

### PEAR TREE ESSEX ENVIRONMENTAL OPPORTUNITIES FUND

FOR THE QUARTER ENDED DECEMBER 31, 2023, the Pear Tree Essex Environmental Opportunities Fund's Ordinary Shares (the "Fund") underperformed its benchmark, MSCI World Index (the "Index"). The Fund achieved a return of 8.21% at net asset value compared to 11.53% for the Index.<sup>1</sup>

### **Market Conditions and Investment Strategies**

The lack of market breadth experienced in 2023 dissipated slightly in the fourth quarter, as the equity market discounted a pause, perhaps permanently in Federal Reserve rate hikes. During the fourth quarter of 2023 ended December 31, the Essex Global Environmental Opportunities Strategy (GEOS) returned 8.21%, versus 11.53% for the Index. The Wilder-Hill Clean Energy Index<sup>2</sup> posted (5.82%) for the fourth quarter. For the full year ended December 31, 2023, GEOS returned (1.53%) versus 24.42% for the Index and (22.69%) for the Wilder-Hill.

For the quarter and the year, GEOS significantly outperformed the secondary benchmark, the Wilder-Hill Clean Energy Index and underperformed the primary MSCI World Index for the year, given significant headwinds including:

Rising interest rates: Rising interest rates have impacted the Strategy in two ways. The first impact is from a pure valuation standpoint. The value of a company is equal to its future earnings stream discounted back to today. The present value of those future earnings is worth less in a higher interest rate environment and faster growing companies that will generate a greater proportion of earnings further in the future will lose value to a greater degree than slower growing companies. The second impact of higher interest rates is on infrastructure spending which needs to be financed at higher rates, thereby warranting some projects to be cancelled or delayed as uneconomic. GEOS is impacted by both of these forces since we tend to invest in faster growing companies and a number of our portfolio companies sell goods and services to infrastructure projects (renewable energy projects, grid infrastructure upgrades, new factory construction, etc.).

Inflationary pressures: Inflation rates around the world have increased for three main reasons: COVID-induced supply chain issues which continued, conflict in Ukraine impacting food and energy prices, and the traditional economic impact of loose monetary conditions and heavy fiscal stimulus causing above trend demand pressures. These inflationary pressures caused an upward "kink" in the normal downward-sloping cost curve of emerging technologies. For example, higher lithium and related material prices meaningfully increased the cost of lithium ion batteries therefore diminishing the value proposition of energy storage projects or electric vehicles that have business models predicated on predictable annual technology cost declines.

Political friction: Trade tariff disputes, changes in the regulatory structure of residential solar systems in California (the largest US market), delays in permitting of electrical grid interconnections and confusion/debate around government subsidy programs such as the Inflation Reduction Act have caused confusion in the marketplace and delays in the development of some clean tech projects The good news is that we see improvements in two of the three factors. Interest rates have peaked recently, and the latest Federal Reserve commentary has quelled the possibility for further rate hikes. Inflationary data has declined, and this has been reinforced in our conversations with several GEOS holdings.

<sup>&</sup>lt;sup>1</sup>The Fund is the successor to the investment performance of the Essex Environmental Opportunities Fund ("Predecessor Fund") as a result of the reorganization of the Predecessor Fund into the Environmental Opportunities Fund on September 1, 2021. Performance information shown prior to the close of business on August 31, 2021 is that of the Predecessor Fund.

<sup>&</sup>lt;sup>2</sup>The priority of the Wilder-Hill Index is to define and track the Clean Energy sector: specifically, businesses that stand to benefit substantially from a societal transition toward use of cleaner energy, zero-CO2 renewables, and conservation. Stocks and sector weightings within the Wilder-Hill Index are based on their significance for clean energy, technological influence and relevance to preventing pollution in the first place. The Wilder-Hill Index emphasizes new solutions that make both ecological and economic sense and aim to stay the leaders in this field.



Importantly, as we have been communicating the past year, when interest rates peak and abate, our stocks will hopefully outperform, and that was clearly the case in December, with the Fund posting a 8.95% return versus 4.94% for the Index.

