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O4 Introduction

# ABOUT THIS REPORT

This is Extreme E's fourth annual Sustainability Report. The report covers our activities and achievements during Season 4, from 1 January 2024 to 31 December 2024 and details the progress made towards our environmental goals, and the areas where we can continue to improve.



**05** Introduction

## ABOUT EXTREME E

Extreme E is a radical off-road racing series which showcases electric SUVs and futuristic technologies in some of the world's most remote and challenging environments.

The series' goal is to highlight the impact of climate change in some of the world's most remote environments, promote the adoption of electric vehicles to pave the way for a lower carbon future, and provide a world-first gender-equal motorsport platform.

Built on five pillars - energy, environment, equality, entertainment, and e-mobility - Extreme E is a trailblazer in demonstrating how motor racing can drive positive change.

Established in 2018 in London, we are a privately owned company, which is funded through sponsorships, location fees, and media rights.



### **Extreme E**Season Four Sustainability Report

#### **ENVIRONMENT**

Re-imagining what is achievable in motorsport, we race across the globe's most remote and formidable terrains, amplifying the urgency for climate action. The championship not only raises awareness about the profound impact of climate change on these regions and their communities, but also pioneers and promotes sustainable solutions to mitigate environmental challenges around the world.

#### **EQUALITY**

We are committed to breaking gender barriers within motorsport and promoting equal representation across the industry. Our gender-equal driver lineup exemplifies the championship's ongoing efforts to dismantle gender stereotypes and provide equal opportunity to motorsport.

#### **ENERGY**

Extreme E leads the way in the transition to sustainable energy solutions, setting the standard by championing electric SUVs in off-road racing. With steadfast support from our partners, our teams experiment with innovative and emerging technologies as we drive towards a greener future.

#### **ENTERTAINMENT**

Extreme E revolutionises the sports entertainment space by intertwining exhilarating sporting events with climate education. The championship utilises its sporting platform to share insights from renowned scientists, inspiring collective commitments to climate action among global audiences.

#### **E-MOBILITY**

Extreme E aims to accelerate the adoption of electric mobility by bringing together worldclass drivers, teams, and automotive manufacturers to showcase the power and performance benefits of electric vehicles in some of the planet's most challenging environments.

# CEOSTATEMENT

It's remarkable to look back and see how far we've come. Season 4 marks a pivotal moment not only in the journey of Extreme E but also in the future of motorsport. From the very beginning, we set out to reimagine what racing could be, and each season has taken us closer to that vision. Season 4 was a milestone year for our sustainability mission, gender equality goals, and our bold next step: the evolution to Extreme H.

On the track, the racing has never been more competitive or inspiring. Four seasons in, we are seeing the results of our commitment to a level playing field. The gender speed gap is now narrower than ever before, down to just over one second from four and a half in our first Season. This remarkable progress is a direct result of our format, our belief in equal opportunity, and the outstanding talent of our drivers. We remain focused on our goal: complete parity, and a sport where performance, not gender, defines success.

Off the track, we made a major leap forward in clean energy. Our Hydro X Prix in Scotland marked a landmark moment with 80% of all race site energy powered by green hydrogen. This demonstrated not only what's possible, but what's scalable. That milestone laid the foundation for our boldest move yet: the official launch of

our championship to Extreme H, the world's first off-road hydrogen racing series, launching later this year.

Extreme H will continue to lead with purpose. As we transition, crucially we do so with the backing of our sport's governing body as the FIA Extreme H World Cup.

Our mission has always been to go beyond racing, to prove what's possible in technology, sustainability, and equality.

Thank you to our teams, drivers, partners, and fans for continuing to believe in our journey. The race is far from over, but the road ahead is more exciting than ever.

#### Alejandro Agag

Founder & CEO, Extreme E





## SUSTAINABILITY ADVISORY NETWORK

Extreme E coordinates progress towards its environmental and social goals with the support of our Sustainability Advisory Network.

Extreme E collaborates closely with advisory leaders, scientists, and industry experts, ensuring that strategic environmental initiatives are not only innovative but also backed by scientific evidence and expert consultation.



PROF. RICHARD WASHINGTON

Head of Scientific Committee 2024 & Desert Expert Professor of Climate Science, University of Oxford





PROF. LUCY WOODALL

Ocean Expert

Principal Scientist, Nekton Foundation, Associate Professor, University of Exeter



University of Exeter



PROF. PETER WADHAMS

Arctic Expert

Head of Ocean Physics, University of Cambridge





PROF. CARLOS M. DUARTE

Climate Expert

Distinguished Professor, King Abdullah University of Science





DR. FRANCISCO OLIVEIRA FILHO

Amazon Deforestation Specialist

University of Cambridge





JULIA WLL-CLARKE

Director of Communications &

Impact



**GENEVIEVE HORTON** 

Marketing & Sustainability Executive



JULIA PALLÉ

Sustainability Advisor

Vice President of Sustainability at Formula E



PIERLUIGI ZACHEO

Sustainability Advisor



EY

Official Sustainability Partner



ALLCOT

Official Carbon Offsetting Partner

### HIGHLIGHTS

HIGHLIGHTS OVER 4 SEASONS OF EXTREME E: 2021-2024



RACE PADDOCK INFRASTRUCTURE POWERED BY 100% GREEN ENERGY



80% OF GREEN ENERGY DERIVED FROM GREEN HYDROGEN



4,618 TONNES
OF CO<sub>2</sub>E
OFFSET FOR
SEASON 4



50/50 EQUAL MALE FEMALE RACING FORMAT SINCE INCEPTION



ALMOST 70% PERFORMANCE GAP
REDUCTION BETWEN
MALE & FEMALE
DRIVERS



14 NATURE
BASED LEGACY
PROGRAMMES
FUNDED



RECOGNISED BY

16 INDUSTRY

AWARD BODIES



472.7M BROADCAST VIEWERS GLOBALLY



542.9M SOCIAL ENGAGEMENTS



48% FEMALE FANBASE



10 CAREERS
LAUNCHED THROUGH
RACING FOR ALL
PROGRAMME



40 DRIVERS
REPRESENTING
18 NATIONALITIES
COMPETED

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#### Introduction

## SUSTAINABLE BY DESIGN



#### Water

We use the water that is generated as a byproduct from the on-site Hydrogen Fuel Cell to clean the cars.



#### Power generation

Second-life Zenobe batteries from Swedish buses store energy generated on site from hydrogen and solar panels, so it can be used as needed.



#### Hydrogen charging

We generate our own power source for the race cars and site infrastructure, using green hydrogen generated from solar and wind power.



#### Food packaging

We have used packaging that, if not recycled first, will self-destruct in open air environment after a year leaving no microplastics and toxins behind.



#### No packaged drinks and snacks

Our ban on packaged drinks or snacks saved approximately 15,000 single-use items in Desert X Prix.



#### Local produce sourced at Hydro X Prix

All on site catering sourced through local providers at the Hydro X Prix to reduce transportation emissions and meaningfully support the local economy.



#### No permanent infrastructure

We transport all our event infrastructure on the St. Helena to each location and remove all trace when the event ends.



#### No spectators

Spectators can represent a high percentage of an event's total carbon footprint – from transport, food and beverage and merchandising. Our no spectator model has avoided significant emissions.



#### Bring your own bowl

All staff, contractors, teams and drivers are asked to bring and wash their own plates and cutlery. This has saved 100,000 dining items from going to landfill at the Desert X Prix.



# TEAM OWNERS

SEASON 4





**Extreme E**Season Four Sustainability Report





Nico Rosberg









# TEAM DRIVERS

#### **SEASON 4**



Fraser McConnell Laia Sanz

Led by Carlos Sainz, voted as the best rally driver in history.



Timmy Hansen Catie Munnings

Led by motorsport legend Michael Andretti with teams in Formula E and IndyCar.



Mattias Ekström McLaren Cristina Gutiérrez

Motorsport giants with championship winning teams in Formula One and IndyCar.



Timo Scheider Klara Andersson

Also led by Timo Scheider, 5x 24h Le Mans winner.



Johan Kristoffersson Mikaela Åhlin-Kottulinsky

Led by Formula One World Champion Nico Rosberg, 2021 and 2023 Extreme E Champions.



LEGACY

Travis Pastrana (Saudi) Patrick O'Donovan (Scotland) **Gray Leadbetter** 

Co-owned by seven-time NASCAR Cup Series champion, Jimmie Johnson.



Andreas Bakkerud Dania Akeel (Saudi) Amanda Sorensen (Scotland)

Founded by Jenson Button, 2009 Formula One World Champion.



Patrick O'Donovan Christine GZ

Extreme E Championship Drivers (Desert X Prix).



*next* Kevin Hansen **VELOCE** Molly Taylor

The world's largest next-gen sports, gaming and media network, supported by Adrian Newey.



Tommi Hallman Tamara Molinaro

Extreme E Championship Drivers (Hydro X Prix).

## OFFICIAL SUSTAINABILITY PARTNER

EY has worked closely with Extreme E since 2020 and, as our Official Sustainability Partner, has supported our environmental objectives by providing close guidance through its sustainability framework.

The framework has helped us assess and minimise our environmental footprint, contributing towards achieving our shared ambitions of mitigating against climate change. The partnership signifies a joint effort to promote sustainability both within motorsport and beyond, aligning both organisations' mission to building a better, more sustainable, world.





EY HAS BEEN A KEY PART OF OUR SUSTAINABILITY JOURNEY SINCE THE VERY BEGINNING. THEIR EXPERTISE AND COMMITMENT HAS BEEN INSTRUMENTAL IN TAKING OUR AMBITIONS TO THE NEXT LEVEL. TOGETHER, WE ARE SHOWING HOW SPORT CAN BE A POWERFUL FORCE FOR CHANGE, ON AND OFF THE RACECOURSE."

Alejandro Agag,

Extreme E, Founder and CEO



Introduction

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## EXTREME E PARTNERS



PRINCIPAL PARTNER



FOUNDING PARTNER AND OFFICIAL TYRE PARTNER

ENQWA.

GREEN HYDROGEN POWER PARTNER



GREEN TECHNOLOGY COMMUNICATIONS PARTNER



OFFICIAL SUSTAINABILITY PARTNER



OFFICIAL UNIFORM SUPPLIER



OFFICIAL HYDROGEN CONSULTANCY PROVIDER



OFFICIAL CARBON OFFSETTING PARTNER



OFFICIAL HYDROGEN CONSULTANCY SUPPLIER

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## EXTREME E PARTNERS



OFFICIAL SUSTAINABLE MINING PARTNER



OFFICIAL GAMING PARTNER



OFFICIAL CLEAN ENERGY TECHNOLOGY PROVIDER



OFFICIAL RACE VEHICLE FUEL CELL PROVIDER



OFFICIAL REUSABLE WATER BOTTLE SUPPLIER



OFFICIAL CAR CHARGER SUPPLIER



OFFICIAL RACE VEHICLE BATTERY SUPPLIER



OFFICIAL VEHICLE SUSPENSION PROVIDER

## SUSTAINABILITY STRATEGY

In its inaugural season, Extreme E established its sustainability strategy through a comprehensive materiality assessment, aligning with Global Reporting Initiative (GRI) principles, industry benchmarks, and sector trends.

The pillars – extreme action, extreme impact, and responsibly extreme – support the championship to deliver on its social and environmental goals.

Extreme E

Season Three Sustainability Report



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## SUSTAINABILITY STRATEGY

**PURPOSE** 

TO USE THE POWER OF SPORT TO CHAMPION SCIENCE-BACKED IMPACT & TO INSPIRE OUR FANS & COMMUNITIES TO RAISE THEIR CLIMATE AMBITION.

**ESG THEMES** 



EXTREME ACTION



EXTREME IMPACT



RESPONSIBLY EXTREME

**ESG TOPICS** 

- 1. Podium for advocacy
- 2. Drive down carbon emissions
- 3. Fast-track innovation
- 4. Support a circular economy

- 5. Empower local communities
- 6. Motorsport for all
- 7. Build a winning team culture

- 8. Extreme success
- 9. Promote green events
- 10. Do things right
- 11. Deliver safe racing



## LOWERING EMISSIONS FROM START TO FINISH

Extreme E is a pioneer of low emission technology in sports. We work to reduce emissions across all of our sectors by engaging in key initiatives such as:

- Racing 100% electric race cars
- Use of green hydrogen energy to power event site
- Industry leading battery technology
- Utilising sea and rail freight to reduce transport emissions
- Remote broadcasting with limited staff on-site

While we are proud of our progress towards net zero operations we acknowledge there is more work to do to achieve our decarbonisation aspirations, primarily with our travel. To address our largest source of emissions, freight, we continue to explore sustainable options, including rail and commercial shipping to ensure we utilise the least-carbon intensive option.

