To: Mr. Robert H. Niehaus, Chairman of the Board, Iridium,
cc: Mr. Thomas C. Canfield, Director, Iridium
cc: Mr. Matthew J. Desch, Chief Executive Officer, Iridium
cc: Mr. Thomas J. Fitzpatrick, Chief Financial Officer and Chief Administrative Officer, Iridium
cc: Mr. L. Anthony Frazier, Director, Iridium
cc: Ms. Jane L Harman, Director, Iridium
cc: Mr. Alvin B. Krongard, Director, Iridium
cc: Ms. Suzanne E. McBride, Chief Operations Officer, Iridium
cc: Mr. Eric T. Olson, Director, Iridium
cc: Mr. Parker W. Rush, Director, Iridium
cc: Ms. Kay N. Sears, Director, Iridium
cc: Ms. Jacqueline E. Yeaney, Director, Iridium
cc: Secretariat of the United Nations (Food & Agriculture Organisation) Indian Ocean Tuna Commission
cc: United Nations Office for Outer Space Affairs (UNOOSA), Director, Aarti Holla-Maini

26 January 2024

Global coalition calls on Iridium to phase out the provision of GPS satellite services to companies that use harmful drifting Fish Aggregating Devices

Dear Mr. Niehaus, Chairman of the Board, Iridium,

We are writing to you on behalf of a global coalition of marine conservation and animal welfare groups, scientists, academics, parliamentarians, representatives from the space, technology, and cultural sectors, as well as concerned individuals, with an observation and request concerning Iridium's commitment to environmental sustainability.

We are concerned that Iridium, via its 'low-earth-orbit' satellite network, is enabling certain unsustainable commercial fishing activities in the Indian Ocean by providing crucial GPS communications capability to companies engaged in industrial-scale fishing of overfished stocks.

We recognise, however, the work that Iridium does in many and varied sectors across the world, including personal communications, sport, humanitarian aid delivery and logistics, polar exploration, ground and air transportation, aviation, energy, national security, emergency communications and scientific research across many different fields.

In fact, we highly applaud Iridium's scientific research work in the field of wildlife conservation including field communications, surveillance and alerting, and location-based services, all of which are helping in the global fight against poaching and the illegal wildlife trade. We also applaud Iridium's commendable partnership with The Outlaw Ocean Project which do great work exposing wrongdoing in fisheries.

We also note Iridium's crucial work in providing satellite communication services to the maritime sector. This includes, but is not limited to safety communications, vessel data recording, weather updates, anti-piracy efforts, lifeboat operations, bridge communications, crew communications and welfare, cargo monitoring, autonomous systems, and leisure boating.

However, there is one small area of your Fisheries and Commercial Fishing operations which falls under your 'Maritime operations' work that we believe to be extremely unsustainable. That is the "Real-time GPS Reporting / Tracking" of harmful drifting Fish Aggregating Devices (dFADs) that use Iridium's Short Burst Data (SBD) services[1]. This is the key area of Iridium's operations that we are concerned about, and we would therefore strongly encourage Iridium to remove it from your very wide portfolio of satellite services.

According to your website, *"Iridium Burst is a service that makes it possible to transmit data to tens, hundreds, thousands, even millions of enabled devices at a time."*[2] We refer in particular to the use of the Iridium Short Burst Data (SBD) Module 9602[3] and the Iridium Short Burst Data (SBD) Module 9603[4], which are contained inside tens of thousands of enabled devices in the Indian Ocean, notably Spanish-made solar-powered satellite buoys. It is a great shame for the marine environment that these satellite buoys are frequently being found washed up on beaches[5], coral reefs, and mangroves across many Indian Ocean costal states such as the Seychelles, Somalia and Kenya.