Additionally, following the sharp selloff in clean tech indices and smaller cap growth stocks in general, we see a lot of compelling investment opportunities and brightened prospects for the coming years. We remain focused on companies with differentiated technologies and services led by competent management teams that can effectively allocate capital efficiently. Importantly, we seek to invest in companies that have strong balance sheets that can internally fund their growth and that are profitable or have a clear path to profitability in the near future.

For fourth quarter 2023 transactions, our focus was taking advantage of continued market volatility to purchase several new holdings with differentiated and attractive businesses exhibiting valuations that met purchase criteria. We also added to existing positions if the stock prices had corrected amidst intact fundamentals. A significant percentage of GEOS total portfolio turnover consists of trading around existing portfolio positions, and this was particularly the case in this period of share price volatility.

Early in the quarter, we sold the remaining shares of SolarEdge Technologies, given slowing demand for solar inverters in the US as well as their key market Europe. SolarEdge has been experiencing more competition from China, leading to compressing margins amidst still high inventory levels. The sale proceeds were directed to solar tracker firm Array Technologies, and electrical balance of systems provider Shoals Technologies Group where portfolio weights were increased. Despite the slowing demand and pricing pressures for residential solar rooftop, utility scale solar business remains well intact, and demand for technologies such as offered by Array and Shoals is strong as their solutions lower installation and operating costs for project developers. Hubbell, in the GEOS power technology theme was trimmed given solid 2023 performance and signs of slowing growth, with the cash deployed to increasing portfolio weight in Kornit Digital, which is experiencing improving demand for its digital garment printing equipment.

Later in the fourth quarter, we continued to take advantage of market volatility to enhance portfolio weights where valuations relative to growth rates were improved by short-term price weakness. We added to American Superconductor given improving orders and enhanced profitability amidst share price weakness, selling Sensata Technologies as the source of funds, with concerns for future growth and margin enhancement. We added a new position in the power technology theme, Valmont Industries, provider of power and lighting infrastructure to municipalities and corporates. Valmont operates in three market segments: utility support, for grid modernization and renewable energy integration; engineered support structures, for wireless communications and lighting systems for road infrastructure; and irrigation systems for precision agriculture. Navitas Semiconductor and Quanta Services were both sold as the source of funds, given valuations at our respective targets. Badger Meter was a very strong performer over the past year, and was trimmed in December, along with a small sale of the Kornit Digital position. A new holding in the GEOS clean tech & efficiency theme was initiated, u-blox, a Swiss semiconductor company with products used for locational positioning across communications technologies, from satellite to cloud-based and wi-fi networks, with applications such as vehicle monitoring, to asset tracking and industrial automation. The source of funds was a trim of Landis+Gyr given strong performance and a high portfolio weight. Within the efficient transport theme, lithium company Livent was sold, with the proceeds used to increase the weight in Albemarle, given its leading market share in lithium production and processing. Late in the year we purchased Mueller Water Products, which manufactures flow control and water infrastructure products used in water distribution systems and wastewater treatment facilities. Mueller is amidst a turnaround with a new management team tasked with improving growth and profitability, with a reflective and attractive valuation. The source of funds for this new GEOS water holding was a trim of Zurn Elkay Water Solutions given strong recent stock performance. Additional late quarter purchases included increasing GEOS weights in NextEra Energy and Valmont Industries.



#### **Attribution (Fourth Quarter 2023)**

**Top contributors:** 

Aspen Aerogels (ASPN): (+83.5%) traditionally designed and manufactured highly efficient aerogels for the oil and gas industry for process and pipeline thermal efficiency. Aspen has the broadest IP in the aerogels industry and is leveraging this 20-year experience to enhance the performance and safety of electric vehicle batteries. Their first customer is GM, its first application of a thermal barrier that is placed in EV batteries to limit the effects of potential battery fires. In December, Aspen announced a new agreement with the Automotive Cells Company, a joint venture between Mercedes-Benz, Saft-Total and Stellantis and will begin production in 2025.