#### **OUR SEASON 4 AIMS WERE TO:**

- Increase our capabilities with green hydrogen to power
   75% of our site through the ENOWA Hydrogen Fuel Cell.
- Continue the use of Zenobe Batteries to store renewable energy produced on-site.
- Explore more solar and wind energy infrastructure throughout the paddock and across our Extreme E race sites.

#### WE ACHIEVED THESE OBJECTIVES THROUGH:

- Operating ENOWA's Hydrogen Fuel Cell System in optimal conditions at Scotland's Hydro X Prix to produce 80% of our event power needs from hydrogen, exceeding our event target.
- Zenobe's second life repurposed battery storage systems provided 900 KWh of energy storage.
- Utilising Power Logistics' flexible solar panel system.

#### FOR SUBSEQUENT SEASONS, WE PLAN TO:

• Continue to increase the scale of green hydrogen energy sources to power the event site, with a goal of becoming 100% hydrogen powered.





## EMISSIONS OVERVIEW

Continuously improving our methods of capturing, monitoring, reducing, and offsetting our carbon footprint is a key objective for Extreme E.

Evolution Markets, a leading provider of environmental market solutions, supported Extreme E with the independent calculation of Season 4 emissions. Evolution worked in close coordination with the Extreme E team to deliver a third-party assessment of the championship's carbon footprint, in line with best practices for climate reporting.

Our current operations still generate greenhouse gas emissions, which we offset through ALLCOT. As a result of the championship's race calendar changing each season, there are fluctuations in Extreme E's carbon footprint when analysing emissions generated by freight and staff travel. We are also working to balance growing as an established motorsport series with our mission to reduce emissions. Operationally, we are always striving to reduce our carbon footprint on site.

90% of Season 4's emissions resulted from freight logistics, so this has become a key target area for reduction. Whilst owning the St Helena was a key strategic move from inception, we have been experimenting with alternative transport solutions as part of future carbon reductions and the St Helena is now no longer under Extreme E's ownership. Read more about our freight logistics approach on page 24 and 25.



90,97%

Freight *4,201* 

5.24%

Staff Travel 242

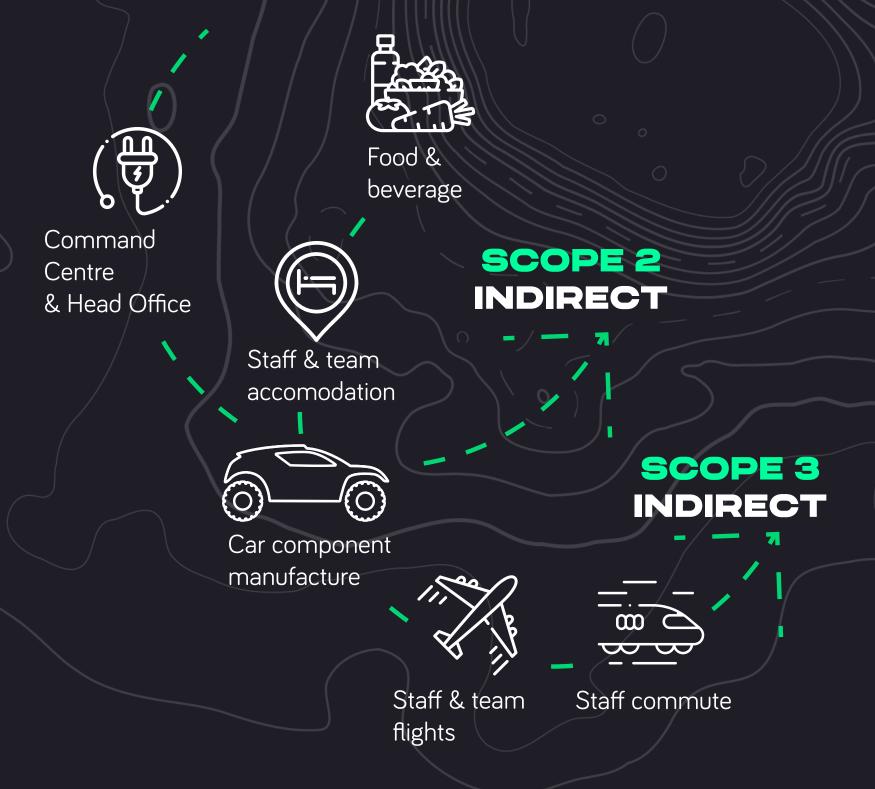
.98% Operations 138

0.78%

Food & Drinks

0.03% Cars

# GREENHOUSE GAS EMISSIONS



**UPSTREAM** 

**ACTIVITIES** 

#### SCOPE 1 DIRECT



Staff & team transport









On-site generators





Freight







Site waste





SCOPE 3

INDIRECT

Broadcast



**DOWNSTREAM ACTIVITIES** 





# DRIVING TOWARDS SUSTAINABLE POWER SOLUTIONS: ENOWA

Our Official Green Hydrogen Power Partner, ENOWA, is making impressive steps in implementing pioneering green hydrogen-based technologies to support the championship.

Throughout Seasons 3 and 4, ENOWA developed a bespoke Hydrogen Fuel Cell System to transition our energy production approach away from hydrotreated vegetable oil (HVO) powered generators, replacing the majority of these in the process.

The ENOWA Fuel Cell used by Extreme E is designed to produce its own ISO grade green hydrogen at the event site using aqueous green methanol. This allows for the transportation of large quantities of green hydrogen as road, rail or sea freight, without the dangerous goods restrictions associated with compressed or liquified hydrogen gas. The extended storage life of aqueous methanol allowed loading of the 'fuel' onto the St Helena and its use many months later at an event.

This approach not only reduces the volume of HVO we must transport and carbon emissions from transportation, but also eliminates air pollutants such as nitrous oxides and particulate matter which are produced by combusting liquid fuels. The onsite production of hydrogen from methanol is a carbon neutral process.

Extreme E and ENOWA's Hydrogen Fuel Cell System initiative marks a transformative leap, showcasing the championship's commitment to pioneering cutting edge sustainability – related technology.

### ENOWA'S HYDROGEN FUEL CELL SYSTEM - BENEFITS:

- Capable of producing ~2 MWh's of clean energy per day.
- Demonstrates the synergy of producing energy in remote locations, as well as creating water as a byproduct that can be re-used.
- The water produced from the fuel cell operation can be reused for potable or non potable needs.
- Designed to operate in harsh climates and can be brought into any remote site without any supporting utilities required.
- Easily deployable in a 20ft ISO container weighing less than 7 tonnes.
- Modular design which can be transported by road, rail or sea freight without dangerous goods restrictions.
- Ability to reform methanol into hydrogen onsite to reduce transport volumes.

ENOWA.
NEOM



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# DRIVING TOWARDS SUSTAINABLE POWER SOLUTIONS: HYDROGEN

#### WHAT IS GREEN HYDROGEN

Green hydrogen is made by splitting water through electrolysis, using power from renewable energy. It is the cleanest form of pure hydrogen, directly supporting the ambitions of the series.

#### **SHIPPING**



Green hydrogen in the form of green methanol/water mix, is sourced and shipped to each race location by our Official Green Hydrogen Power Partner, ENOWA.

Image Credit: James Morris

#### REFORMER



Kaizen Clean Energy's reformer (under license from Element 1<sup>®</sup> Corp.) is used on site to convert this mix to produce ISO grade green hydrogen for the ENOWA fuel cell system.

#### FUEL CELL



Stored green hydrogen and air is fed into a fuel cell, creating electricity. Water is also created as a by-product. The cell is left on continually to charge the batteries on-site.

#### BATTERY



The batteries provide 'on demand' power for the whole race site across each race weekend, which is distributed by a microgrid.

#### MICRO-GRID



The energy created is then distributed by the microgrid according to fluctuating demand. EV staff vehicles and team racing cars are charged using Kempower chargers.

# TRIALLING EMERGING TECHNOLOGIES: POWER LOGISTICS

Extreme E focused on strengthening its capacity to power its race sites with Hydrogen Fuel Cells in 2024, whilst storing and distributing this power effectively. Utilising groundbreaking battery technologies from Zenobe, their second life repurposed battery storage systems provided 900KWhs of energy storage.

Our event power supplier, Power Logistics, has taken the lead to implement this innovative technology across our Extreme E events. Their flexible solar panel system continued to provide an additional source of power in 2024 and is capable of expansion to meet future requirements.

We will continue to work closely with the Power Logistics team, who are currently analysing the data gathered by their bespoke power monitoring system to design a cutting-edge power solution, that will continue to push the boundaries of technology. Trialling emerging technologies will continue to be a priority as we seek to achieve our sustainability goals.





# RACE SITE ENERGY DEVELOPMENT

Since Extreme E's inception, the primary objective has been to enhance the use of clean energy from Hydrogen Fuel Cells, under the aim of achieving the greatest sustainability and environmental efficiency.

In Season 4, our objective was to power 75% of our event footprint with green hydrogen, an ambitious but attainable goal, whilst continuing to explore additional clean energy sources such as solar and wind.

With planned shipments for the Desert X Prix having us on track to achieve this, the delivery of green hydrogen was delayed due to geopolitical instability along our shipping routes, resulting in a portion unable to reach its final destination. Consequently, we had to retain our reliance on HVO for this racing round.

At the Hydro X Prix, a significant milestone was achieved however, as we met 80% of power requirements with the Hydrogen Fuel Cell, a major progression from Season 1 (10%). With rain and cloud cover and minimal sunshine occurring during event, our ability to utilise energy from solar panels was reduced, but will remain a supplementary source for continued seasons.

Throughout Season 4, we achieved an increased reliance on Hydrogen Fuel Cells through powering 51% of our total site energy requirements across both races, expanding upon Season 3's average of 30%. Whilst the entire Season 4 goal of 75% was not reached due to the shortened race calendar, the achievement in Scotland has confirmed the technology's ability to support our ambitions for Extreme H, where we aim to produce 100% of our energy with hydrogen.



## HYDRO X PRIX: GREEN HYDROGEN MILESTONE

Extreme E and ENOWA, the Official Green Hydrogen Power Partner of Extreme E, celebrated a major milestone in motorsport, and for the events industry at large at the Hydro X Prix in Scotland, by powering 80% of the race site with the ENOWA Fuel Cell System.

Using 700kg of green hydrogen supplied by ENOWA and fuel cell technology supplied by Kaizen Clean Energy, the Dumfries and Galloway race site was able to use the 11 Megawatt-hours (MWh) produced to support car charging, catering, and event control power.

To deliver this ambitious project, an entirely unique ecosystem was developed, including Zenobe's second-life batteries, Siemens' infrastructure support, and overseen by Power Logistics which integrated the energy sources into the site microgrid.

The 11MWh produced across the Hydro X Prix was equivalent to the energy required to power approximately 1,000 homes in the UK for a day.

This partnership enabled real-world testing of green hydrogen solutions in extreme conditions while also showcasing the technology's viability for broader applications in sports and events.

The achievement has demonstrated the fuel's potential to not only power events such as Extreme E, but to also decarbonise industries. With the UK event industry's use of diesel generators producing over 1.2 billion kilograms of CO2-e emissions annually, a major opportunity exists in using green hydrogen as a zero-emission source to create a major reduction in emissions.

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EXTREME E AND ENOWA'S ACHIEVEMENT DEMONSTRATES THAT GREEN HYDROGEN CAN PROVIDE RELIABLE, LARGE-SCALE, OFF-GRID POWER IN DEMANDING ENVIRONMENTS, MOVING BEYOND THEORY INTO PRACTICE.

IT SIGNALS A CRITICAL STEP IN ACCELERATING GREEN HYDROGEN'S ROLE IN THE GLOBAL ENERGY TRANSITION, SHOWING THE WORLD THAT IT IS READY TO SUPPORT SIGNIFICANT, HIGH-DEMAND APPLICATIONS.

**ENOWA** 

MARIE S



## LOGISTICS AND TRAVEL

From the outset, it was recognised that freight would be the most material source of carbon emissions for the series. In response, sea freight was prioritised over air travel for transporting equipment, giving the potential to reduce transport emissions by over 75%.

In 2021, the RMS St. Helena Ship was acquired and refurbished, to ensure it operated in the most energy efficient way possible. Key adjustments included stripping and rebuilding her engine to run on low-sulphur marine diesel and refurbishing propellers to reduce friction and improve efficiency.

As part of our commitment to continual carbon reduction, the series made the strategic decision to sell the RMS St Helena. Whilst the vessel played a vital role in supporting the series' early logistics needs and will remain an important part of its legacy, it will not be replaced. Freight accounts for over 90% of Extreme E's total carbon footprint, making it a key focus area for emissions reductions.