We have reason to believe that this area of your business operations, which unfortunately generates a great deal of plastic waste and hazardous electronic waste pollution, must generate only a very small and insignificant fraction of your overall revenue for the entire company. We do not believe that, by removing it, Iridium would suffer any material financial losses to its overall balance sheet. We believe that the sales of Iridium Burst enabled devices for tuna purse seine fishing operations in the Indian Ocean would likely account for less than rounding error of your annual turnover. Conversely, a phasing out of your SBD services to the Spanish tuna overfishing fleet would have a hugely positive knock-on effect on Indian Ocean marine ecosystems as well as the threatened biodiversity lives within those ecosystems.

We note from your website that Iridium is a *"leader in creating sustainable solutions for a stronger, safer tomorrow"* and that *"Iridium's satellite de-orbiting expertise, communications technology, and company policies drive a holistic approach to corporate sustainability."* Your company's Environmental Sustainability Policy Statement [6] (ESPS) states that *"Environmental sustainability at Iridium means conducting our business in a manner that acknowledges, measures, and takes responsibility for our direct and indirect impacts on the environment."* It is also stated on your website that Iridium strives to conduct its business in a way that *"carefully manages risk and ensures [your] growth is sustainable, thereby enabling [you] to continue to invest in [your] people, products and services, and communities with minimal impact to the environment."* Iridium's Environmental Sustainability Policy Statemen also says that *"Our products, services and operations are **safe** for [...] the environment [emphasis added]."*

[1] https://www.iridium.com/services/iridium-sbd/
[2] https://www.iridium.com/services/iridium-burst/
[3] https://www.iridium.com/products/iridium-9602/
[4] https://www.iridium.com/products/iridium-9603/
[5] https://news.mongabay.com/2021/04/european-tuna-boats-dump-fishing-debris-in-seychelles-waters-with-impunity/
[6] https://www.iridium.com/resources/resource-download/?idr_resource_download_nonce=763eaa21f2&idr_force_download=1&idr_zip_download=0&resource-id=360066

We would therefore be most grateful if Iridium could please abide by these statements and join us in helping to protect the marine environment by halting the provision of Real-time GPS Reporting / Tracking through Iridium's Short Burst data services to the tuna fishing industry in the Indian Ocean.
Regarding the protection of Indian Ocean biodiversity, there is much peer-reviewed science which suggests that use of controversial Iridium GPS-tracked dFADs is contributing vastly to the overfishing of juvenile yellowfin tuna populations, whilst shark, turtle and cetacean populations are being decimated in the crossfire as unintended, although sometimes targeted, 'bycatch'.

Drifting FADs are a type of harmful fishing gear used primarily by purse seine tuna fisheries. A dFAD constitutes a quantity of floating material that is set out at sea, around which threatened marine species such as juvenile tuna, sharks, turtles, and cetaceans congregate. Fish attracted to dFADs can become easy targets for encircling purse seine nets. The use of dFADs is controversial[7] and their usage has grown exponentially over the last three decades. It is estimated that well over a hundred thousand dFADs are deployed in purse seine tuna fisheries around the world each year. These dFADs generally consist of a floating raft, submerged materials such as fishing nets that can extend to depths of 100 metres, and a satellite buoy that allows fishing vessels to monitor the dFAD from afar.

As mentioned, the destructive nature of dFADs is well documented. We would therefore like you to consider the list of peer-reviewed scientific papers below, which highlight the hugely detrimental impact that dFADs have on marine ecosystems in general and on tuna populations like Indian Ocean yellowfin tuna which has been overfished since 2015. Shark, turtle, and cetacean populations are also affected, whilst toxic electronic waste pollution and micro plastics pollution are caused by lost, abandoned, or discarded dFADs, devastating pristine coral reef atolls and beaches of the Indian Ocean.