<u>Symbotic (SYM):</u> (+53.5%) is in the clean tech & efficiency theme. Symbotic is a technology company offering a revolutionary new warehouse automation platform to address the increased need for labor, efficiency, speed, and flexibility. Today, supply chains are hindered by limited labor availability, increased operating costs, out-of-stocks, SKU proliferation and mismanagement of inventory versus demand, all of which can be rectified with Symbotic Al-powered robotics with machine learning capabilities.

<u>Vestas Wind Systems (VWS DC):</u> (+47.7%) is a GEOS renewable energy holding, and the world's leading wind turbine manufacturer. In November, the largest offshore wind project in UK history was commissioned off Scotland using 114 Vestas turbines.

American Superconductor (AMSC): (+47.6%) is in the GEOS power technology theme, designing electrical control systems, transmission voltage management solutions and distribution voltage optimization systems – all meeting the pressing need for electrical grid security, high quality power and resilience. For example, their Resilient Electric Grid Systems increase load serving capacity, targeting urban electric utilities.

<u>Cadeler (CADLR NO):</u> (+35.1%) is a GEOS renewable energy holding, and transports and installs offshore wind foundations using their fleet of jack-up installation vessels. The current global fleet of wind turbine installation vessels is insufficient to meet offshore wind goals, and these capacity constraints should lead to enhanced day rates driving profitability.

#### **Underperformers:**

<u>Array Technologies (ARRY):</u> (-24.3%) is a GEOS renewable energy holding, providing hardware and software that optimize large solar arrays to adjust for unique site terrain, weather conditions as well as the geospatial location for the arrays. These solutions maximize solar plant performance and increase profits for asset owners. As of November, Array's backlog was over \$2 billion.

<u>Livent (LTHM):</u> (-22.2%) is a GEOS efficient transport holding and was sold during the fourth quarter. Early in 2024, Livent will be merging with Allkem in a merger of equals to form the lithium company Arcadium.

<u>Sensata Technologies (ST):</u> (-16.1%) was sold during the quarter, as we believe the sensor company's margins will compress in 2024.

<u>Shoals Technologies (SHLS):</u> (-14.9%) is in the power technology theme, providing energy balance of system solutions for solar installations, to wire a solar field together. The Shoals interconnect system allows for reduced specialized labor, reducing on site labor costs by 40% on average.

<u>Albemarle (ALB:</u> (-14.8%) is in the GEOS efficient transport theme, providing lithium to global EV and battery storage manufacturers. While the market is concerned about a pause in EV manufacturing, Albemarle has the most competitive global scale to optimize production, and uses long-term lithium contract prices, dampening any exposure to short-term spot prices.



### **Social Impact Management Update**

The differentiation of GEOS rests we believe in the portfolio of environmental solutions, representing technologies and services which are solving global environmental problems. We believe the impacts of these solutions address important global challenges, as defined by entities such as the United Nations with the Sustainable Development Goals (SDGs). The UN has defined 17 SDGs, all addressing social and environmental challenges. The following are several examples of current GEOS holdings, and the impact they are having on global environmental challenges.

Clean water and Sanitation (SDG 6): GEOS water holding Zurn Elkay has a division bringing clean drinking water to institutions, with a focus on school systems. Several states are introducing legislation addressing lead contamination and other pollutants in water supplies, and are initially targeting school systems, given the deleterious effects of lead on children. The Zurn Elkay systems provide clean, hygienic drinking water while eliminating highly polluting, single use plastic bottles. Through the third quarter of 2023, Zurn drinking water systems reduced over 9.4 billion single use plastic water bottles. Zurn water management technologies used by water utilities and commercial customers saved over 16 billion gallons of water for 2023 through the third quarter.