During the most recent race in Scotland, the series trialled a rail-based freight solution with KC Group Shipping, yielding significant carbon savings. The sale of the St Helena enables Extreme H to further explore and adopt lower-impact logistics methods such as train freight and commercial shipping, reducing emissions incurred from the outset.

Looking ahead to Extreme H, we will continue utilising the most appropriate modes of transport for the locations where we race.



## HYDRO X PRIX SUSTAINABLE LOGISTICS

At the Hydro X Prix in July 2024, Extreme E, supported by KC Group Shipping, developed an innovative approach to meet the championship's unique logistics needs. A challenge was set to transport all site equipment from the St Helena in Portland, Dorset, to the inland site in Dumfries and Galloway, Scotland, using the most carbon efficient method.

With over 450 tonnes spread throughout 70 containers and 10 specialised trailers, the entire paddock infrastructure, including the fleet of Odyssey 21 race cars, were transported to the former Glenmuckloch open cast coal mine site, utilising the commercial rail network.

The project removed nearly 50,000 miles from the UK road network, and with a significant portion of the journey being completed by an electric train, we reduced the emissions which would have been generated through road transportation by over 34%.

With the operation saving approximately 6,000kg CO<sub>2</sub>-e the solution proved that fit-for-purpose logistics can be utilised whilst reducing environmental impact.



## ALLCOT SUSTAINABILITY PARTNERSHIP

While we continue to explore opportunities to reduce emissions, we are committed to engaging in offsetting initiatives to maintain our carbon neutral status. To do so we engage our official offsetting partner, ALLCOT, who work with governments, businesses, and communities to develop sustainable, longterm solutions for climate change.

ALLCOT is a veteran project developer offering knowledge, expertise, and management to initiatives that reduce greenhouse gas (GHG) emissions to actively combat the climate crisis under Article 6 of the Paris Agreement is aligned with the 2030 Agenda and its 17 Sustainable Development Goals (SDGs).

ALLCOT have worked with the series since its first season and have played a vital role as the Official Environmental Contribution Partner for the championship.

#### **OAXACA II WIND FARM PROJECT**

The Oaxaca II wind farm, operated by ACCIONA, combines with Oaxaca III & IV to form one of the largest wind power complexes in Latin America, producing enough electricity to power 700,000 Mexican homes.

The project is comprised of 68 wind turbines of 1.5 MW each, with a total installed capacity of 102 MW. It is located north of the Transístmica Highway and the Espíritu Santo River, and south of the Ejido El Porvenir, in the municipality of Santo Domingo Ingenio, Oaxaca. It is one of three independent wind energy projects with the Federal Electricity Commission (CFE) as the off-taker.

The site also holds a sustainability lab to provide educational opportunities to school and graduateaged students, building knowledge on the topics of energy, water and sustainable construction, alongside specialised courses.

So far, over 1000 schoolchildren and 40 young people have been reached through the programmes respectively, in addition to a renewable energy conference being hosted for over 700 students and professionals. Additionally, as part of the project, over 150 hectares of land has been reforested.

















## DOUBLE-HEADER FORMAT

The exciting double-header format introduced in Season 3, became a mainstay of the championship through its continuation in Season 4, with each location playing host to back-to-back rounds across each race weekend. The format delivers twice the entertainment without materially adding to our carbon footprint, in line with the series' goal to keep carbon emissions to a minimum.

As a result, the new format also provides double the opportunity for wins, podiums and crucial points for teams to compete for.

## SEASONG RACE FORMAT

## XPRIXR.01 - DAY 1

<b>Q1</b>	Q2		REDEMPTION RACE	GRAND FINAL
Two four-car heats	Two four-car h	eats	Four-car race	Four-car race
60		Top four - quallifiers go to <b>Grand Final</b>		
		go to Clario i mat		
600		Bottom four - qualifiers		
		go to <b>Redemption Race</b>		

## XPRIXR.02 - DAY 2

Two four-car heats	Q2 Two four-car	heats	REDEMPTION RACE Four-car race	GRAND FINAL Four-car race
		Top four - qualifiers go to <b>Grand Final</b>		
		Bottom four - qualifiers go to <b>Redemption Race</b>		

The championship's gender-equal racing format is a world-first in motorsport.



## EQUALITY AT EXTREME E

Extreme E set a world first in motorsport by designing a unique sporting format which sees every team field a male and female driver, who compete together for success. This format has revolutionised motorsport by ensuring equal opportunities at the highest level of competition, compelling drivers to adapt, learn, and collaborate.

Extreme E aims to inspire future generations of female drivers, and build a sport which fosters inclusivity on and off the racetrack, giving candidates from all backgrounds equal opportunity to join.

EQUALITY HAS ALWAYS BEEN AT THE HEART OF OUR CHAMPIONSHIP, AND SEASON 4 PROVED ONCE AGAIN THAT TALENT KNOWS NO GENDER. THE LATEST GENDER SPEED GAP DATA SHOWS THAT THE PERFORMANCE BETWEEN MALE AND FEMALE DRIVERS HAS NEVER BEEN CLOSER, AND IS A TESTAMENT TO THE POWER OF EQUAL OPPORTUNITY.

WE ARE BUILDING A SPORT THAT REFLECTS THE WORLD WE WANT TO SEE, ONE THAT VALUES FAIRNESS, DIVERSITY, AND EXCELLENCE ABOVE ALL."

#### **ALEJANDRO AGAG**

Extreme E, Founder and CEO



## INTHE SPOTLIGHT MOLLY TAYLOR

Molly Taylor, from E.ON Next Veloce Racing is one of Extreme E's most decorated drivers, achieving eight victories and the inaugural Championship title. The Australian also boasts the most victories of any female driver and the highest start to win conversion rate across the championship, having won 38% of the races she has competed in.

I was lucky growing up as my mum was competing as a professional co-driver in rallying, so I had an amazing role model, and her influence was fundamental to my perceptions of the sport. One of the biggest challenges we face in motorsport has always been finding opportunities for seat time, so when the chance came to compete against some of the greatest drivers across different motorsport disciplines, with male and females racing equally, it was a very easy decision to join Extreme E.

Coming from a rally background, driving wheel-to-wheel on gravel was a new experience, there are so many different skills you need in this format, so it has really raised my level as a driver. With Extreme E enabling us to drive alongside some of the greats who set such a high benchmark, it has given drivers more chances to actively develop and show what they are capable of, whilst providing an incredible support network that doesn't exist like this anywhere else. This gives way to further opportunities beyond the championship, so it's made a great difference. Competing in Extreme E has opened so many doors for me and changed the course of my career.

It's hard to pick one highlight of the series, coming into the very first race in 2021 when we were all completely new and then winning, will always stay with me. More recently, a highlight has to be taking back-to-back wins in Scotland, particularly the race day when I did most of the Qualifying and Final starts. Kevin and I showed that in all the different formats and no matter who we start against, we can win.

It's impossible to be involved in this series and not have your mindset changed by the Legacy Programmes, seeing the incredible locations where we race really opens your eyes. We have such a huge opportunity to use the platform we have for good, and it's inspiring to be around an environment with so many forward focused solutions, so I'm really excited to build that over the next year with our team.



33 Equality

## FEMALE DRIVER PERFORMANCE & DEVELOPMENT

Striving for equal performance through continued talent development

#### **CLOSING THE GENDER PERFORMANCE GAP**

Extreme E continues to use the Continental Traction Challenge, a predefined section for each race course, as a time trial to measure performance between our female and male drivers. At each event, the fastest Traction Challenge time for each driver is recorded to allow for comparability within and across events.

Over the course of the four seasons, Extreme E has seen a significant decrease in time difference between the female and male drivers. Our female drivers have played a crucial role in demonstrating the transformative potential of equality-focused motorsport, showing

remarkable growth and consistently narrowing the performance gap with their male counterparts season after season.

#### What's driving the change?

Extreme E's commitment to providing equal opportunities for male and female drivers has been pivotal. Unlike traditional motorsport formats, Extreme E requires every team to field one male and one female driver, sharing the same vehicle and providing equal responsibility for performance.

#### This framework:

Increases Seat Time: Ensures female drivers gain the same competitive experience and visibility as their male teammates.

Encourages Development: Teams invest equally in training and development for both drivers.

Promotes Confidence: Female drivers are going head-to-head against, and gaining mentorship from, the best drivers in the world.

Allows data sharing: Female and male drivers work together reviewing the key data points from the car to improve overall performance.





**EXTREME H\*** 

## FEMALE PERFORMANCE MEDIAN TABLES

From Qualifying through to the Grand Final, the fastest Continental Traction Challenge time for each driver is recorded. We have used this metric to compare the progression between our male and female drivers from Season 1 to Season 4.

Despite racing a shorter season, our female drivers have again improved their race performance and closed the gap between their male counterparts by 36.5% on Season 3, an especially remarkable achievement.

As we transition to Extreme H, we will continue exploring ways to refine timing data analysis, ensuring a more accurate and fair comparison between all drivers. However, certain factors may impact this analysis, including drivers prioritising the Continental Traction Challenge over overall race position, changes in driver line-ups, and the influence of racing incidents.

SEASON 1	DESERT	X PRIX	OCEAN	I X PRIX	ARCTIO	C X PRIX	ISLAND	X PRIX	JURASS	IC X PRIX	TOTA	AL /
Female Median Time	N/	'A	124	4.19	55	5.27	47	.16	53	3.74		
Male Median Time	N/A		114.49 53.6		114.49 53.63		43.20		51.01			
% Difference	N/	'A	8.4	-7%	3.C	7%	9.1	6%	5.3	55%	6.51%	6
SEASON 2	DESERT	X PRIX	ISLAND	X PRIX	ISLAND	X PRIX II	COPPE	R X PRIX	ENERG	Y X PRIX	TOTA	.L
Female Median Time	71.6	69	37.	.60	36	.56	36	.74	43	3.01		
Male Median Time	67.3	39	36	.03	35	.09	35	.03	41	.73		
% Difference	6.38	8%	4.3	57%	4.1	8%	4.8	8%	3.0	)7%	4.58%	%
						) \'					<i>////</i>	-/. ///
SEASON 3	DESERT			X PRIX		X PRIX	ISLAND			R X PRIX	TOTA	.L
	R.01	R.02	R.03	R.04	R.05	R.06	R.07	R.08	R.09	R.10		
Female Median Time	70.15	67.10	28.70	30.10	45.20	45.05	59.30	57.50	33.30	32.70		
Male Median Time	67.40	65.40	28.20	29.05	44.10	43.90	57.05	56.00	32.05	31.30		
% Difference	4.08%	2.60%	1.77%	3.61%	2.49%	2.62%	3.94%	2.68%	3.90%	4.47%	3.22%	6
								/				-/////
		DE	SEDT Y DD	IY			Ц	YDDO Y DDI	Y			

SEASON 4	DESERT X PRIX		HYDRO X PRIX		TOTAL
	R.01	R.02	R.03	R.04	TOTAL
Female Median Time	43.09	41.72	40.63	42.00	
Male Median Time	41.79	41.10	40.02	40.08	
% Difference	3.09%	1.59%	1.52%	4.80%	2.73%

The Continental Traction Challenge (previously named the Super Sector) was only introduced from the Ocean X Prix in Season 1.

By using the median time data from the Continental Traction Challenge, as opposed to the mean, we aim to eliminate anomalies including crashes and breakdowns. A primary limitation of this analysis is the size of the dataset.

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Equality

111

EXTREME E'S MIXED-GENDER FORMAT IS A GAME-CHANGER, AND THIS DATA PROVES JUST HOW POWERFUL EQUAL OPPORTUNITY CAN BE. OVER FOUR SEASONS, WE'VE SEEN FEMALE DRIVERS CLOSE THE GAP AND PERFORM ON PAR WITH THE BEST IN THE WORLD, WHICH IS AN INCREDIBLE ACHIEVEMENT.

WATCHING THE SERIES' DRIVERS, BOTH MALE AND FEMALE, THRIVE UNDER THIS FORMAT HAS BEEN INSPIRING, AND A REMINDER THAT TALENT KNOWS NO GENDER, IT JUST NEEDS THE RIGHT PLATFORM TO SHINE."

### Jenson Button

Founder, JBXE





## SPORTING RULES UPDATE

To drive greater opportunity for our female drivers, we introduced a Sporting Regulation whereby teams were required to alternate their starting drivers for each racing session (Qualifying Round 1, Qualifying Round 2 and the Redemption Race or Grand Final).

With female sporting performance gaps still prevalent, a trend emerged during Season 3 where teams would often nominate drivers based on who would start the Redemption Race or Grand Final. Last season's overall statistics saw an average of 92% of males starting the Qualifying Round 1 session and thus also the Redemption Race or Grand Final.