A list of scientific papers that highlight
the destructive nature of drifting Fish Aggregating Devices

1. Guillermo Gomez , Samantha Farquhar , Henry Bell , Eric Laschever & Stacy Hall (2020)
   'The IUU Nature of FADs: Implications for Tuna Management and Markets'[8]

2. Banks, R. and Zaharia M. (2020)
   'Characterization of the Costs and Benefits Related to Lost and/or Abandoned Fish Aggregating Devices in the Western and Central Pacific Ocean'[9]

3. Quentin Hanich, Ruth Davis, Glen Holmes, Elizabeth-Rose Amidjogbe and Brooke Campbell (2019)
   'Drifting Fish Aggregating Devices (FADs) Deploying, Soaking and Setting – When Is a FAD 'Fishing'?[10]

[7] https://www.theguardian.com/environment/2023/feb/02/ms-joins-calls-for-eu-to-restrict-harmful-tuna-fishing-methods-in-indian-ocean
[8] https://www.tandfonline.com/doi/full/10.1080/08920753.2020.1845585
[9] https://www.bmis-bycatch.org/index.php/system/files/zotero_attachments/library_1/7RPKCVDC%20-%20Poseidon_Pew1514_FAD-final-report_270120.pdf
[10] https://brill.com/view/journals/estu/34/4/article-p731_8.xml

4. Pierpaolo Consolia, Mauro Sinopolib, Alan Deidunc, Simonepietro Canesed, Claudio Bertie, Franco Andalorob, Teresa Romeoa (2020)
'The Impact of Marine Litter from Fish Aggregation Devices on Vulnerable Marine Benthic Habitats of the Central Mediterranean Sea'[11]

5. Lucas Bonnin, Christophe Lett, Laurent Dagorn, John David Filmalter, Fabien Forget, Philippe Verley, Manuela Capello (2020)
'Can Drifting Objects Drive the Movements of a Vulnerable Pelagic Shark?'[12]

6. John David Filmalter, Manuela Capello, Jean-Louis Deneubourg, Paul Denfer Cowley, Laurent Dagorn (2013)
'Looking Behind the Curtain: Quantifying Massive Shark Mortality in Fish Aggregating Devices'[13]

7. Alexandra Diallo, Mariana Travassos Tolotti, Philippe Sabarros, Laurent Dagorn, Jean-Louis Deneubourg, Hilario Murua, Jon Ruiz Gondra, Lourdes Ramos Alonso, José Carlos Báez, Francisco J. Abascal Crespo, Pedro José Pascual Alayón and Manuela Capello (2019)
'Silky Shark Population Trend in the Indian Ocean Derived from its Associative Behaviour with Floating Objects'[14]

8. Alexandra Maufroy , Emmanuel Chassot, Rocío Joo, David Michael Kaplan (2015)
'Large-Scale Examination of Spatio-Temporal Patterns of Drifting Fish Aggregating Devices (dFADs) from Tropical Tuna Fisheries of the Indian and Atlantic Oceans'[15]

9. Martin Stelfox, Christophe Lett, Geraldine Reid, Graham Souch, Michael Sweet (2020)
'Minimum Drift Times Infer Trajectories of Ghost Nets Found in the Maldives'[16]

10. David J. Curnick, David A. Feary, Geórgenes H. Cavalcante (2020)
'Risks to Large Marine Protected Areas Posed by Drifting Fish Aggregation Devices'[17]

11. Burt, A.J., Raguain, J., Sanchez, C. et al. (2020)
'The Costs of Removing the Unsanctioned Import of Marine Plastic Litter to Small Island States'[18]

12. Robin Churchill (2021)
'Just a Harmless Fishing FAD – or Does the Use of FADs Contravene International Marine Pollution Law?'[19]

13. Francis Marsac, Alain Fonteneau, Frédéric Ménard (2000)
'Drifting FADs Used in Tuna Fisheries: An Ecological Trap?'[20]