Affordable and Clean Energy (SDG 7): GEOS power merchants & generation holding NextEra Energy owns an electric utility, Florida Power and Light (FPL), and is one of the world's largest developers of utility scale wind and solar projects. NextEra has developed one of the largest community solar programs in the US, avoiding more than 175 million tons of CO2 emissions over the past 20+ years. NextEra has proven renewable energy can be affordable and clean, as FPL's residential customer bills are lower than the national average, and among the lowest in Florida. NextEra's current solar fleet equates to nearly 15 million solar panels with capacity of 4 gigawatts of electricity generation.

Sustainable Cities and Communities (SDG 11): New holding, Swiss semiconductor firm u-blox enhances the Internet of Things (IoT) to enable innovations to make the world more sustainable. u-blox technologies are applied to asset tracking and management, to optimize freight routes which reduce energy consumption. The company enables connected sensors which can protect and monitor the quality of water, air and soil. According to u-blox, 84% of their IoT deployments are currently addressing, or have the potential to address the SDGs. u-blox solutions are used for navigation, the connected factory, connected tools, asset tracking, livestock tracking, home healthcare and the automated car. The firm's location technology is at the heart of IoT, to integrate and connect in reliable fashion. u-blox has been conducting SDG mapping since 2021, and recently set an ESG strategy for their own operations, from continued solutions tracking, to operational based, including employees and community, and supply chain and environmental responsibility.

Climate Action (SDG 13): Cadeler is in the GEOS renewable energy theme, and is a signatory of the UN Global Compact, and is focused on SDG 13, and 6 other SDG goals which it holds as integral to its business operations. Cadeler is a leading global vessel company providing offshore wind farm construction and maintenance, based in Oslo, Norway. Cadeler owns the industry's largest fleet of jack-up offshore wind installation vessels and has the capacity to handle the largest and most complex next-generation offshore wind projects. For its operations, Cadeler has pledged to net-zero operations by 2035, with a reduction of Scope 1 and 2 emissions intensity by 50% by 2030. Cadeler will report its Scope 3 emissions later this year. To date, Cadeler has installed 853 wind foundations, equating to almost 12 gigawatts of wind power, providing offshore wind electricity of 12 million EU households.



#### **Outlook**

There were times last year when we heard experienced investors claim that clean tech stocks were dead, because the technologies do not work, and renewables will never scale. We strongly believe these misinformed market participants were reacting purely to stock price movement, sentiment and headlines, not underlying fundamentals. We believe these claims could not be further from the truth. While we do agree some clean tech companies went to the public markets too early, it is a miscalculation to state the broad swath of the arena is not investible. We think this is a symptom of the recent public equity market environment, where trades were made on headlines, or broad speculation, without a significant degree of fundamental analysis. We also observed investor behavior that lacked creativity, or semblance of long-term investment rationale, given the narrowness of trading activity toward long positions.

The vast majority of GEOS holdings have strong balance sheets and profitability. With central banks around the world continuing to tighten, capital is expensive and far more scarce than in recent years. This lends emphasis to companies that can fund growth from existing cash flow and balance sheets, placing a premium on our long-held focus on return on investment, an indication of proper capital allocation. Shoals Technologies Group is an example of a company we believe is well positioned in the solar industry, and more broadly for distributed energy, providing electrical balance of system technology for solar energy, as well as the new fast charging EV market. While Shoals declined last year in line with the broad solar market, the company is growing revenue over 30% per annum, with profitable margins and improved and now consistent free cash flow. With a forward P/E which is in line with the broad market, and strong returns on capital of over 12%, we believe Shoals to be differentiated and left for dead – an opportunity is at hand, speaking to the broad-brush environment we are still amidst. Another current example is Irish efficient building materials company Kingspan Group, which we have owned in GEOS for a decade. Kingspan makes highly efficient insulated panels for data centers and cold storage, as well as energy efficient materials to retrofit commercial building envelopes. Kingspan is a strong steward of capital in our opinion, with returns on invested capital of over 10% for the past decade, consistent net income margins, and strong free cash flow. Kingspan has transacted M&A consistently using their cash flow to acquire for strategic growth, in the form of distribution in North America, and tuck in acquisitions to supplement and enhance current offerings.

