



OCEAN LIFE
FOUNDATION

Q1-2020

The Ocean Life Foundation

- U.S. registered 501(c)(3) non-profit organization;
- Domiciled in Salt Lake City, Utah;
- International Board of Directors consisting of world business leaders and world's leading marine biologists and marine archeologists;
- The Ocean Life Foundation's ("**OLF**") main focus is to bridge the gap between the investment community and the capital requirements with funding, management and dynamic collaborations for "moonshot" companies that are pioneering new technologies for addressing climate change, cultivating sustainability and fueling economic growth in the most disadvantaged and developing countries.



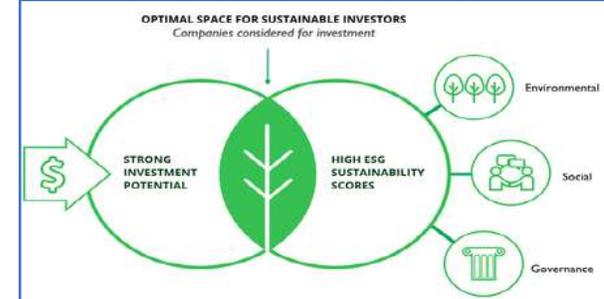
Foundation Mission

- The Ocean Life Foundation's primary mission is to enable the research and development of "net-zero" carbon & GHG footprint technologies and methodologies that will lead to industrial-scale applications of Mineral Accretion Technology ("MAT") projects for coral reef protection, coral reef restoration, marine aqua-culture and coastal defense;
- The Ocean Life Foundation provides grants, debt & equity financing, on a "case-by-case" basis, for projects that meet the foundation's strict mission requirements;
- Any "return-on-investment" remains with the foundation and is invested in new opportunities, to create a "self-sustaining endeavor" for continued investment in additional MAT projects around the world.



Funding & Investments

- OLF’s vision is a hybrid organization combining research, donations, venture capital funding, investment banking and technology incubation;
- OLF provides early-stage equity or debt capital, grants, strategic guidance and key personnel (if needed) to the world’s innovators, social entrepreneurs and inventors to launch an enduring foundation;
- With an emphasis on “Blue Ocean Economy”, OLF’s selection criteria for projects and investments focus on opportunities that score high on environment, social impact and corporate governance (“ESG”) as well as the United Nations’ - “17 Sustainable Development Goals to Transform Our World”.



Funding & Investments

The primary objective of the Ocean Life Foundation is furthering the development of Mineral Accretion Technology (“MAT”) applications

- OLF will primarily focus on opportunities that provide innovations within one or more of the following sectors:
 - Ocean-based renewable energy technologies (i.e. wind, wave, solar, tidal);
 - Protection and restoration of coral reefs, ocean eco-systems and marine habitats;
 - Marine aqua-culture;
 - Coastal defense and erosion prevention; and
 - Sustainably growing building materials.



The Importance of Coral Reefs

Global coral reefs invisibly support humanity

- 50% of our oxygen comes from the ocean;
- Photosynthetic algae that live in symbiosis with corals are vital;
- Coral reefs cover less than 0.015% of the planet's ocean surface yet harbour more than 25% of the ocean's biodiversity;
- No other ecosystem occupies such a limited area with more life forms;
- Coral reef related economies support more than 300 million people worldwide and account for over 15% of gross domestic product in more than 20 countries;
- Coral reefs protect coastlines in more than 100 countries - helping defend against storms, erosion and protecting communities and economies.



Coral Reefs Are Facing Extinction

Global warming causes sea-level rising, ocean acidification and increased water temperature

- Over 40% of man-made CO₂ has been sequestered by the ocean, increasing the ocean acidity overall by 30%;
- 50% of global coral reefs have already died due to global warming.

90% of reefs predicted to die by 2050 unless atmospheric CO₂ declines to 320 ppm from 414 ppm today

- Coral reefs and their eco-systems are over-stressed by pollution, commercial activities and climate-change factors.
- Coral-bleaching, ocean acidification, increased storm severity, habitat destruction and disease are all individually existential threats.
- The compounding effects of these collective forces are killing coral reefs globally at alarming rates.



