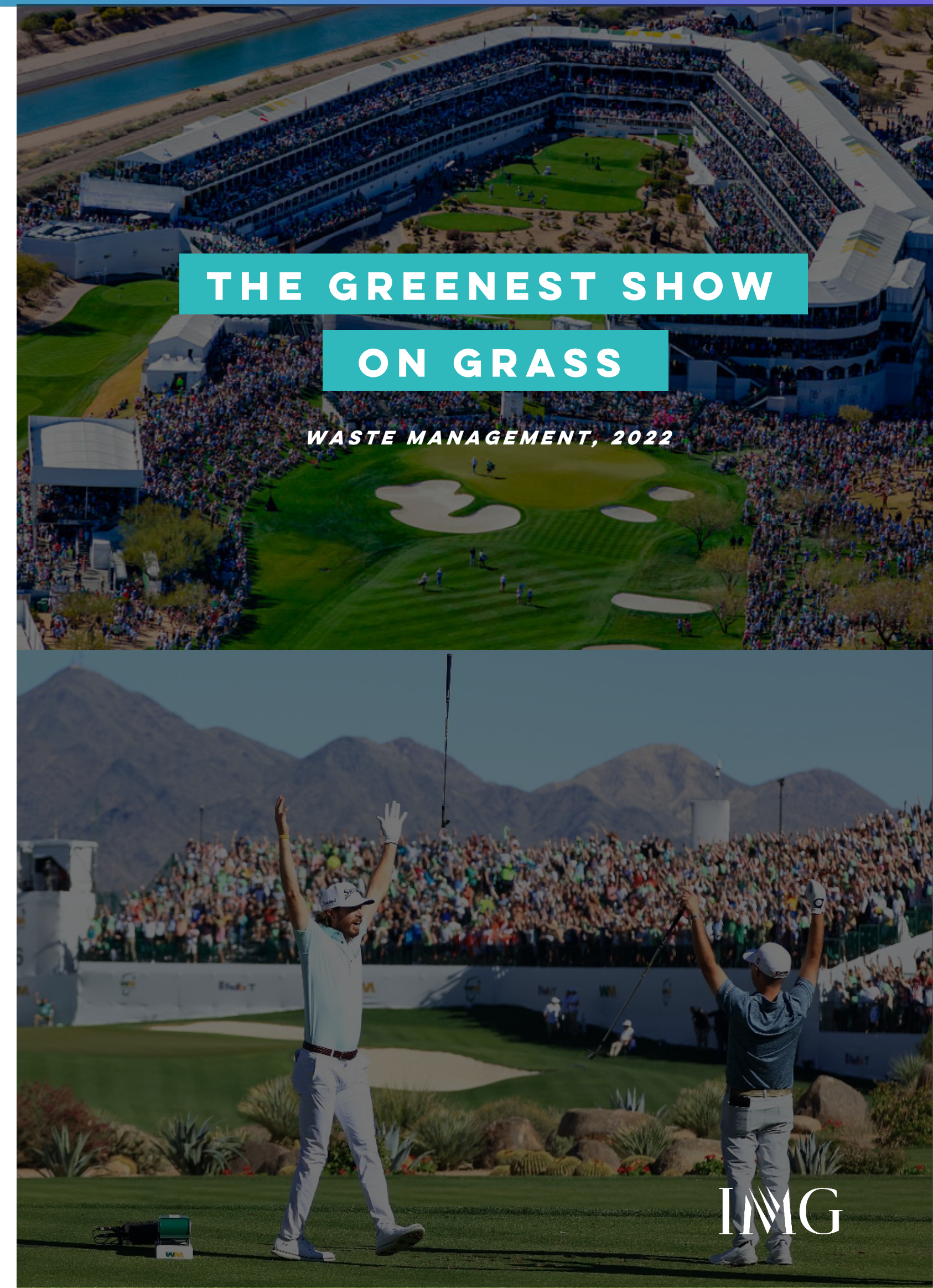


5.6 tons of building materials donated to local organizations

THE GREENEST SHOW

ON GRASS

WASTE MANAGEMENT, 2022



WOMEN'S SCOTTISH OPEN

THE GEO CERTIFICATION WAS AWARDED TO THE 2022 WOMEN'S SCOTTISH OPEN, MARKING THE FIRST TIME THAT THIS ACCOLADE HAS BEEN PRESENTED TO AN LET EVENT.



The Dundonald Links is a [GEO-certified venue](#), as well as having a [zero-waste-to-landfill policy](#) and [exceptional water management](#) initiatives.