In Season 4, we changed the regulation to ensure that male and female drivers were mandated to be the nominated starting driver the same number of times in a season.

By doing this, the number of males that started the Qualifying Round 1 session and thus also the Redemption Race or Grand Final dropped from 92% to 50%, ensuring males and females were together on track and fighting wheel-to-wheel more often, further allowing females the opportunity to further develop their racecraft skills against their male opponents.

## CASE STUDY

#### RACING FOR ALL

Extreme E's Racing for All programme is an inclusive initiative designed to inspire and empower individuals and provide valuable career opportunities. Informed by the findings of the Hamilton Commission, Racing for All attempts to break down barriers to entering motorsport, by offering aspiring mechanics and engineers the opportunity to become a supporting member of a team within the Extreme E grid during race week.

Amanda Kangai, who started at Extreme E as a Student Ambassador in 2022, joined the E.ON Next Veloce team in 2023 through Racing for All, and has become a key member of the team, returning for her second season in 2024. Speaking on her experiences, she said: "The Racing For All Programme was an amazing opportunity. My team at E.ON Next Veloce Racing have been incredibly nurturing and allowed me to learn through making a real contribution to the team, they've taken the extra step in opening up the whole world of motorsport to me."

Through this inclusive approach, Extreme E is reshaping the narrative of motorsport to show that talent from any background can be a part of a high performance team, and that exposing the multitude of career opportunities available within motorsport to potential candidates is key in uncovering the next generation of talent.

On the programme's impact, Amanda added, "It's extremely important to have these kinds of programs, as there is so much talent out there, but many aren't aware of the career options available. This experience has really set up my career, as I always knew I wanted to be an engineer, but I didn't necessarily know motorsport would be in my path until being a part of the program. I now have a clear aspiration to continue my career in motorsport and become a performance or race engineer."

Extreme E's commitment to inclusive participation not only rewrites pathways into motorsport, but also solidifies a shared sense of unity across the championship's community.







# PADDOCK HEROES

#### PAULINE SCHOOFS, DEPUTY RACE DIRECTOR

At Extreme E, gender equality is not just limited to the teams, we are passionate about encouraging more women to take up senior roles in the sport. Pauline Schoofs, became the championship's first female Deputy Race Director at the Hydro X Prix in Scotland, and is a testament to the pioneering spirit that the Extreme E championship embodies, on and off the track.

On her experience, Pauline said "Being my first off-road experience, the event format was very new for me. The short but intense racing sessions had me out of my comfort zone, but that's what made it so amazing. As the Deputy Race Director, you have to make many quick decisions."

Having previously worked in officiating roles across several motorsport disciplines, Pauline assisted the Race Director in managing all aspects of the sporting side of the event, working with the Clerk of the Course, course marshals, recovery, and medical teams.

"I love working with the whole team, and feeling the pressure increasing as you arrive on site. It's fantastic to see more females operating in senior roles across motorsport, especially the common recognition that if a female has a role, it's because they've been recognised for their abilities."

Extreme E will continue to champion females on and off the course for its next season, and lead the way in ensuring motorsport provides equitable opportunities for all.

# INTHE SPOTLIGHT PATRICK O'DONOVAN

Speaking to Patrick O'Donovan, part of the Championship's youngest lineup in history, we hear him outline his experiences growing up through various roles on both sides of the steering wheel, and what it means to him to be able to combine multiple passions in the same setting.

#### "

As a younger person, I've been brought up in a time where we are really starting to see the consequences from our actions in regard to climate change and how it impacts the world around us. Extreme E is an opportunity to continue competing in a sport that we love while also being able to use the platform to spread awareness and directly make a positive impact on our future.

Progressing to become a member of the youngest ever team line-up has been a crazy journey, starting from being a STEM student ambassador, to a Championship Driver, and then getting the call up from NASCAR royalty Jimmie Johnson, to race alongside Gray Leadbetter at the Hydro X Prix in Scotland.

Working and racing at Extreme E has not only improved my skills in the car, but also greatly developed me as an individual, through opportunities I've been afforded on both sides of the racetrack. My biggest highlights have been able to join a community dedicated to bringing amazing racing to the world, whilst exploring new cultures and importantly being at the forefront of tackling global climate change.

As an athlete, nearly every action I take day to day is purpose driven, and being a part of a championship such as Extreme E has been a huge breath of fresh air. It's been a pleasure to be around such like minded and purpose driven individuals on a daily basis, who share the passion for creating a better future for all.

Our visits to Sardinia over the years have really stuck with me, particularly what the championship did to improve blue and green carbon storage after the horrendous fires that took place in July 2021. To witness the damage first hand, and then be a part of the process of rebuilding the damage on the island is one of the most important things I've ever had the opportunity to be a part of.

I'm looking forward to continuing with the championship as it continues on its mission to find green solutions, now with some exciting and new groundbreaking technologies which I'm really excited to test out, whilst developing myself along the way.

I'm looking forward to continuing with the championship as it continues on its mission to find green solutions, now with some exciting and new groundbreaking technologies which I'm really excited to test out, whilst developing myself along the way.





# FIA GIRLS ON TRACK

A joint venture between the FIA (Fédération Internationale de l'Automobile), and Motorsport UK, Girls on Track is a key initiative championing gender diversity and equality in motorsport. The programme offers educational resources, mentorship, and hands-on experience to nurture the next generation of female leaders in motorsport.

At the Hydro X Prix, Extreme E hosted 43 young girls of primary school age who assist as carers for family members, to experience a day in the paddock and learn about a multitude of career opportunities in motorsport. Throughout the day, the girls honed new STEM skills via a lego building challenge, participated in a pitstop simulation, and heard from a range of females in various roles across the paddock about their journeys into motorsport.

They also had the opportunity to take a seat in the Odyssey 21 race car for an unique experience behind the wheel, and hear from Legacy MC driver Gray Leadbetter on her own journey to become a professional driver.

Jenny Fletcher, Programme Manager at Girls on Track UK, said: "This was a once in a lifetime opportunity for the girls, as they spend their lives looking after family relatives and not having time to think about themselves or live their own experiences. The day enabled them to experience the buzz and excitement of motorsport first hand. Meeting the drivers, seeing the cars racing and taking part in some fun activities made such a special day for them all."

On race day, twelve members of the Girls on Track Scottish Hub were invited to access a behind the scenes experience of Extreme E, engaging with females across the paddock including Extreme E's racing teams, FIA, Extreme E staff, and Motorsport UK, to hear about a range of different career opportunities available.







# Extreme E Season Four Sustainability Report

# EY SUSTAINABLE TECHNOLOGY FUTURES PROGRAMME

Over a two-week period in April, seventeen secondary school students who are eligible for free school meals, gained hands-on experience at Extreme E's headquarters in London, as part of the Sustainable Technology Futures programme.

The foundation brings young people and employers together to close the gap between UK businesses and hidden talent, sharing a common goal with Extreme E: using its podium for advocacy and the empowerment of local communities.

As part of the programme, students developed marketing campaign proposals aligned with our mission to raise awareness of the climate crisis, with senior staff acting as judges and mentors in a project pitch competition. They also worked with our broadcast production team, honing their on-camera interviewing skills to build their confidence. The championships' involvement also extended beyond the programme, offering ongoing mentorship for participants over the next six months.

Leanne Peabody, CEO of EY Foundation stated "Working with Extreme E to deliver our Sustainability Technology Futures programme has been such a brilliant experience. If we're going to tackle some of society's biggest challenges, like climate change, then we need diversity of thought and creativity. To do this we need to inspire the next generation of engineers and tech developers from all backgrounds. Our partnership with Extreme E is a great example of how we can do this."

Throughout their time at Extreme E, the students completed sessions on teamwork, presentation skills and an in-depth exploration of all the roles that allow the Extreme E events to happen. All of the students who completed their business placement at Extreme E rated their experience a 7 or above out of 10, a testament to the success of the programme.

The Sustainable Technology Futures Programme has affirmed the need to continue providing opportunities for young people to gain exposure to sustainable and innovative organisations whilst improving their employability skills, and Extreme H will continue to collaborate with EY to provide these opportunities.





# OPTIMISING LEGACY PROGRAMMES FOR IMPACT

Over multiple seasons, Extreme E has collaborated with EY to develop a comprehensive Outcome Measurement Framework (OMF) for Extreme E's Legacy Programmes. OMFs help organisations articulate their impact, especially when those impacts are non-financial. EY employed a Theory of Change approach to map out the journey from Extreme E's actions through to community outcomes. This is a key step in the maturity of a Legacy Programme as we now have a framework upon which we can demonstrate the true outcomes of our efforts.

#### **METHODOLOGY AND IMPACT**

EY held interviews with Legacy Programme partners to obtain data that informed the OMF. Recognising the challenges many partners faced in aligning with these indicators due to data collection gaps, Extreme E viewed this as an invaluable exercise to enhance the capacity of our partners.

By providing data collection recommendations and the option of empowering organisations to develop their own contextually relevant indicators, the OMF is not just a tool for reporting but a dynamic instrument for growth, enabling continuous improvement and adaptation as the programmes evolve.





45 Impact Through Collaboration

## UNSUSTAINABLE DEVELOPMENT GOALS



Extreme E recognises the role it can play in advancing environmental and social equity. Therefore, we have adopted the United Nations Sustainable Development Goals (SDGs) to inform our sustainability framework and guide key decision-making in executing on our strategy.

By aligning our actions with the global goals, we aim to ensure our championship is not only a source of entertainment but also a catalyst for change with tangible impact.



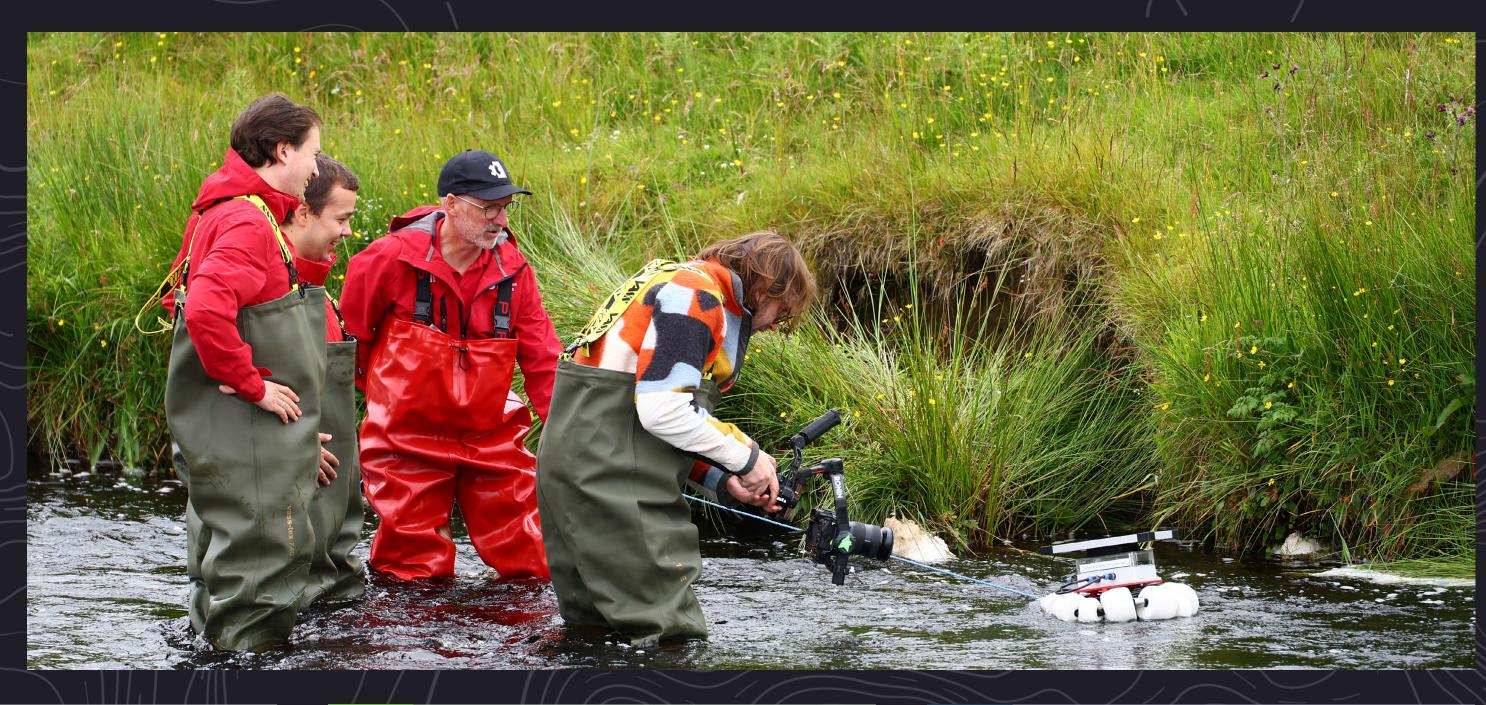
Impact Through Collaboration

# SALMON CONSERVATION, SCOTLAND

Nestled within the dramatic landscape of the Lowther Hills, Crawick Water is one of the River Nith's most vital salmonid spawning tributaries- an ecological lifeline for juvenile salmon at every stage of their development. In the face of intensifying climate impacts, including rising water temperatures and habitat degradation from upland agriculture, the Nith Board and Trust has taken bold action to restore resilience through riparian woodland regeneration.