Mineral Accretion Technology

Calcium carbonate, (limestone, CaCO₃), is the basic compound of coral reefs and other marine organisms such as mollusks

- Mineral Accretion Technology (“**MAT**”) is a process of electrolytic deposition of limestone from seawater using a low-voltage electric field;
- The principles of MAT consist of passing a low-voltage direct electrical current through a cathode and an anode;
- The electrical field causes a chemical reaction that will allow calcium carbonate to form using dissolved minerals from the seawater;



- Low-voltage trickle charge through a metal bar produces 1-2 cm of radial growth of limestone annually.



MAT for Coral Reef Restoration

MAT can grow coral reefs faster than climate change is killing them

- Coral polyps secrete a skeleton of calcium carbonate, and correctly applied, MAT increases coral growth rates 3-4x;
- Over 40 years of empirical data has validated the methodology;
- MAT can regenerate coral reefs that have died;
- Using MAT for accelerated reef restoration involves two key steps:
 1. Growing calcium carbonate on metal frames in seawater using an electrical field; and
 2. Grafting live coral fragments onto this calcium carbonate substrate, onto which the coral pieces will accrete, fuse and continue to thrive.



MAT for Coral Reef Preservation

MAT can help preserve coral reefs before environmental stresses kill them

- MAT can enhance resilience of corals against coral bleaching events, ocean acidification and diseases, with 95% survival rates observed;
- The greater potential is to protect and preserve the coral reefs that are still healthy by deploying large MAT electrical fields before climate change induced stresses threaten to kill them;
- Due to unabated green-house gas emissions, air and seawater temperatures continue to increase globally;
- It is unlikely that we will be able to prevent the predicted decline of coral reefs, however it may be possible to protect and preserve a significant part of the existing coral reef tracts and their fragile eco-systems if MAT can be further developed and deployed cost-effectively worldwide.



MAT for Aqua-Culture

MAT can be used for accelerated commercial scale aqua-farming of mollusks

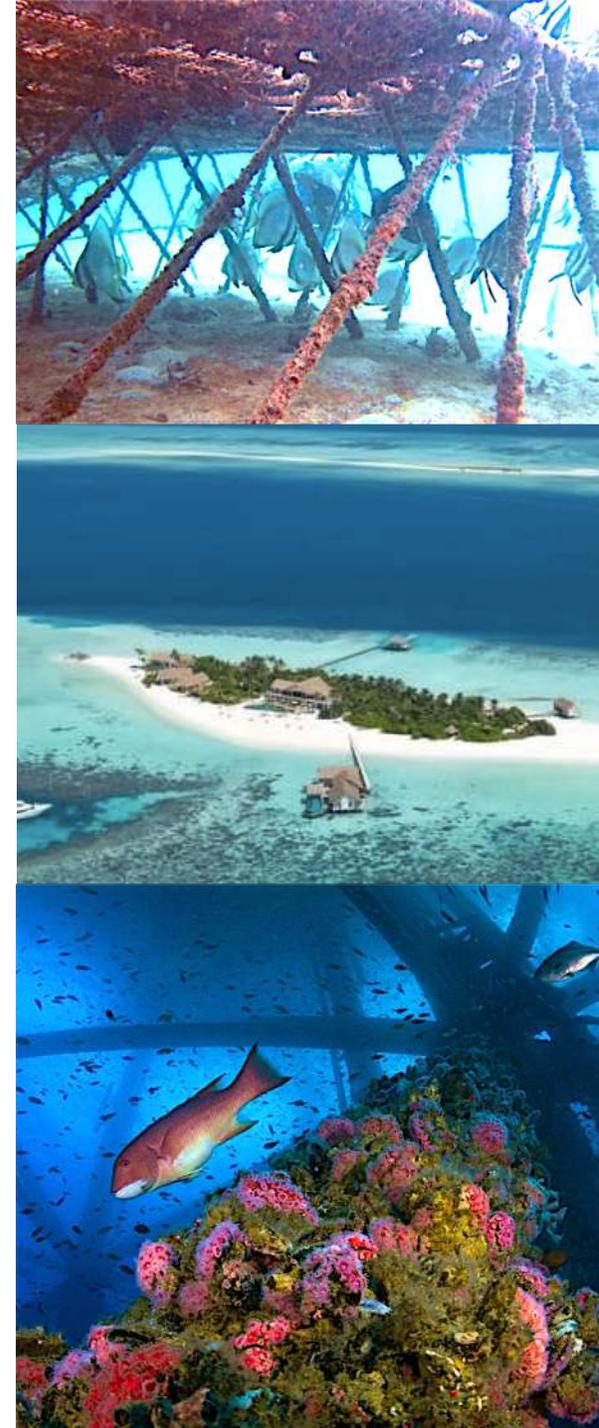
- Calcium carbonate, or limestone, is the basic compound of marine organisms such as mollusks;
- Commonly known mollusks for human consumption include oysters, clams, mussels, abalone and a variety of other shellfish;
- In the presence of MAT, oyster and mussel farming have produced observed yields up to 4-5x greater than natural growth rate, but requires further R&D for scientific validation;
- If sustainable, this could materially increase annual shellfish yields and boost local economies in island and coastal communities with sustainable livelihoods.