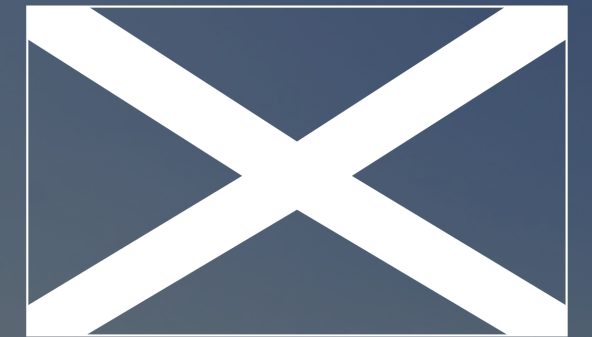
Key information and tournament programmes are available through a QR code, [reducing printed materials](#).



All event catering is done by a local supplier [specializing in locally sourced food](#), reducing transport and associated carbon emissions.

WOMEN'S SCOTTISH OPEN

WOMEN'S
SCOTTISH
OPEN



TEED UP FOR A SUSTAINABLE FUTURE



GOLF HAS A MISSION TO LIMIT ITS IMPACT
BY ENSURING SUSTAINABLE PRACTICES IN
MAINTAINING GOLF COURSES AND FOR
FUTURE EVENTS.

GOLF'S OPPORTUNITY TO MAKE A DIFFERENCE



JONATHAN SMITH, EXECUTIVE DIRECTOR OF GEO FOUNDATION

GOLF COULD BECOME SUCH A VALUED AND WELCOME LAND USE, PARTICULARLY IN A WORLD WHERE COMMUNITIES ARE APPRECIATING NATURE AND ARE RECOGNIZING THAT THE QUALITY OF THE LOCAL ENVIRONMENT IS DIRECTLY LINKED TO THE QUALITY OF LIFE.

HOPEFULLY, GOLF WILL BE LOOKED BACK ON AS THE SPORT THAT DID THE MOST WHEN THE PLANET NEEDED IT THE MOST.

COMMERCIALLY, GOLF WILL THRIVE WITH SUSTAINABILITY AT ITS HEART

- Research from Nielsen has shown that of the top 20 global sponsorship brands by spending in 2019, the vast majority have made **an active shift in their sponsorship** and advertising messaging over the past 5 years **to include purpose-driven narratives**.
- THEY IDENTIFIED AN 11% GROWTH, OVER THE NEXT 3-5 YEARS, FOR RIGHTS HOLDERS WITH A SUSTAINABILITY AGENDA.**

Neilson Sport Analysis

FUTURE OPPORTUNITIES

THERE ARE NUMEROUS OPPORTUNITIES FOR THE GOLF INDUSTRY TO
CREATE A MORE SUSTAINABLE FUTURE FOR THE SPORT:



Potential improvements include the implementation of sustainable land management practices, such as native plant landscaping, wetland creation, and bee-friendly initiatives.



Future opportunities lie in the development of innovative water-saving technologies, such as moisture sensors and precision irrigation systems, to further reduce water consumption.



Additional progress could be made by developing innovative solutions for waste reduction and recycling, as well as exploring the use of biodegradable and environmentally friendly materials in golf course operations.



Further development lies in expanding community outreach efforts and creating partnerships with local organisations to drive sustainable development beyond the boundaries of the golf course.



SUSTAINABILITY MATTERS

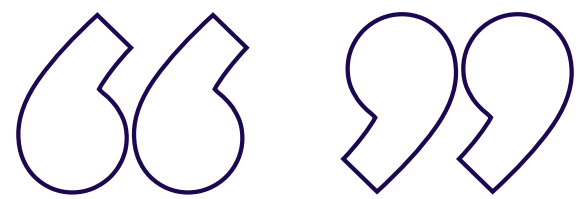
A RECENT YUGOV SURVEY INDICATED THAT **53% OF CONSUMERS LOOK FOR SUSTAINABLE OPTIONS WHEN TRAVELLING**, WITH THE SAME PROPORTION WILLING TO PAY MORE FOR A SUSTAINABLE HOLIDAY.

YUGOV, 2022

WITH GREEN TOURISM ON THE RISE, GOLF HAS AN OPPORTUNITY TO **EMERGE AS A LEADER IN THE SUSTAINABLE SPORT**, WITH **87% OF GOLF FANS BELIEVING IT IS IMPORTANT TO REDUCE THEIR IMPACT ON THE ENVIRONMENT.**

GWI, Q1-Q4, 2021

EVOLUTION NOT REVOLUTION



SUSTAINABILITY WAS PART OF GOLF FROM THE START AND MUST BE PART OF GOLF IN THE FUTURE. SUSTAINABLE COURSES RESPECT THEIR SURROUNDINGS AND HONOUR THE NATURAL ENVIRONMENT. THEY SEEK TO EMBRACE THE UNIQUENESS OF EACH SITE – BY ENHANCING ITS HISTORY, CULTURE, LANDFORMS, AND WILD PLANT AND ANIMAL SPECIES.

GEO Foundation for Sustainable Golf