14. Megan Bailey and U. Rashid Sumaila (2010)

[11] https://cttf.uk/wp-content/uploads/2021/04/Consoli-et-al.-2020-published-paper.pdf
[12] https://brill.com/view/journals/estu/34/4/article-p731_8.xml
[13] https://www.fao.org/3/bh042e/bh042e.pdf
[14] https://iotc.org/sites/default/files/documents/2019/09/IOTC-2019-WPEB15-23_Rev1.pdf
[15] https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0128023
[11] https://repository.derby.ac.uk/download/b45e3fe6bcbad070e74a4b5f1a413b52e66632fb799a4db0b3e49311ddd86ca4/4248304/Manuscript_final.pdf
[17] https://conbio.onlinelibrary.wiley.com/doi/10.1111/cobi.13684
[18] https://www.nature.com/articles/s41598-020-71444-6
[19] https://www.tandfonline.com/doi/full/10.1080/00908320.2021.1901342
[20] https://archimer.ifremer.fr/doc/00042/15303/12636.pdf

'The Cost of Juvenile Fishing: FADs Management in the Western and Central Pacific Ocean Tuna Fishery'[21]

We urge Iridium to show environmental leadership by agreeing not to enter into any new contracts with companies that use Iridium Short Burst data services inside harmful dFAD satellite beacons.

We would be happy to meet with you at any time to discuss this issue and would also welcome your views. Above all, we look forward to positive engagement with your company.

Yours sincerely (in no particular order),

Marine Conservation and Environmental/Wildlife Protection Organisations

1. Brendon Sing, Co-Founder, Shark Guardian, United Kingdom
2. Monica Verbeek, Executive Director, Seas At Risk, Belgium
3. Dr. Sylvia Earle, Founder and Explorer, Mission Blue, United States
4. Dr. Susan Lieberman, Ph.D., Vice President, International Policy, Wildlife Conservation Society, United States
5. Claire Nouvian, President and Founder, Bloom, France
6. Dr. Nirmal Shah, CEO, Nature Seychelles, Seychelles
7. Adrian Skerrett, Chairman & Norman Weber, CEO, Island Conservation Society, Seychelles
8. Dr. Martin Stelfox, Founder, Olive Ridley Project, United Kingdom/Maldives
9. Dr. Guy Stevens, CEO & Co-Founder, Manta Trust, United Kingdom
10. Daniel Fernando, Director of the Fisheries and Policy Programme, Blue Resources Trust, Sri Lanka
11. Mark Spalding, President, The Ocean Foundation, United States
12. Rebecca Regnery, Senior Director Wildlife, Humane Society International, United States
13. Barbara Slee, Senior Program Manager - International Policy, International Fund for Animal Welfare (IFAW), Netherlands
14. Mary Rice, Executive Director, Environmental Investigation Agency UK, United Kingdom
15. Steve Trent, CEO and Founder, Environmental Justice Foundation, United Kingdom
16. Dr. Jill Robinson MBE, Founder & CEO, Animals Asia, Hong Kong
17. Gonçalo Ferreira de Carvalho, Executive Coordinator, Sciaena, Portugal
18. Sandra Altherr, Head of Science, Pro Wildlife, Germany
19. Abigail Kidd, Operations Manager, Local Ocean Conservation, Kenya
20. Randall Arauz, International Marine Conservation Policy Advisor, Marine Watch International, United States
21. Alexia Wellbelove, Campaign Manager - Fisheries & Threatened Species, Australian Marine Conservation Society, Australia
22. Georgia Hancock, Director and Senior Attorney, Marine Life Program, Animal Welfare Institute, United States
23. Paulo Cavalcanti, Co-Founder, Divers for Sharks, Brazil
24. Brazilian Humpback Whale Institute, President, Eduardo Camargo, Brazil
25. Nalu Machado, President, IBRACON / Brazilian Institute for Nature Conservation, Brazil
26. Fernando Reis, Founder, Sharks Educational Institute, Portugal
27. Doug Woodring, Founder, Ocean Recovery Alliance, Hong Kong
28. Marco Manghisi, Co-Founder, The Oceancy, Estonia
29. José Carlos Cidade, Board Chair, OnGaia- Associação de Defesa do Ambiente, Portugal
30. Dr. Teale N. Phelps Bondaroff, Co-Founder, Oceans Asia Foundation, Hong Kong
31. Gloria Hidalga, Secretary, Océanos de Vida Libre, Spain
32. Sandra Stewart, Co-Founder, Rob Stewart Sharkwater Foundation, Canada
33. Andrea Richey, Executive Director, Hong Kong Shark Foundation, Hong Kong
34. Captain Paul Watson, Founder, Captain Paul Watson Foundation, United States
35. Gary Stokes, Neptune's Pirates, Captain Paul Watson Foundation, United Kingdom
36. Nathalie Gil, President, Sea Shepherd Brasil, Brazil
37. Lamya Essemlali, President, Sea Shepherd France, France
38. Jessica Dickens, President, Cetacean Society International, United States
39. Kiyoshi Ogawa, Representative Director, Japan Wildlife Conservation Society, Japan
40. Alex Smolinsky, President, Sharkproject International, Switzerland