As part of Extreme E's Scottish Legacy initiative, over 5 hectares of riverbanks have already been fenced and planted with native broadleaf species, creating essential shaded habitats, stabilising banks, and enhancing biodiversity corridors.

This pioneering effort not only safeguards salmon survival but also delivers carbon sequestration, flood mitigation, and water quality benefits- demonstrating how nature-based solutions can address both local ecological challenges and global climate goals. A robust long-term monitoring program is now in place, ensuring measurable impact and continuous learning as this regenerative project evolves.







#### **Outputs**

- Conducted regular water quality monitoring to track ecosystem health.
- Collected baseline data on fish populations to inform conservation and restoration efforts.

#### **Outcomes**

- Achieved a 10% reduction in water temperature, contributing to improved habitat conditions.
- Recorded a 208% increase in salmon fry per 100m2, indicating enhanced reproductive success and population recovery across scientific, educational, and cultural sectors.



#### **Output**

• Planted 3,140 native hardwood trees along riverbanks to support climate adaptation and biodiversity goals.

#### **Outcomes**

- Strengthened ecosystem resilience and habitat protection through expanded riparian corridors.
- Enhanced biodiversity and climate benefits through reforestation efforts, including carbon sequestration and temperature regulation.



#### Outputs

• Installed fencing and planted native broadleaf species along riverbanks and riparian zones to protect and restore land ecosystems.

#### **Outcomes**

- Stabilised riverbanks and increased shaded areas, leading to improved habitat quality and species diversity.
- Projected carbon sequestration benefits estimated at 2,089 tonnes of CO2 equivalent (tCO2e) over 50 years



#### **Outputs**

 Reached over 50 million individuals- including students, farmers, and community groups- through targeted outreach and engagement campaigns.

#### **Outcomes**

• Elevated public awareness of river and salmon ecosystem health, fostering widespread community participation in conservation and restoration initiatives.

# SALMON CONSERVATION, SCOTLAND

INPUTS	ACTIVITIES	OUTPUTS REALISED (FUNDING PERIOD)	OUTCOMES REALISED (FUNDING PERIOD)
		Fenced and planted riverbanks and riparian zones with native broadlead species	Stabilizing riverbanks through protection from livestock access and erosion  Stabilizing riverbanks through protection from livestock 2089 tCO2e in 50 years
	Habitat restoration	Planted 3140 native hardwood trees along riverbanks	13 15
	13 15	Regulated water flow from adjacent land  13 14	Increased resilience to flooding  Improving habit protection through riparian corridors  13 14
	Monitoring the effectiveness of habitat	Collected baseline data on fish populations, including salmon fry and parr counts, before and after restoration efforts	Improving understanding of fish population dynamics and the health of the aquatic ecosystem  Improving understanding of fish population dynamics and the corridors  13
Extreme E	restoration, including fish		
seed funding	population and water quality  14	Conducted regular measurements of water quality parameters such as temperature and conductivity  6 14	Improving understanding of water quality trends by establishing a baseline assessment  6 14
			6 14
	Expanding community	Engaged 50 million people through various outreach initiatives aimed at communicating the importance of the project	Enhancing public awareness of environmental issues relating to salmon and river health
	engagement and outreach through education and engagement with	17	14 17
	local schools	Engaged local schools and farming communities to raise awareness about environmental issues and the importance of salmon conservation	Increasing community engagement with conservation initiatives, fostering a culture of sustainability  14 17
			15 LIFE ON LAND 17 PARTNERSHIPS FOR THE GOALS
Evtreme F			SE POR THE GOALS

# ENOWA CLIMATE DISCUSSIONS

OPPORTUNITIES FOR STUDENTS AT THE DESERT X PRIX

At the Desert X Prix in Saudi Arabia, Extreme E and ENOWA, the championship's Official Green Hydrogen Partner, facilitated a range of discussion and events raising awareness on key climate issues across a number of societal pillars.

Hosted at Fahad Bin Sultan University in Tabuk, an educational day was organised for 50 local STEM students, where Extreme E Scientific Committee member, and esteemed professor Carlos Duarte, spoke on the impacts of climate change around the globe, whilst highlighting the championship's role in driving nature based solutions.

The session ended with a strong call to action, involving a competitive task in designing how to lower Extreme E's carbon footprint, with the winning team receiving an invitation to join Extreme E's race weekend in Jeddah.

An innovation day was also facilitated on the Friday of race week, consisting of an onsite roundtable discussion with key leaders from ENOWA and ten local C-Suite business leaders. During the discussion, attendees discussed the development of clean energy and sustainable technologies, and how continued collaboration is key in the quest to drive forward climate solutions.

Through our unique partnership, ENOWA and Extreme E aim to not only continue in leading the way in green energy technology development, but spread climate awareness through education to equip the next generation in meeting the needs of tomorrow.



# LEGACY PROGRAMME DEVELOPMENT

#### BEAVER REINTRODUCTION, UK

In Season 1 as part of the Jurassic X Prix Legacy Programme, we teamed up with the National Trust to reintroduce wild beavers to the Purbeck Heath wetlands in Dorset, UK. With nature in decline at an unprecedented rate, the UK remains one of the most biodiversity-depleted countries in the world.

During the race week, a beaver lodge was constructed out of heather bales and twigs, part submerged in the wetlands, ready for its new semi-aquatic future owners to move into. Due to strict licensing issues, the beavers' release was subsequently delayed for the following four years, whilst the habitat lay ready to welcome its new inhabitants.

In March 2025, the long-awaited licence was granted, and two pairs of wild beavers were released, marking the UK's first legal wild beaver release in over 400 years, a monumental achievement for biodiversity restoration in the UK.

David Brown, Land and Nature Programme Manager for the National Trust Purbeck Estate, said:

"Beavers are nature's water engineers, and their return will help revive wetlands that have been in decline for decades. Their ability to improve water quality, reduce flood risk, and boost biodiversity makes them an essential part of the landscape's future."

The beaver's impact upon the landscape will allow wetlands to retain water during droughts, reduce flood risks, and store carbon, making them a nature-based solution to climate challenges.

The release has propelled the National Trust's impact to a next level, opening doors for the organisation to support national policy in preserving and rehabilitating wetlands across the UK. Extreme E's support for the National Trust continues to demonstrate how motorsport can drive long-lasting and meaningful environmental change, showcasing how sport can play a vital role in supporting nature.



## CASE STUDY

# VODAFONE BUSINESS' TRANSFORMATIVE PARTNERSHIP WITH EXTREME E

Throughout Season 4, Extreme E worked with its Official Technology Communications Partner, Vodafone Business, to continue their deployment of communications technologies to help deliver impactful Legacy Programmes. Vodafone Business offers innovative solutions, which pioneer the use of communications technology for monitoring and evaluation in some of our key legacy initiatives.

#### **RESTORATION OF THE RIVER NITH**

Season 4's Hydro X Prix legacy project returned to the Crawick River, working with the Nith District Salmon Fishery Board on the restoration of the wider River Nith in Scotland. The project involved a multi-stage initiative focused on community engagement and education, whilst mitigating climate change effects upon Atlantic salmon, with rising water temperatures and changing rainfall patterns causing disruption to their habitat.

Vodafone Business provided the Board with Internet of Things (IoT) hydrosensor solutions to help monitor water quality and temperature levels within the river. The objective was to create a stream of data across the seasons to enable the scientists to identify and understand the trends and what was happening in different parts of the river.





## CASE STUDY

#### WHALE PROTECTION, URUGUAY

2022 Legacy Programme Impacts

In 2022, Extreme E partnered with the OCC (Organisation for Cetacean Conservation) to support the organisation's research and protection efforts for Uruguayan marine life. Such habitats in Uruguay are highly vulnerable and are under threat due to unsustainable fishing practices carried out by industrial and 'pirate' fishing fleets, and ever increasing levels of on-the-water tourism.

For over 25 years, the OCC has been carrying out marine conservation, whilst promoting responsible tourism and sustainable fishing. Another pillar of the OCC's work involves equipping citizens to act as a voice for protecting marine mammals, which serves as a powerful tool in catalysing change in policy, governance and human behaviour.

Most recently in August 2024, the OCC supported the successful establishment of Isla de Lobos and surrounding waters as a National Protected Area. This provides a vital refuge for a range of species (sea lions, birds, turtles and whales) from activities such as trawling and urbanisation, to ensure that the delicate ecosystems remain in balance.

The OCC's continued education efforts and ability to mobilise populations as agents for protection will ensure that breakthroughs, such as the establishment of protected areas, continues to expand.



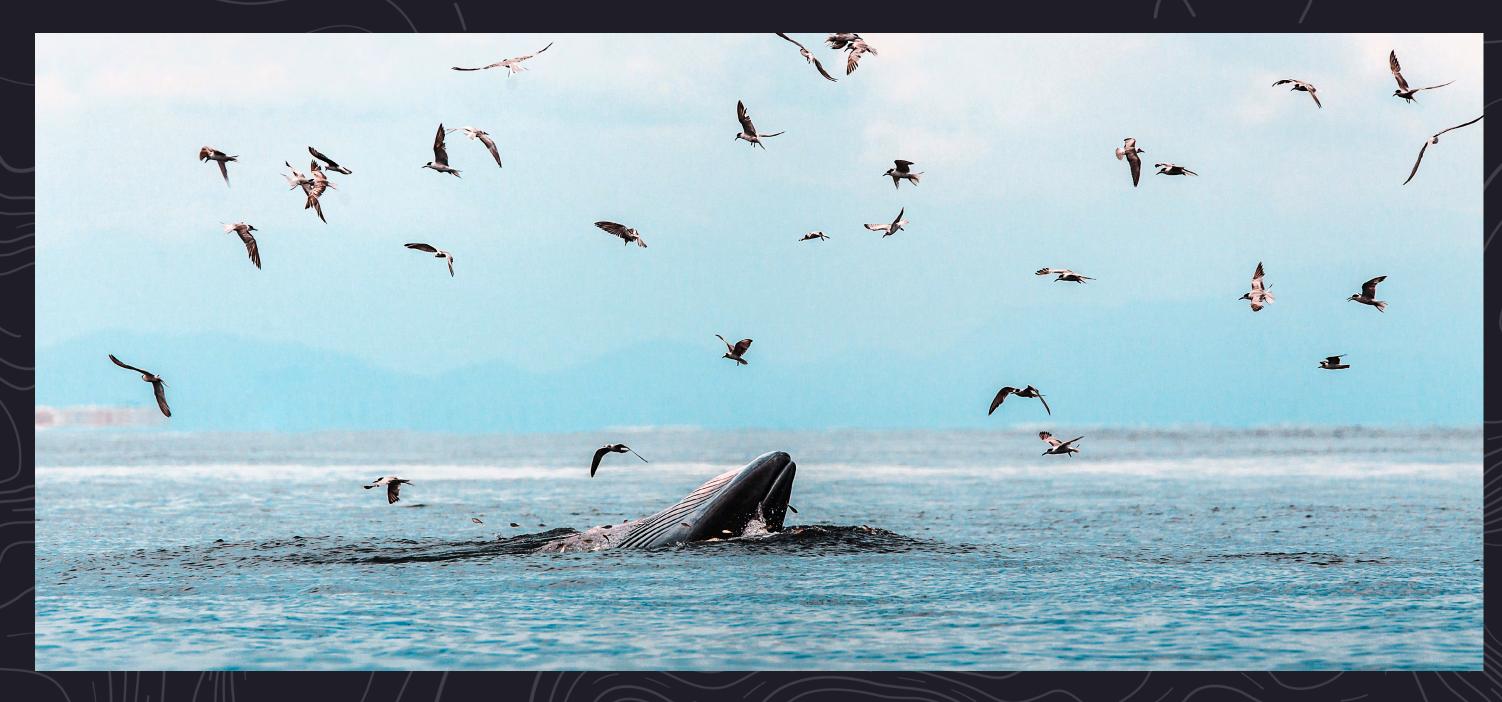
53 Impact Through Collaboration

# WHALE PROTECTION, URUGUAY

Through its dynamic partnership with the Organisation for Cetacean Conservation (OCC), Extreme E is driving meaningful change for Uruguay's marine ecosystems and coastal communities. Funding from Extreme E has enabled the OCC to advance critical marine research—particularly on the Southern Right Whale—while also delivering transformative education and advocacy initiatives.