MAT for Coastal Defenses

Barrier reefs are natural breakwaters and can be grown in place with MAT using clean energy

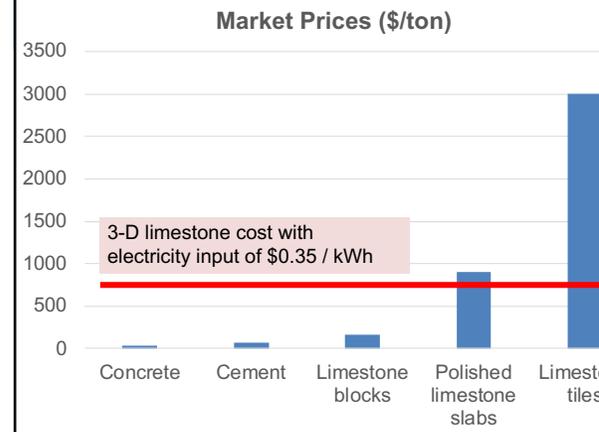
- Coastal erosion is a global challenge, threatening populations and local economies;
- Current methods of building coastal defenses predominantly involve building large-scale concrete-block breakwaters as well as dredging sand to replenish beaches and natural dunes;
- Reefs act as natural barriers to erosion by causing waves to break out at sea, taking away up to 97% of their energy before they hit the shore;
- Natural self-healing barrier reefs can be grown in place with MAT for coastal protection and beach erosion prevention cheaper than traditional methods of marine construction;
- These barrier reefs stimulate marine biodiversity and combined with aqua-farming provides sustainable coastal livelihoods.



MAT for Sustainable Building Materials

MAT can be applied for commercial production of sustainable ocean-grown limestone tiles and other products

- MAT-grown limestone tiles are market competitive with polished limestone and limestone tiles providing a compelling business case:
 - Production cost of USD 700 per US ton (power, labor, logistics) and
 - retail value of USD 3,000 per US ton = gross margin \$2,700 per US ton
- A vast array of potential commercial applications with MAT that could generate low carbon-footprint products that would have the strength and durability of steel-reinforced concrete:
 - Exotic polished limestone furniture (i.e. coffee tables, chairs, benches, office desks, etc.);
 - Decorative components (i.e. lamp shades, lamp bases, crockery, etc.);
 - Bathroom and kitchen fixtures (wall tiles, countertops, etc.);
 - Roof tiles



MAT Development

The Ocean Life Foundation's Immediate Focus

- Provide funding for multi-year R&D projects to scientifically validate MAT empirical data for accelerated growth rates of corals and mollusks
- Provide funding to develop lowest-cost achievable supply-chain for upscaling to industrial-scale deployment of MAT
- Provide funding for companies that are specialized in developing offshore renewable energy systems that will provide clean reliable energy for MAT systems
- Provide funding for pilot projects for coastal defense and beach erosion prevention
- Provide funding for multi-year R&D pilot projects for commercial growing of limestone building materials



Appendix

OLF Board of Directors

Michael McDowell – Founder & Chairman

Mike was born & educated in Australia. He obtained a BSc in Physics and mathematics from the University of New South Wales and later a Bachelor of Economics degree from the Australian National University and much later an MSc in Astronomy and Astrophysics from Swinburne University. His career began on MacQuarie Island as a geophysicist with an Australian expedition in 1971. He would go on to found Quark Expeditions and pioneer tourism transit to the polar regions with Russian icebreakers. In the late 1990s, he sold Quark in order to focus on new ventures in space travel and deep ocean exploration. He co-founded and sat on the board of Space Adventures for 18 years, a company which offered space travel to the International Space Station for the general public and Mike also founded and operated Deep Ocean Expeditions which organised and coordinated dive expeditions to the Titanic, the Bismarck, and the hydrothermal vent areas in the Atlantic and the Pacific oceans. Mike also participated in James Cameron's Deep Sea challenge expedition by providing vessel logistics to the expedition. Mike continues to coordinate and operate Antarctic expeditions into the interior of Antarctica through his co-ownership of the company Antarctic Expeditions & Logistics LLC.