[21] https://d2ouvy59p0dg6k.cloudfront.net/downloads/background_paper___cost_of_juvenile_fishing.pdf

41. Ocean Crew, Ocean Rebellion, United Kingdom
42. Erica Lyman, Director, Global Law Alliance for Animals and the Environment, United States
43. Urs Baumgartner, Founder, ekolibrium, Spain
44. Antoinette Vermilye, Co-Founder, Where's The Fish? and Gallifrey Foundation, Switzerland
45. Melanie Salmon, Founder, Global Ocean, Switzerland
46. Chris Butler-Stroud, CEO, Whale and Dolphin Conservation, United Kingdom
47. Isabel Naranjo, President, Centro Restauración de Species Marinas Amenazadas (CREMA), Costa Rica
48. Dr. Jack Dyer, CEO, Blue Economy Future, South Africa
49. Alex Antoniou, CEO, Fins Attached Marine Research & Conservation, United States
50. Ulrich Kirsche & Ulrich Karlowski, Founders, Deutsche Stiftung Meeresschutz, Germany
51. Jorge Serendero Hülssner, Director & CEO, For The Oceans Foundation, United States
52. Sigmar Solbach, Chairman, Society for Dolphin Conservation, Germany
53. Dr. Erick Ross Salazar, Executive Director, Migramar, United States
54. Birgith Sloth, Chairman, Society for the Conservation of Marine Mammals, Denmark
55. Cristina Mittermeier, Co-Founder & President, Sea Legacy, United States/Canada
56. Alasdair Harris, Executive Director, Blue Ventures, United Kingdom
57. Lloyd Gofton, Operations Director, Blue Planet Society, United Kingdom
58. Matthieu Lapinski, President, Ailerons, France
59. Helder Careto, Executive Secretary, Grupa de Estudios de Ordenamento do Território e Ambiente (GEOTA), Portugal
60. Martin Purves, Managing Director, International Pole & Line Foundation
61. Brian Stewart, Director, United Conservationists, United States
62. Sophie le Clue, CEO, ADM Capital Foundation, Hong Kong
63. Regina Domingo, Founder, Nakawe Project, Mexico
64. Zakia Rashid, Founder & Director, MotherOceanBlue, United Kingdom.
65. Lloyd Nelmes, Marine Project Officer, Sea Trust Wales, United Kingdom
66. Jamie Pollack, Executive Director, Shark Angels, United States
67. David McGuire, Director, Shark Stewards, United States
68. Dr. Marie Levine, Executive Director, Shark Research Institute, United States
69. Stefanie Brendl, Founder and Executive Director, Shark Allies, United States
70. Katrien Vandevelde and Jan Wouters, Founders, BlueShark Conservation, Belgium
71. Felipe Vallejo, Executive Director, Equilibrio Azul, Ecuador
72. Sigrid Lueber, President and Founder, OceanCare, Switzerland
73. Alexander Buttigieg, Founder, Sharkman's World and The Shark Group, United States
74. Matt Mellen, Founder, Ecohustler, United Kingdom
75. Ericka Ceballos, CEO and Founder, CATCA Environmental and Wildlife Society, Canada
76. Shawn Heinrichs, Founder, Only One, United States
77. Sophie Atkinson, Project Coordinator, Sustainable Fisheries and Communities Trust (SFACT), United Kingdom
78. Nika Dubrovsky, Director, David Graeber Institute and Museum of Care, United Kingdom
79. Tré Packard, Founder & Executive Director, PangeaSeed Foundation & Sea Walls, United States
80. Fish Free February, Jess Haines, Campaign Manager, United Kingdom