From hiring specialist biologists and supporting technical fieldwork to facilitating public outreach through audiovisual media and exhibitions, this collaboration is helping build scientific knowledge, community engagement, and regional conservation capacity. By investing in both environmental protection and local empowerment, Extreme E's support is not only strengthening OCC's operational effectiveness but also amplifying its long-term impact.

Continued support will allow OCC to scale its efforts, embed marine conservation into local education systems, and foster a deeper public connection to Uruguay's unique coastal biodiversity.





#### Outputs

• Engaged two biologists with expertise in education, research, and audiovisual analysis to support knowledge dissemination and learning design.

#### **Outcomes**

- Strengthened community education programs by embedding a gender-responsive lens and promoting ocean literacy and sustainable marine practices.
- Fostered interdisciplinary learning in marine education by connecting diverse stakeholders across scientific, educational, and cultural sectors.



#### Outputs

- Strengthened community education programmes
- Commissioned a consultant to reinforce OCC's commitment to core values, with a particular focus on planetary health and climate-conscious program delivery.

#### **Outcomes**

- Raised awareness among local and regional communities about the climate-related impacts on marine ecosystems.
- Supported behaviour change initiatives aimed at reducing human-induced pressures on the local marine environment.



#### Outcomes

- Contributed to the recovery of the Southern Right Whale population and broader restoration of Uruguay's marine ecosystems.
- Revitalised long-term marine research through the reactivation of the Southern Right Whale monitoring project, deepening understanding of species inhabiting Uruguay's territorial waters.



#### **Outcomes**

- Strengthened public engagement in Uruguayan marine conservation, evidenced by a 14% increase in Facebook followers and a 125% increase in Instagram followers.
- Scaled regional initiatives that underscore the value of partnerships grounded in shared environmental priorities and a collective ocean identity.
- Enhanced local capacity for collaborative action, supporting greater community resilience and climate responsiveness.



54 Impact Through Collaboration

# WHALE PROTECTION, URUGUAY

INPUTS **OUTPUTS REALISED (FUNDING PERIOD) OUTCOMES REALISED (FUNDING PERIOD) ACTIVITIES** Strenghtened mission, vision & values resulting in greater staff Capacity building & strategic Engaged a consultant for strategic Expanding outreach capability through professional Progression towards planning & capacity building planning with core team to acquire a diverse development rehabilitating the range of donors Southern Right Whale & engage over population & broader 10,000 individuals Uruguayan marine including persons with ecosystem Expanding data & knowledge disabilities on Southern Right Whales by leveraging AI capabilities Expanding Southern Right Engaged biologists to support Southern Right Extreme E Whale research & education in Whale research & education seed Uruguayan wwaters funding Enhancing opportunities 4 13 14 for education by applying a gendered lens 4 13 Strengthening eight Reconnect with regional & national environmental NGOs to local communities to advance education & research through eight science clubs Strenghtening regional alliances expand their knowledge Greater diversity to nurture a shared ocean identity **14** 17 of regional marine Identifying new ways to conduct amongst community fauna, specifically the education research & knowledge engagement with Southern Right Whale, sharing marine conservation thereby contributing Enhancing interdisciplinarity initiatives Sensory experiences: Redesigned community education & to resilience & climate within education, including in arts, exhibit opportunities science, business & education action 4 13 17 14 17











# VODAFONE BUSINESS SUMMIT

In partnership with Vodafone Business, Extreme E hosted the Innovation for Impact Sustainability Summit, bringing together sustainability leaders, scientists and technology experts to explore how innovation can accelerate climate action.

The summit featured a number of keynote talks and thought provoking panel discussions, enabling rare cross-sector insights across a range of key topics. The audience learnt how today's emerging technologies are enabling further scientific research and development in sustainability, and how these technologies are helping large businesses achieve their sustainability goals.

Extreme E and Vodafone Business also showcased real-world impact stories from the series' Legacy Programmes, including the use of IoT technology to detect wildfires in Sardinia and monitor river ecosystems in Scotland.

With strong messages from company leaders and Extreme E drivers, the summit reflected a shared commitment to leveraging innovation, sport and science to build a more sustainable future.

#### **FULL SPEAKER LINEUP:**

Liz Bonnin - Science Broadcaster

Kate Norgrove - WWF UK

Matt Anderson - The Carbon Trust

Miryem Salah - Vodafone UK

**Julia Palle** - Formula E

Richard Washington - University of Oxford & Extreme E Scientific Committee Chair

**Helen Smith** - Aviva

lan James - NEOM McLaren Electric Racing

Mitch Donnelly - Suez UK

**Ebru Ozguc** - Vodafone Business

Nicki Lyons - Vodafone UK

Hedda Hosas, Kevin Hansen & Patrick O'Donovan - Extreme E Drivers

# LEGACY PROGRAMME DEVELOPMENT

#### RAS BARIDI PROJECT

# TURTLE CONSERVATION, SAUDI ARABIA

In 2021, Extreme E partnered with Ba'a Foundation and Beacon Development for a five-year initiative supporting environmental and turtle conservation in Saudi Arabia. The Ras Baridi Turtle Conservation Initiative aims to secure safe nesting environments for endangered Green and Hawksbill turtles through three key objectives: mitigating human impact, launching an education and awareness campaign, and addressing climate change.

#### Project highlights from the 2024 season include:

- 240 Green and 2 Hawksbill female turtles assessed, flipper tagged and had biometric data collected. 11 females were recaptured, with some flipper tags found to be over 30 years old
- Over 500 hatchlings rescued and guided towards the sea.
- Over 200 kg of marine debris was collected and removed from the beaches.
- Three additional wardens, trained to help educate the local community and help protect the sensitive hatching sites from vehicle tracks and human interference.
- Two wardens attended the 42nd International Sea Turtle Symposium in Pattaya, Thailand. They presented the Ras Baridi work and findings to the Indian Ocean South East Asia (IOSEA) regional meeting and wider symposium community, reaching over 500 attendees.
- In collaboration with SHAMS, Ras Baridi wardens assisted the training of six marine rangers from the nearby Prince Mohammed bin Salman Royal Reserve (PMBSRR), over a three day period including theory and practical aspects.





# WASTE MANAGEMENT

Waste minimisation is a key component of our mission to support a circular economy. We strive to leave no trace of waste at our race sites and our approach is guided by the waste management hierarchy as we prioritise avoiding and reducing waste. We achieve this through minimising the use of single use materials, such as cutlery and food containers, and using materials designed for minimal environmental impact, such as the Polymateria biodegradable plastic alternative coffee cups.

Where avoiding and reducing waste is not feasible we seek to reuse or recycle materials. Of our main three sources of waste - general waste, organic waste and car parts - we are able to separate and salvage some components for reuse, such as car parts for local artists and car clubs. Where waste cannot be treated, such as general and organic waste, this is sorted and disposed of in line with local regulation and available infrastructure.

We recognise that there are untapped opportunities to improve our waste management approach by pioneering new and effective waste management systems across the vast range of regions and terrains that we operate in. For Extreme H, we will continue to refine and improve our data collection and monitoring of our waste to better understand our waste footprint. This will inform the development of new and improved waste management strategies.

#### CHALLENGES OF CAPTURING WASTE

Extreme E seeks to exemplify leading sustainability practices, such as in waste management, across all aspects of our operations. However, we acknowledge that there are a series of challenges that inhibit our ability to execute a pioneering strategy, due to both the nature of our business and the resources and support available.

Key challenges identified through the season include the number, infrequency and disparity of locations where Extreme E events are held. This results in a broad range and variety of regulations, standards and infrastructure available to support with waste management. Difficulties identifying waste and recycling management partners further perpetuate the challenges, due to lack of availability and appropriateness of partnerships for Extreme E's needs.



## HYDRO X PRIX WASTE STRATEGY

At the 2024 Hydro X Prix, sustainable waste management was a priority, and we partnered with the Binn Group to ensure a high-performance, circular approach to handling all event waste. Operating from their state-of-theart and built for purpose facility, Binn Group offered a closed-loop solution using their two Material Reclamation Facilities, anaerobic digestion plant, and greenwaste composting systems.

The purposeful design of the facilities ensured that no waste materials from the Hydro X Prix entered any landfill, with 55% being repurposed and returned to market for onward use. The remaining 45% of waste was processed to create Solid Recovered Fuel, a viable source of electrical energy which is used by Scotland's national grid. This comprehensive approach aligns with Scotland's ambitious renewable energy goals and Extreme E's mission to drive environmental responsibility in motorsport. Through this collaboration, we ensured our event waste was not only responsibly managed but actively contributed to a local circular economy and low-carbon future.

#### **LESSONS LEARNT**

Our understanding of the waste segregation and division processes is continually evolving through experience. Extreme E will continue to actively seek industry leading partnerships in each race location and continually assess our operations chain to increasingly prevent, minimise, and repurpose waste.

#### STATISTICS - TOTAL







460 KG

480 KG

Glass

Plastic

240 KG
Cardboard
paper

**840 KG**Food waste

**920 KG** Metal



000

**7.5 KG**Battery waste

100 L Waste oil (for onward refining)

#### HYDRO X PRIX — WASTE OUTCOMES



**55%**Recycled



**45%**Converted to useable electricity energy



O%
Landfill

## OCEAN BOTTLE PARTNERSHIP

a Cean bottle



Extreme E has continued our partnership with Ocean Bottle for Season 4, to reduce levels of plastic waste used and avoiding the potential of polluting the ocean. Ocean Bottle was launched in 2019 and has prevented over 10 million kgs of ocean-bound plastic from reaching our oceans.

The scheme works by collecting 11.4 kilograms worth of ocean bound plastic from high pollution areas (such as the Philippines and Indonesia), for every one Ocean Bottle sold.

The bottles also have inbuilt smart chips, which means owners can register their bottle on the mobile app and, every time the bottle is refilled, they are funding the collecting of more ocean-bound plastic.

Report







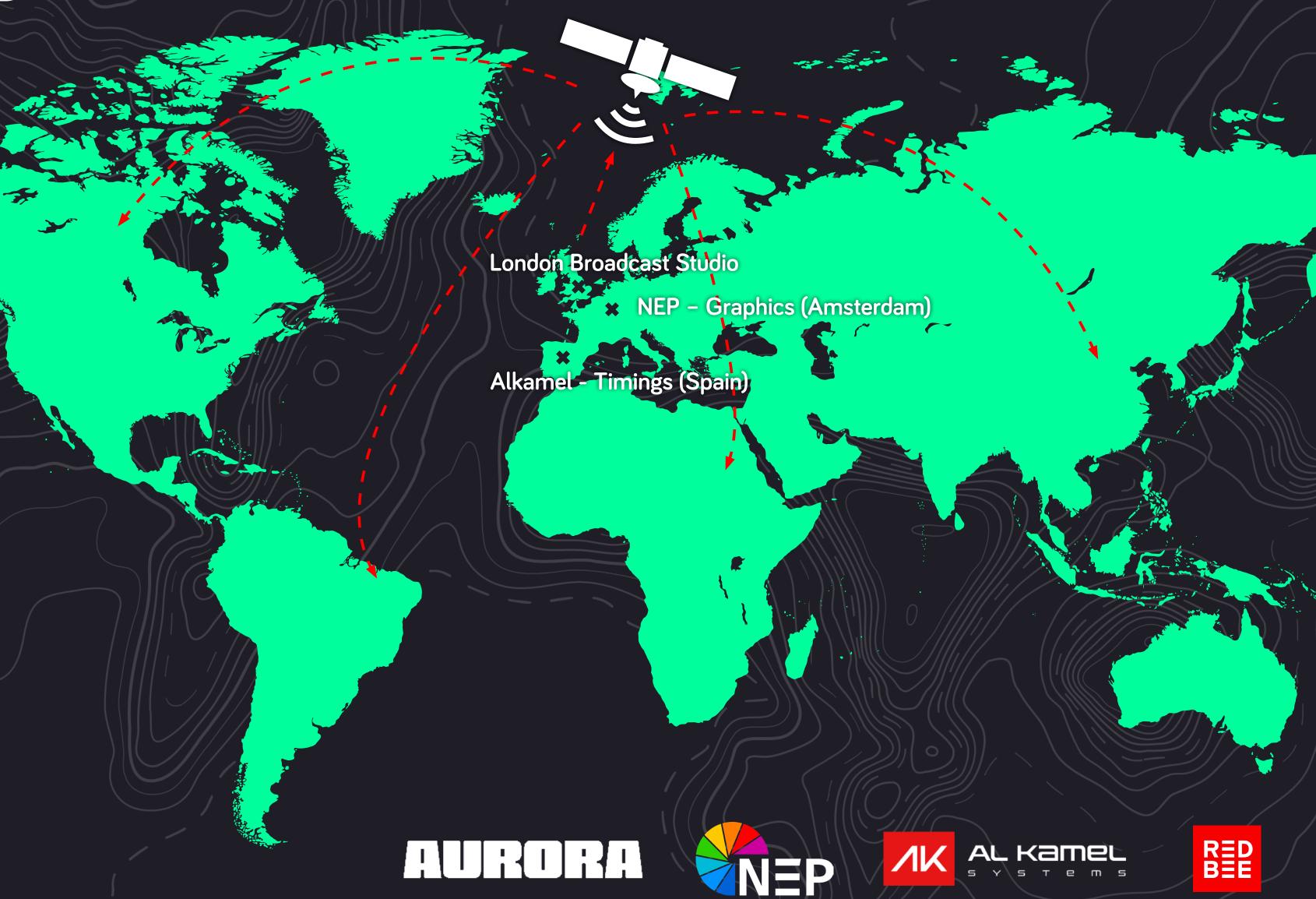
# EXTREME E STUDIO & BROADCASTING

Extreme E's broadcast infrastructure was designed from the outset to achieve two goals:

- Deliver a world-class production from the most remote corners of the globe
- Use and develop emergent broadcast technologies to reduce the environmental impact of the production

The latter is enabled by using a remote production approach. Aurora Media Worldwide, Extreme E's host broadcasting agency, facilitates the broadcasting logistics using remote production teams across four geographic regions:

- On-location staff capturing the event 29 staff members
- Barcelona-based sports graphic
   team -4 staff members
- Netherland-based AR and VR creative graphics team – 7 staff members
- HQ Broadcast Hub 29 staff members



Entertainment

# EXTREME E STUDIO BROADCASTING

Extreme E and Aurora Media Worldwide's global broadcast is a Carbon Neutral Sustainable Production. A significant proportion of the production's emissions are attributed to accommodation and transport. To minimise this, the production maintains a minimal on-site presence from the outset. Instead, staff based across various geographies design their content remotely and share it with the HQ team, where the live show is composited, commentated and distributed.

METRIC	Average Emissions Per Race	Per Hrs Emissions
UNIT	tCO2-e	tCO2-e
2021	38	19.24
2022	149	74.41
2023	111	55.48
2024	80	80.34





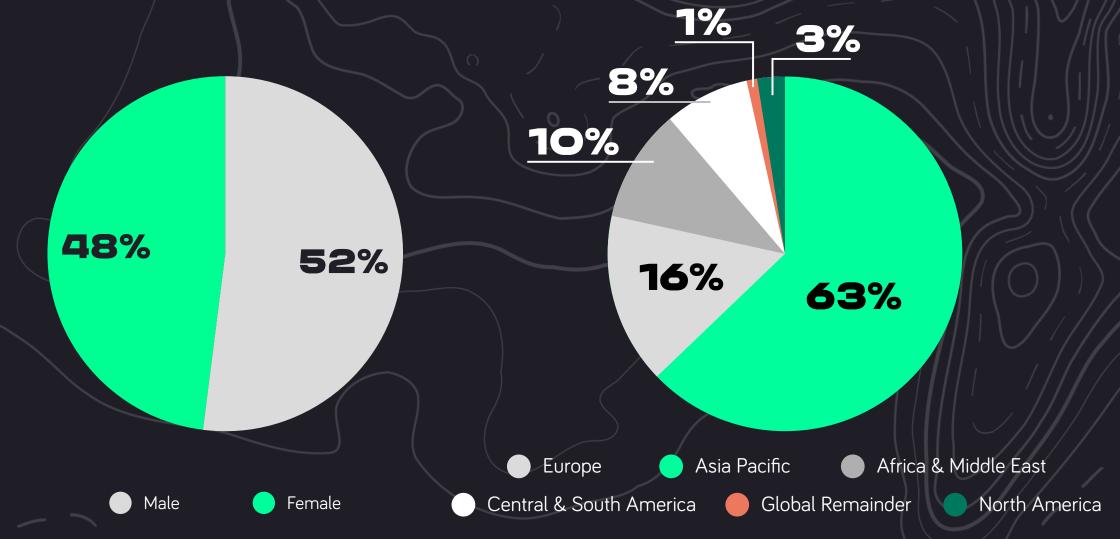
64 Entertainment

## FAN ENGAGEMENT

Over four seasons of high-adrenaline racing, Extreme E has built a growing digital and broadcast audience, captivating motorsport fans while raising awareness of critical environmental issues across our global race locations. Our thrilling format not only draws in viewers but also inspires hope by showcasing forward-focused solutions from our Legacy and technology partners, demonstrating how innovation can drive a sustainable future.

Our gender-equal racing format continues to attract a rising female audience, contributing to a turning tide in motorsport viewership. By offering equal opportunities for male and female drivers, Extreme E is shifting perceptions and proving that elite competition and sustainability can go hand in hand. As our audience expands across digital and broadcast platforms, we remain committed to delivering world-class racing while amplifying environmental awareness and action.

#### **AUDIENCE DEMOGRAPHICS**



GLOBAL BROADCAST AUDIENCE BY REGION

Extreme E's following also continued to grow across its digital and social media channels.

#### **TOTAL EXTREME E CHAMPIONSHIP FAN ENGAGEMENT\*\***

TOTAL BROADCAST AUDIENCE: 427.2 m

**LINEAR TV: 268.5 m** DIGITAL TV: 158.4 m

**TOTAL BROADCAST COVERAGE HOURS: 40,985 hours** 

**ONLINE PRESS ARTICLES: 54,010** 

**TV NEWS FEATURES: 9253** 

**SOCIAL MEDIA POSTS: 285,191** 

SOCIAL MEDIA ENGAGEMENTS: 542.90 m

VIDEO VIEWS: 440.80 m





















**GENDER SPLIT\*** 



# GOVERNANCE

We recognise the importance for a robust governance structure to deliver on our sustainability goals. Extreme E's leadership and board reflects the championship's commitments to advancement in sustainable motorsport, and we are establishing management-level resourcing to ensure appropriate sustainability and social impact oversight across all operations.

Extreme E's Board of Directors is responsible for the leadership, stewardship, strategic direction, and governance of the organisation. The Board is governed by a charter that outlines its roles and responsibilities. The Board meets regularly throughout the year and undertakes an annual review of the C-Suite and its performance including its sustainability risks and performance.

#### **ALEJANDRO AGAG**

Chairman





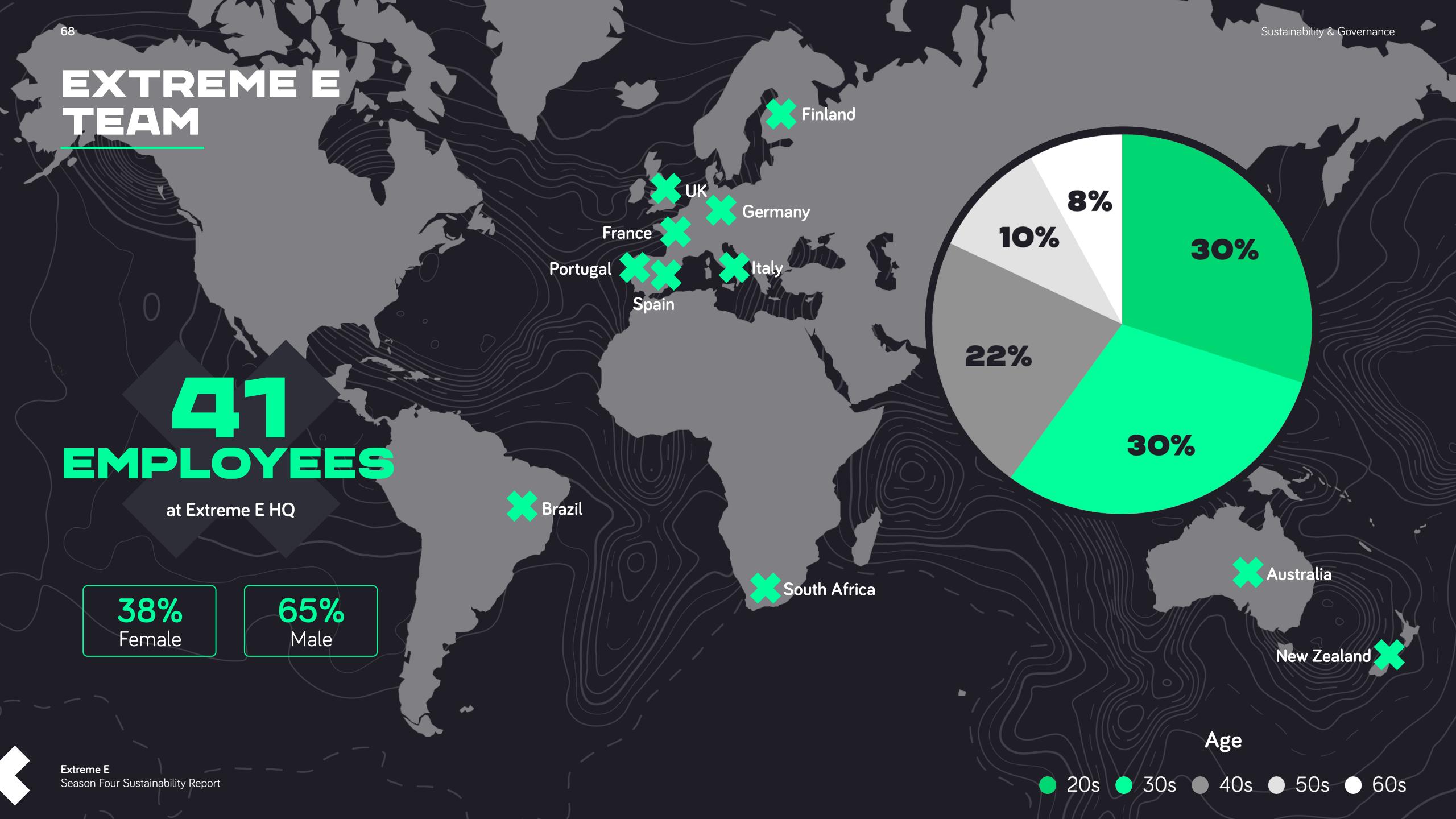


FORMULACE

SHANGHAI JINGCHEN ENTERPRISE MANAGEMENT PARTNERSHIP







Sustainability & Governance

# SIGNATORIES



Since Season 1, we have been proud signatories to the United Nations Sports for Climate Action initiative, led by the UN's Framework Convention on Climate Change (UNFCCC).

As such, we are guided by Sports for Climate Action's five principles:

- Promote greater environmental responsibility
- Reduce the overall impact from sports
- Use its platform to education for climate action
- Promote sustainable and responsible consumption
- Advocate for climate action through communication

The Sports for Climate Action framework commitment was updated during COP26 to further align with the Race to Zero criteria and science-based targets. Extreme E aims to sign the updated commitment letter in Season 4.



We are signatories of the Sports for Nature Framework, led by the IUCN, reaffirming our drive to become an industry leader in environmental stewardship. With these new pledges we commit to:

- Protecting nature and avoiding damage to natural habitats and species
- Restoring and regenerating nature wherever possible
- Understanding and reducing risks to nature in our supply chains
- Educating and inspiring positive action for nature across and beyond sport



As a rightsholder based in the United Kingdom, we are members of the British Association for Sustainable Sport (BASIS). The organisation's mission is to educate, engage and empower sporting entities in the UK to become world-leading in sustainability. Member organisations actively contribute to this goal, in which our sustainability performance can be managed and assessed against the following twelve principles.

SOCIAL	ENVIRONMENTAL	ECONOMIC
Accessibility & Equality	Energy & Emissions	Procurement & Employment
Healthy Options	Waste Management	Economy & Community
Engagement & Education	Water & Effluents	
	Materials & Chemicals	
	Transport & Travel	
	Food & Drink	
	Biodiversity & Habitats	

## AWARDS

Extreme E has been highly commended for its efforts and achievements across numerous sustainability pillars in 2024, receiving recognition alongside leading projects from around the globe for its industry-leading work.