OLF Board of Directors

Chris Haver – Founder & CEO

Chris Haver is based in Phoenix, has a BSc in Finance, attended the University of Southern California and San Diego State University. He is the founder of H4 Capital Partners, a U.S. based private equity firm that invest in sustainable projects in the developing world, specifically focused on South East Asia and Africa. H4 Capital Partners has investments in numerous clean energy and sustainability companies seeking to reduce the cost of electricity, food and forestry products. H4 Capital is currently working to provide 1 million families in Mozambique with electricity using PV/Charger/Battery on a PAYGO model in collaboration with Solar-Works Mozambique to address the nearly 70% of the population lacking grid connectivity. Chris is life long conservationist and explorer. He was the second person and first American to climb and ski the Seven Summits, dove to RMS Titanic in Russian submersibles and completed a First Ascent in Antarctica in 2016. He's also shareholder in Maritime Research and Recovery, a historic shipwreck recovery company founded by Mike McDowell and Dan Porter.



OLF Board of Directors

Harald van Hoeken – Founder & COO

Harald van Hoeken is from the Netherlands and obtained Bachelor's of Science degrees in both Aerospace Engineering and Ocean Engineering from the Florida Institute of Technology). During the course of 2019, Harald developed the idea for the Ocean Life Foundation with Haver and McDowell in order to provide funding to ocean based renewable energy technologies for protecting coral reefs and their complex marine eco-systems using low-voltage electrical fields. His career started working offshore on seismic acquisition vessels from a US consultancy firm and after 2 years took on the responsibility for business development for Europe, Africa and Asia. In 1997 he moved to Lagos, Nigeria and set-up the office for a Norwegian marine seismic contractor, taking responsibility for business development and sales for all of West Africa. In total, he has 25 years' experience in West Africa in oil & gas investments, oil field exploration and production services and mining. He is the founder and CEO of Precision Energy Group, a natural resources and renewable energy advisory company. Precision Energy and partners Equinox Group Ltd are currently focused on building a portfolio of assets in Angola in oil & gas, mining, agriculture, renewable energy and power that will exceed \$4B in aggregate investment.

www.oceanlifefoundation.org



OLF Board of Directors

David Wotherspoon – Technology Director

David Wotherspoon, Australian, was Project Manager and Submersible Operations Director on the Deep Sea Challenge expedition to the deepest part of the Mariana Trench led by film director James Cameron. David then worked with Eric Schmidt on special projects before heading to London to work on classified project for mini communications satellites. Prior to that, he worked as a senior consultant for Phaze Zero, and before that he had a varied military career. After enlisting in the Corps of Royal Engineers in 1983, he trained as a mechanical engineer and military diving supervisor and saw active service in Iraq, Bosnia, Kosovo, Northern Ireland, and Afghanistan. Wotherspoon enlisted in the Australian Defence Force in January 2007, where he served as a development officer in the Special Operations Command (SOCOMD). During this period, he project-managed a number of technically challenging projects. He ended his military career in January 2010 before joining the expedition on loan. He was born in Oban, Scotland, in 1967.



OLF Board of Directors

Anne Lauvergeon – Director

- Anne is Founder and CEO of A.L.P an advisory and investments company. ALP supports large corporate groups, funds, investors and start-ups for the acceleration and success of their industrial or innovation projects. She is Chairman of the Board of Sigfox. She was CEO of AREVA from July 2001 to June 2011, and Chairman and CEO of AREVA NC from June 1999 to June 2011.
- In 1997, Ms Lauvergeon worked at ALCATEL as Senior Executive Vice President, member of the Executive Committee, in charge of International business and industrial holdings. From 1995 to 1997 she was Partner of Lazard Frères & Cie. From 1990 to 1995 she worked for the French President's office, in charge of international economy and foreign trade missions in 1990, then Deputy Chief of Staff and Personal Representative to the French President, in charge of the G7/G8 Summits' from 1991.
- Anne Lauvergeon began her career in 1983 in the steel industry, at Usinor, before working on nuclear & chemical safety issues in Europe at the French Atomic Energy Commission. Anne Lauvergeon is a graduate of the Ecole Normale Supérieure and the French National School of Mining Engineer. She holds an advanced degree in Physics & Chemistry.
- Mrs Lauvergeon is Doctor Honoris Causa of the Imperial College, London (2008), Fellow of the Royal Academy of Engineering (UK 2011) and Fellow of the Royal Academy of Belgium (2012).
- Ranked twice by Time Magazine amongst 100 most influential people in the world; ranked by Forbes (Fortune Global), the Financial Times as one of the most powerful and influential women in Europe and in the world.