Space and Technology Sector

81. Madin Maseeh, President, Maldives Space Research Organisation (MSRO), Maldives
82. Ted Schmitt, Senior Director, Conservation, Allen Institute for Artificial Intelligence, United States

Media, Culture & Arts Sector

83. Chris Packham, Wildlife TV Presenter, Conservationist and Campaigner, United Kingdom
84. Hugh Fearnley-Whittingstall, Broadcaster and Campaigner, United Kingdom
85. Amanda Holden, Actress, Judge at 'Britain's Got Talent', Presenter at Heart FM, Singer at EMI Records, United Kingdom
86. Ali Tabrizi, Founder, 'Seaspiracy' movie, Australia
87. Louie Psihoyos, Director of 'The Cove' Oscar-winning documentary & Executive Director, Oceanic Preservation Society, (United States)
88. Brian Eno, Activist and Musician, United Kingdom
89. Jamie Theakston, Television Presenter, Producer, Narrator and Actor, United Kingdom
90. Alan Carr, Comedian, United Kingdom
91. Louis J. Butler AKA Louis VI, Award Winning Film Composer, United Kingdom
92. Matt Black, DJ and musician, Ninja Tune, United Kingdom
93. Marcus Lyon, Artist, United Kingdom
94. Clive Russell, Design Director, David Graeber Institute and This Ain't Rock 'n' Roll, United Kingdom
95. Jay Griffiths, award winning Writer, United Kingdom

96. Paul Ewen, award winning Writer, United Kingdom

Scientists & Academia

97. Professor Callum Roberts, Professor of Marine Conservation, Centre for Ecology and Conservation, University of Exeter, United Kingdom
98. Dr. Rashid Sumaila, Professor, Institute for the Oceans and Fisheries, University of British Columbia, Canada
99. Professor Yvonne Sadovy de Mitcheson, IUCN Groupers & Wrasses Specialist Group, University of Hong Kong (ret.), Hong Kong
100. Dr. April Burt, Environmental Researcher, Queen's College, Oxford University, United Kingdom / Consulting Scientist, Seychelles Islands Foundation, Seychelles
101. Jeremy Raguain, Seychellois Conservationist, Graduate Student at Columbia University, Member of the Sustainable Ocean Alliance, Alliance of Small Islands States Fellow (2022), Co-Founder, Aldabra Clean Up Project, Seychelles
102. Dr. Simon Dedman, Postdoctoral Researcher: Shark Movement & Fisheries Management, Florida International University, United States
103. Dr. Steven Lindfield, Fisheries Ecologist and Honorary Visiting Fellow at the University of Technology, Sydney, Australia
104. Dr. Vanessa Jaiteh, Centre for Development and Environment, University of Bern, Switzerland
105. Professor Amanda Whitfort, Associate Professor, Faculty of Law, Hong Kong University, Hong Kong
106. Ila France Porcher, Shark Behaviour Specialist Advisor, Let Sharks Live, Morocco
107. Dr Chung Shan Shan, Director of the Master of Science in Environmental & Public Health Management Programme, Department of Biology, Hong Kong Baptist University, Hong Kong.
108. Mark Jones, BVSc MSc MRCVS, Veterinarian, United Kingdom