- Sustainability in Sport Award Gold
- Equality, Diversity & Inclusion Award - Silver



- Sustainability Innovation of the Year (ENOWA) - Finalist
- Sustainable Partnership of the Year (Vodafone Business) - Finalist



Environmentally Sustainable
 Sponsorship (ENOWA) - Finalist





 Renewable Energy Project of the Year (ENOWA) - Finalist



 Renewable Energy Project of the Year (ENOWA) - Finalist



 Purpose-Led Partnership (Vodafone Business)- Finalist



 Trailblazer Category (Alejandro Agag) - Finalist



 Climate for Good Award (ENOWA) - Finalist 71 Sustainability & Governance

# CONTINUOUS IMPROVEMENTS

We understand that lasting change stems from consistent small improvements and moments challenging the status quo. Over the course of four seasons Extreme E has consistently defied norms and envisioned new possibilities. Season 4 was defined by numerous small wins, collectively contributing towards meaningful impact and transformative, sustainable change.



#### **RACE SUITS\***

In 2024, Extreme E's Championship Driver racing suits and shoes were constructed from at least 51 percent and 70 percent of regenerated fabric respectively. Sparco's fuel efficiency project adapted the production process to attain zero waste by regenerating scrap fabric, promoting a circular production cycle.



#### **SCOTLAND SOURCING**

To ensure the minimal transportation of goods for on-site hospitality, Extreme E utilised equipment owned by the Buccleuch Estate, which own the land the Hydro X Prix was set upon. All on-site catering was sourced via the estate, negating the need to ship provisions from afar, as the race site was situated in a remote location.

Sustainability & Governance

# CONTINUOUS IMPROVEMENTS



#### **BRING YOUR OWN BOWL**

The championship continues to use its 'Bring Your Own Bowl' policy at all events, circumventing single use plates and utensils from entering landfills. At the Desert X Prix alone, approximately 100,000 items were avoided going to the landfill.



#### **DESERT X PRIX CLIMATE TALKS**

In partnership with the King Abdullah University of Science and Technology (KAUST), Extreme E invited 250 key local delegates to an informative talk and Q&A session to discuss key strategies in protecting local coral and marine life. Extreme E aims to catalyse the progression of innovative ideas at each event, by bringing together individuals from a range of disciplines and backgrounds for collaboration.

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## CONTINUOUS IMPROVEMENTS



#### **UNIFORM RECYCLING**

Extreme E actively encourages its staff to return any unwanted uniforms as part of our commitment to reducing textile waste. Through our partnership with First Mile's textile recycling program, we ensure that these items are diverted from landfill and given a second life. In 2024 alone, we collected 25kg of clothing, which was carefully sorted and either resold for reuse or repurposed into new materials.



#### STAFF GROUND TRANSPORT

At Extreme E's Hydro X Prix in Scotland, a fleet of 27 electric vehicles (EVs) were used by staff and crew to ensure efficient and sustainable transport throughout the event. These EVs were supported on-site by Kempower chargers, which drew power from ENOWA's Hydrogen Fuel Cell, providing an entirely self-reliant and clean method of transportation.



#### **COMMUNITY ENGAGEMENT**

Leading into the Hydro X Prix in Scotland, Extreme E team members alongside Drivers Catie Munnings and Kevin Hansen joined the Kirkconnell Community Gala day, and engaged closely with the local community. During the Hydro X Prix, 71 of these community members received a paddock tour as a competition prize, for an exclusive peek behind the scenes of the championship.



75 Education & Academia

## TIPPING POINT

As part of its commitment to raising awareness of the climate crisis, Extreme E hosts 'Tipping Point' panels at every race location where guests have the opportunity to engage with climate change and sustainability experts, ambassadors, and drivers discussing key regional sustainability issues.

#### SEASON 4 TIPPING POINT PANELS

**EVENT** 

TOPICS

Desert X Prix

Driving Innovation for a Sustainable Future: Oxagon

Coral Protection with KAUST University

Superfoods: Foods that are healthy for people and planet

Hydro X Prix

Hydro Pump Storage: Revolutionising Energy Storage for a Sustainable Future

Vodafone Business: Driving Innovation & Impact with Extreme E

All Hands in Motorsport: Heralding a New Generation of Talent

The River Nith: Cornerstore of the Global Atlantic Salmon Population

EY: Shaping Sustainable Supply Chains







76 Education & Academia

### INTRODUCTION TO THE SCIENTIFIC COMMITTEE

Extreme E's Scientific Committee, consisting of leading academics from across the world, advise closely on the series' education and research programmes, event logistics and impact as well as the recommendation of positive legacy initiatives which support local communities in each race location.



## PROFESSOR RICHARD WASHINGTON

South African native Professor Richard Washington is Professor of Climate Science at the University of Oxford and a Fellow of Keble College, Oxford. With degrees from the University of Natal and University of Oxford, Richard has lectured at the University of Stellenbosch and University of Cape Town.

His doctorate on Africa-wide rainfall variability was undertaken alongside the University of Oxford and the UK's Meteorological Office.

#### Chair of Scientific Committee 2024, and Desert Expert

Professor of Climate Science, University of Oxford







Extreme E's immense, pioneering effort saw a convergence and maturity of success in Season 4. All the energy needs of the race paddock came from innovative green power, enough in the case of the Hydro X Prix for the equivalent of 1000 UK homes for a day. Long-term Legacy project goals, such as the beaver project from the Jurassic X Prix back in Season 1, came good, and the promise of innovation through motorsport has been realised in the Pioneer 25 hydrogen car. "



## PROFESSOR CARLOS DUARTE

Distinguished Professor Carlos Duarte is based at the King Abdullah University of Science and Technology (KAUST) and holds the Tarek Ahmed Juffali Research Chair in Red Sea Ecology.

During his decades of dedication to ocean health, Professor Duarte has published more than 900 scientific papers and has been ranked within the top 1% of Highly-Cited Scientists by Thomson Reuters. His research focuses on understanding the effects of global change in marine ecosystems and developing nature-based solutions to global challenges, including climate change, and evidence-based strategies, which aim to help rebuild the abundance of marine life by 2050.

#### Climate Exper

Distinguished Professor, King Adbullah University of Science and Technology



## PROFESSOR LUCY WOODALL

Marine Biologist Professor Lucy Woodall oversees the championship's ocean events, having dedicated her career to understanding the impact of humans on the health of the world's marine environments and the factors that drive biodiversity in the ocean.

Lucy has also pioneered research into the consequences of marine litter, and the effects and ubiquity of micro plastics in the deep sea.

#### **Ocean Expert**

Principal Scientist at Nekton Foundation, University of Exeter



**79** Education & Academia

## DR. FRANCISCO OLIVIERA FILHO

Dr. Francisco Oliveira is a leading Brazilian conservation expert with over 20 years' experience of working on the issues facing the Amazon Rainforest and its communities.

Formerly the Director of Policies to combat deforestation at the Brazilian Ministry of the Environment (2012-2015), he recently completed a PhD on Amazon conservation in the Department of Geography at the University of Cambridge. Francisco believes working with local communities to find real workable solutions is an important way to generate change and protect the region for future generations. He is currently working for the Gordon and Betty Foundation to conserve the Amazon rainforest and avoid the tipping point.

#### **Amazon Expert and Amazon Deforestation Specialist**

University of Cambridge and Fordon and Betty Moore Foundation



### Extreme E Season Four Sustainability Report

### PROFESSOR PETER WADHAMS

Professor Peter Wadhams has spent his career in the polar regions, with more than 50 expeditions to the Arctic, including some in submarines with the Royal Navy under the polar ice.

He is credited with being the first scientist to show that the ice that once covered the Arctic Ocean was beginning to thin as well as to shrink. He was Director of the Scott Polar Research Institute in Cambridge from 1987 to 1992, and has served as Professor of Ocean Physics at the University of Cambridge since 2001.

His book, A Farewell to Ice, tells the story of his study of these alarming Arctic trends and describes what the consequences for our planet will be if Arctic ice continues to disappear at its current rate.

#### **Arctic Expert**

Head of Ocean Physics, University of Cambridge





## E360 PARTNERSHIP

#### **SUPERCHARGING MOBILITY**

In 2024, The Public Investment Fund (PIF) announced a multi-year partnership, Electric 360, with Formula E, Extreme H, and the E1 Series. This unique partnership supports the growth of electric motor sports and their role in advancing the future of electric mobility.

Drawing together initiatives that underscore the power of electric motor sports to drive technological innovation, the partnership aims to revolutionise sustainable transport and future mobility – while leading the way in carbon reduction.

The partnership will promote educational opportunities tied to the cutting-edge engineering of electric motor sports, as well as community, social programs and environmental stewardship.

#### WHO ARE PIF?

The Public Investment Fund (PIF) is the sovereign wealth fund of the Kingdom of Saudi Arabia and one of the world's most innovative investors. With headquarters in Riyadh, PIF is the engine driving the transformation of Saudi Arabia's economy.

PIF is ranked by Global SWF as one of the top sovereign wealth funds in the world and number 1 in the Middle East for Sustainability among the top 100 sovereign wealth funds globally.

Passionate about leading local economic development, localizing cutting-edge technology and knowledge, PIF is expanding its portfolio of international assets, investing in global sectors and markets by building strategic partnerships, and launching initiatives to contribute to the goals of Vision 2030.





## DEVELOPING THE PIONEER 25

The launch of the Pioneer 25 represents a bold step forward in the transition to clean energy, showcasing cutting-edge hydrogen technology in a competitive racing environment.

Drawing from over three years of data from Extreme E, the new chassis, manufactured by Spark Racing Technology, is designed for optimal performance, safety, and resilience. A central tenet of the championships' commitment to racing sustainably, the Pioneer 25 will be exclusively fuelled with green hydrogen, which is entirely generated with renewable energy sources.

This transition not only promises faster and more intense races, but also signifies a commitment to exploring the potential of hydrogen as a sustainable and powerful source of energy, revolutionising carbon-free mobility on a global scale.



July 2024

Dumfries &

Galloway,

Scotland

First public test

## PIONEER 25 TESTING

The Pioneer 25 has undergone a rigorous and intensive testing programme, equivalent to three seasons worth of testing to ensure it is race ready upon the launch of Extreme H.

#### O November 2023

First chassis test car completed

Spark Factory, France

#### November 2023

First run on track

Circuit Automobiles La Ferte Gaucher France

Open December 2023

KPI sign off test

Circuit Automobiles La Ferte Gaucher France

First off-road test

Q January 2024

La Galicet, France

Battery pack pressure test

> Fortescue Headquarters, UK

June 2024

**Q** June 2024

Design completed Spark Factory, France

O August 2024

Safety testing

UTAC test facility, Montlhery, France

October 2024

Battery pack deceleration test

CSI, Italy

October 2024

Tyre & fuel cell tésting

Fontjoncouse, France

O January 2025

Fleet production complete

Spark Factory, France

**Q June 2025** 

FIA full car inspection

Valleiry, France

June 2025

Tyre testing

Fontjoncouse, France

# HOW DOES THE PIONEER 25 WORK?

- Fuel tank (hydrogen): 2 x 25L tanks store hydrogen gas onboard, stored at 400 bar.
- Fuel cell stack: The Symbio Hydrogen Fuel Cell with 75kW output supplies power to the battery.
- Traction battery: The Fortescue ZERO 325kW battery supplies all of the power to the car.
- DC/DC converter: The DC/DC converter creates a low-voltage power supply to run the vehicle systems, whilst maintaining a high-voltage supply to the MCU.
- MCU: The motor control unit controls all of the high-voltage power supply to the eMotors.
- eMotors: Using the power under control of the MCU, the eMotors drive the vehicles wheels.



## ODYSSEY 21 & PIONEER 25 SIDE-BY-SIDE COMPARISON

FEATURE	ODYSSEY 21	PIONEER 25
Overall length	4.4m	4.4m
Overall width	2.3m	2.4m
Overall height	1.9m	1.9m
Weight	1895kg	2200kg
Suspension	Double wishbone independent suspension	Double wishbone independent suspension, driver adjustable live valve technology
Dampers	Three-way adjustable dampers	Twin front and rear coil over dampers
Battery capacity/output	50kWh / 400kW / 800V	40kWh / 325kW / 850V
eMotors	Front and rear 200kW eMotors	Front and rear 200kW eMotors
Hydrogen Fuel Cell output	N/A	75kW Hydrogen Fuel Cell technology
Hydrogen tanks	N/A	2 x 25L tanks to storge 2kg of gas at 400 bar pressure
Tyres	Continental CrossContact race tyre using ContiRe.Tex recycling technology	Testing on BF Goodridge KDR3 tyre - LT 37 x 1250 R17
Seat configuration	Two seater	Single, central seat
Driver adjustability  Extreme E  Season Four Sustainability Report	N/A	Adjustable seat & steering wheel position