OLF Board of Directors

Douglas Riboud – Director

Born in Switzerland in 1977, Douglas Riboud is the co-founder and co-chairman of Harmless Harvest, a natural foods trailblazer that swiftly led the industry toward elevated levels of sourcing, manufacturing and social progress. The company has now reached \$100m+ in sales of its flagship coconut water and is widely recognized as a mass market hit brand with iconic status in the next wave food and beverage.

Riboud also cofounded and is the CEO of Goodfish, his second venture with Harmless Harvest co-founder Justin Guilbert. The two entrepreneurs are aiming to apply their passion, commitment, expertise and learnings to positively contribute to solving the seafood conundrum. A major keystone to healthier people, stronger communities and a thriving wilderness for all to share.

Riboud is an active investor supporting progressive business models in the CPG, healthcare and education industries. Riboud sits on various boards and lives with his 3 kids and his wife in Aspen, Colorado

Riboud holds an MBA from Insead and a BA from Boston University.



OLF Board of Directors

François Chateaux – General Counsel & Compliance Director

- François Chateau is a partner in Dentons' New York office. He was previously global vice chairman of Dentons and chairman of the global board of legacy firm Salans, which he helped lead through the combination that created Dentons.
- François is engaged in the representation of French and other European companies in the US, as well as multinational companies globally. He primarily represents companies and individuals in the luxury, fashion and beauty industries and leads this Global Practice. He is also head of Dentons' French desk, a special cross-border practice group composed of bilingual, French-speaking lawyers in many Dentons' offices around the world.
- As a successful entrepreneur, François has extensive experience in contract negotiations, intellectual property issues, international tax planning, joint ventures, licensing and distributions agreements, venture capital and venture development.
- In addition to such transnational work, François acts as an adviser to wealthy multinational families and individuals in their business affairs and as trustee for family trusts. François is a dual French and US citizen. He is very active in the French-American community in the US and is a Chevalier de l'Ordre National du Mérite (France)



OLF Board of Directors

Dan Millison - Director

- Dan Millison is the Manager of Transcendergy L.L.C., a private consultancy established in 2008 to provide sustainable infrastructure solutions.
- He holds a M.S. in Civil Engineering (1986) and a B.A. in Geological Sciences (1981), both from Northwestern University in Evanston, Illinois.
- He has helped mobilize well over \$10 billion investment in energy and transport infrastructure in developing countries in the Asia-Pacific region, including more than \$1 billion of co-financing from the Clean Technology Fund, the Scaling Up Renewable Energy Program, and the Green Climate Fund.
- He was formerly a senior energy specialist at Asian Development Bank, and previously worked in the environmental services and oil and gas industries.



OLF Board of Directors

Dr. Dimitar Ivanov - Director

- Dimitar Ivanov is Managing Director - Europe of Gerken Capital Associates, a multinational investment management firm and Senior Advisor to the Board of Directors since 2008.
- Since 1980, he was Economic Advisor to the UN Industrial Development Organization and in this capacity, he has advised the Governments of Moldova, Azerbaijan, and Ukraine.
- 1985-1991 served as Economic Advisor to the State Council of Bulgaria
- In 1990, he was honorary guest of the Council of the Economic Advisors of President George Bush Sr. His works on the results of the reforms in the emerging markets and expertise are used by the IMF, the World Bank, and the IFC.
- 2002-2007, Dimitar served as Senior Economic Advisor to the President of the Republic of Bulgaria.
- 1995-2002 acted as Strategic Advisor to Bank Austria.
- He has published six books and more than 300 papers,
- Dr. Ivanov received his Ph.D. in Economics and attended the senior doctoral program at the prestigious Institut d'Etudes Politiques in Paris
- Dimitar is recipient of the Golden Order of the State Council of Bulgaria for his academic achievements in the development of the national economy.
- Since 2017 he is serving as a Global Ambassador and Member of the Council of the Buck Institute for Research on Aging.
- Dimitar speaks fluent English, French, Russian, Bulgarian, and Serb-Croat. He resides with his family in London since 1991.