Lawmakers from the United Kingdom, European Union and Hong Kong

109. Baroness Rosie Boycott, Life Peer, British House of Lords, United Kingdom
110. Baroness Jenny Jones of Moulsecoomb, British House of Lords, United Kingdom
111. Martyn Day MP, Member of Parliament for Linlithgow and East Falkirk Constituency, United Kingdom
112. Caroline Roose, Member of the European Parliament Committee on Fisheries (PECH), France
113. Francisco Guerreiro, Member of the European Parliament Committee on Fisheries (PECH), Portugal
114. Grace O'Sullivan, Member of the European Parliament Committee on Fisheries (PECH), Ireland
115. Hon. Elizabeth Quat, SBS, JP, Hong Kong Legislative Council Member, Hong Kong S.A.R., China

Sustainable Seafood Suppliers

116. Charles Redfern, Founder, Fish 4 Ever, United Kingdom
117. Julius Palm, Director of Sustainability & Innovations, Follow Food, Germany
118. René Benguerel, Co-Founder & Director, Blueyou Group, Switzerland

LOGOS


SHARK GUARDIAN
SEAS AT RISK
BLOOM
Wildlife Conservation Society
HK SHARK FOUNDATION
DIVERS FOR SHARKS
INSTITUTO BALEIA JUBARTE
IBRACON
Sei
GALLIFREY FOUNDATION
ecohustler
OCEAN REBELLION
LOCAL OCEAN CONSERVATION
PRO WILDLIFE
SEASPIRACY
Ocean Recovery Alliance
ekolibrium
THE OCEANC
ONGaia
OCEANSASIA FOUNDATION LTD
OCÉANOS DE VIDA LIBRE
OLIVE RIDLEY PROJECT
ROB STEWART SHARKWATER FOUNDATION
Marine Watch International
NATURE SEYCHELLES
eia environmental investigation agency
CREMA
Global Ocean
WHALE AND DOLPHIN CONSERVATION
WDC
WTF
Animal Welfare Institute
SCIAENA
SHARK RESEARCH INSTITUTE
PINS ATTACHED MARINE RESEARCH & CONSERVATION
CETACEAN SOCIETY INTERNATIONAL
DEUTSCHE STIFTUNG MEERESSCHUTZ (DSM)
HUMANE SOCIETY INTERNATIONAL
for the oceans foundation
peace for the ocean
one ocean worldwide coalition
OPS: OCEANIC PRESERVATION SOCIETY
SHARK STEWARDS
GLOBAL LAW ALLIANCE FOR ANIMALS AND THE ENVIRONMENT
GRD
MIGRAMAR
JWCS JAPAN WILDLIFE CONSERVATION SOCIETY
認定NPO法人 野生生物保全論研究会
GSM
SeaLegacy
Manta TRUST
blue ventures beyond conservation
UNIVERSITY OF EXETER Centre for Ecology and Conservation
ailerons
geota
AnimalsAsia
Australian Marine Conservation Society
UBC Institute for the Oceans and Fisheries
CHRISPACKHAM
ifaw
IPNLF INTERNATIONAL POLE & LINE FOUNDATION
UC UNITED CONSERVATIONISTS
FISH 4 EVER
Neptune's Pirates
CAPTAIN PAUL WATSON FOUNDATION