As we enter 2024, we continue to execute our GEOS investment philosophy, analyzing, evaluating and potentially holding the companies we believe can solve global environmental problems. At this point in the cycle, there are attractive opportunities, with valuation/growth rates we have not seen in our careers – we think it is an opportunistic period, and look forward to discussing with you this year.



### TOTAL EXPENSE RATIOS\*

	Gross Expense Ratio*	Net Expense Ratio*
Ordinary Shares	1.58%	1.24%
Institutional Shares	1.33%	0.99%
R6 Shares	1.18%	0.95%

\* Per Prospectus dated August 1, 2023, as amended. Fee waivers and expense reimbursements may not be amended, rescinded or terminated before July 31, 2024 without the consent of the Fund's Trustees.

### A WORD ABOUT RISK

Investing in foreign markets, particularly emerging markets, can be more volatile than the U.S. market due to increased risks of adverse issuer, political, regulatory, market or economic developments and can perform differently than the U.S. market. The fund's exclusion of investments in companies other than clean tech may adversely affect the fund's relative performance at times when those other types of investments are performing well.

**Investment Products** 

■ Not FDIC insured ■ May lose value ■ No bank guarantee

# PEAR TREE ESSEX ENVIRONMENTAL OPPORTUNITIES FUND PORTFOLIO HIGHLIGHTS

as of December 31, 2023 (The portfolio is actively managed. Holdings and weightings are subject to change daily.)

#### **Top Ten Holdings**

Top Ton Holdings	
Percentage of total net assets	39.5%
Badger Meter, Inc.	5.3%
NextEra Energy, Inc.	5.1%
Landis+Gyr Group AG	4.1%
Kingspan Group plc	4.1%
Primoris Services Corporation	3.7%
Infineon Technologies AG	3.6%
Energy Recovery, Inc.	3.5%
Valmont Industries, Inc.	3.5%
Zurn Elkay Water Solutions	3.4%
Hubbell Incorporated	3.2%

The companies mentioned in the commentary on page one have the following percentage of total net assets as of 12/31/2023:

Mueller Water Products	3.2%
Aspen Aerogels	3.1%
Vestas Wind Systems	3.0%
American Superconductor	2.6%
Kornit Digital	2.4%
Albermarle	2.4%
Cadeler	2.4%
Shoals Technologies	2.3%
Array Technologies	2.0%
Symbotic	1.0%
u-blox	0.4%

### **PERFORMANCE**

as of December 31, 2023

### **Average Annual Total Returns at Net Asset Value**

	Unannualized		Annualized					
	Q4	Calendar YTD	1-Year	3-Year	5-Year	10-Year	Since Inception	Inception Date
Ordinary Shares	8.21%	(1.53%)	(1.53%)	(7.65%)	9.96%	_	5.42%	09/01/2017
Institutional Shares	8.25%	(1.28%)	(1.28%)	(7.42%)	10.25%	_	5.68%	09/01/2017
R6 Shares	8.30%	(1.15%)	(1.15%)	_	_	_	(15.05%)	09/01/2021
MSCI World <sup>1</sup>	11.53%	24.42%	24.42%	7.79%	13.38%	_	10.22%	_

<sup>1</sup>The MSCI World Index captures large and mid-cap representation across 23 Developed Markets (DM) countries. With 1,480 constituents as of 12/31/2023, the index covers approximately 85% of the free float-adjusted market capitalization in each country. You cannot invest directly in an index. For comparative performance purposes, the beginning date of the Index is 09/01/2017. The MSCI World Index is maintained by MSCI Inc.

Performance data quoted represents past performance and is no guarantee of future results. Current performance may be lower or higher than performance data quoted. Investment return and principal value will fluctuate so that an investor's shares, when redeemed, may be worth more or less than original cost. For the most recent month-end performance, visit the Fund's website at www.peartreefunds.com.



55 Old Bedford Road Suite 202 Lincoln, MA 01773 www.peartreefunds.com

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