ENVIRONMENTAL JUSTICE FOUNDATION
SIF
seychelles islands foundation
THE QUEEN'S COLLEGE
UNIVERSITY OF OXFORD
Aldabra Clean Up Project
MISSION BLUE
SYLVIA EARLE ALLIANCE
CAPTAIN PAUL WATSON FOUNDATION
ADMCF
LET SHARKS LIVE
SEA SHEPHERD BRASIL
SEA SHEPHERD FRANCE
COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK
NAKAWE Project
MOTHEROCEANBLUE
education protection conservation
SEA TRUST WALES
SHARK ANGELS
www.sharkangels.org
ISLAND CONSERVATION SOCIETY
equilibrioAzul
la vida empezó en el agua
ocean care
IUCN
Groupers & Wrasses Specialist Group
香 港 大 學
THE UNIVERSITY OF HONG KONG
HKU LAW
HOUSE OF LORDS
FIU
FLORIDA INTERNATIONAL UNIVERSITY
SHARK ALLIES
葛珮帆
Elizabeth QUAT
LEGISLATIVE COUNCILLOR
SHARK PROJECT
followfood
blue
resources trust
blueYou
CATCA Environmental and Wildlife Society
CEWS
Blue Shark
cde
UTS
UNIVERSITY OF TECHNOLOGY SYDNEY
Only One
香港浸會大學
HONG KONG BAPTIST UNIVERSITY
SFACT
NINJATUNE
BRIAN ENO
LOUIS J. BUTLER
(AKA LOUIS VI)
LYON
DAVID GRAEBER INSTITUTE
MUSEUM OF CARE
THIS AIN'T ROCK'N'ROLL
SEA WALLS
ARTISTS FOR OCEANS
AMANDA HOLDEN
Jamie Theakston
Alan Carr
THE OCEAN FOUNDATION
msro
Hugh Fearnley-Whittingstall's
RIVER COTTAGE
FISH FREE FEBRUARY

APPENDIX I

Photos of Iridium-enabled fish aggregating devices satellite beacons found discarded in an urban area and washed up on a beach in the Seychelles.

Photos of internal chip board with Iridium Short Burst Data (SBD) Module 9602 as extracted from a Marine Instruments Fish Aggregating Device satellite beacon:

Photos of Fish Aggregating Device satellite beacons washed up on beaches in Somalia:

Photos of endangered, threatened and protected sharks and turtles caught up as 'bycatch' in nets attached to a drifting fish aggregating device[22]:

Figure 1 – Photo by Fabien Forget of two sharks entangled in a drifting FAD (left) and another likely juvenile silky shark entangled in netting below a drifting FAD (right) (©Fadio/IRD/Ifremer/mtaquet)
Photo credit: ISSF/Fabien Forget

Figure 2 – Turtle entangled within a so-called "eco-FAD" (© Fabien Forget)
Photo credit: ISSF/Fabien Forget

[22] https://iotc.org/sites/default/files/documents/2023/09/IOTC-2023-WGFAD05-05.pdf

APPENDIX II

According to scientists, yellowfin tuna populations in the Indian Ocean are crashing towards collapse. They are in the 'red zone', which means they are either *'overfished'* or *'subject to overfishing'*. Whilst bigeye tuna was only declared as *'overfished'* in 2022, yellowfin tuna has been in the red since 2015. The Indian Ocean Tuna Commission (IOTC) recently acknowledged that yellowfin tuna catches have in fact exceeded the *"maximum sustainable yield"* for well over a decade[23]. A recovery plan, complete with interim country-specific catch limits, has been in place for yellowfin tuna for almost as long as the stock has been overfished. The most recent stock assessment showed that a 30% reduction in catches (relative to 2020 levels) is now needed to allow the population to recover by 2030[24]. That translates into a catch limit of a little over 300,000 tonnes per year. In 2022, a staggering 413,680 tonnes of yellowfin tuna was caught[25] which is 37% higher than the recovery plan catch limit. Even skipjack tuna, the most abundant of the three, is being mismanaged in the Indian Ocean. A total catch limit has been in place since 2018 and, every single year since then, it has been systematically ignored. Last year's over catch was the worst yet. Total catches should have been limited to 513,572 tonnes, but instead they reached an all-time high of 671,317 tonnes[26].

[23] https://iotc.org/sites/default/files/documents/2023/02/IOTC-2022-SC25-RE_FINAL_0.pdf
(IOTC (2022). Report of the 25th Session of the IOTC Scientific Committee.)
[24] https://iotc.org/sites/default/files/documents/2022/05/IOTC-2021-SC24-RE_Rev1.pdf
(IOTC (2021). Report of the 24th Session of the IOTC Scientific Committee.)
[25] https://iotc.org/data/datasets
IOTC datasets (2023). Accessed: 29/10/2023
[26] https://iotc.org/data/datasets
IOTC datasets (2023). Accessed: 29/10/2023