



2021

PREQIN GLOBAL
NATURAL RESOURCES
REPORT

SAMPLE PAGES



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A Note on Our Theme

Plants have evolved to thrive in conditions that many would describe as incredibly harsh. Surviving in full sunlight, freezing temperatures, or rising seawater are just some examples of this adaptation and resilience in action. Similarly, we've seen alternative asset classes continue to grow and mature as the world faces a challenging pandemic, political instability, and change.

Executive Summary

Natural resources funds had a difficult year, but valuation corrections across many assets have created fresh opportunities for new investors

The natural resources landscape was already a challenging one for private investment going into 2020. The uncertainty created by COVID-19 made it even more turbulent. Natural resources funds had their worst year since 2011, when Preqin began tracking their returns, with a rolling one-year IRR of -22.8% in the year to June 2020.

Returns were hit by weakening asset valuations. Global AUM in unlisted natural resources funds¹ had modest growth, ticking up less than 1% from December 2019 to \$866bn as of June 2020. Total AUM for pure natural resources funds fell, down 6.7% to \$215bn.

Fundraising Hit by COVID-19

In a tumultuous year, aggregate natural resources capital raised fell for the first time since 2016, down 29% from 2019 at \$90bn. The number of funds¹ closed has fluctuated around the 190 mark since 2013, but just 106 reached final close in 2020.

Despite the slowdown in fundraising, the natural resources investor universe visible to Preqin is now more than double the size it was in 2016, at almost 5,300, with more wealth managers, family offices, and Asia-based investors seeking exposure. In fact, allocators in Asia now account for 20% of all investors active in the asset class, up from just 8% in 2019.

Energy and Farmland Are Evolving Fast

The decarbonization agenda is fundamentally changing the energy sector. Although energy-focused strategies continue to dominate natural resources, private investment is playing a key role in achieving emissions targets globally. Renewables-focused fundraising¹

reached a record-high \$49bn in 2020, while oil & gas-focused¹ fundraising fell from \$21bn in 2019 to \$7.0bn – a low not seen since 2003.

With climate-change concerns and population pressures at the top of the global agenda, the farmland sector also faces a period of significant disruption. Accounting for 5% of natural resources AUM, farmland funds¹ raised only \$2bn in 2020, the lowest level since 2003. But investments in new technologies could change the game. Farmland investment managers are increasingly adopting a private-equity-like play to gain exposure to technology or business model innovations in agriculture, which could improve their returns profile.

Innovation Is Improving ESG Transparency

Investors demonstrate a growing interest in strategies that align ESG goals with financial returns. Managers that integrate sustainability into their investment process will be better placed to anticipate emergent risks from sustainable finance regulations in developed nations. In fact, impact funds led fundraising in the timberland sector in 2020, with still more scope for managers to innovate in areas such as carbon sequestration and offsetting structures. Technology is enabling improved monitoring of ESG commitment throughout supply chains, increasing transparency.

Looking ahead, the 2021 fundraising market is crowded. A record 383 unlisted natural resources funds are in the market, targeting an ambitious \$202bn. Given the pricing corrections last year, there are opportunities for investors that understand how technology and innovation will shape the asset class.

¹ Includes private equity and infrastructure fund types with a focus on natural resources.

Natural Resources Megatrends

Key themes shaping the natural resources industry



ESG

Investors are not only asking fund managers to further integrate ESG policies into their mandates, but are increasingly demanding more uniform standards and measurable ESG metrics. Environmental considerations are particularly important for natural resources, where exposure to both the physical and transition risks from climate change will be more keenly felt. As global pressure mounts to tackle rising temperatures and extreme weather, asset managers will face closer scrutiny from stakeholders to address emerging environmental and operational risks.



Capital Consolidation

Since 2014, investors have been committing larger sums of capital to fewer managers that raise ever-larger funds. In 2020, the share of capital raised by the 50 largest funds kept climbing, but the capital consolidation trend is evolving. The share of capital secured by the 10 largest funds declined in 2020 for the first time since 2017, as the largest funds saw lower commitments. LPs are now increasingly willing to explore relationships with up-and-coming managers that have a tighter alignment of interests and more attractive fund terms over incumbent mega-funds.



Technology

Technological advancements in battery storage, big data, artificial intelligence (AI), and the Internet of Things (IoT) are driving transparency, efficiency, and innovation across all sectors of the industry, from renewable energy to sustainable farming.



Geopolitical Tensions

US-China tensions are ongoing, and economic conflicts, such as the recent Saudi-Russia oil price war, will remain a feature of the geopolitical landscape in 2021, driving volatility in global commodities markets.



Rising Allocation to Alternatives

Investor appetite remains robust, despite escalating trade tensions, supply chain disruptions, and growing sustainability concerns continuing to contribute to performance volatility for natural resources investments in the short term. However, the majority of surveyed investors see value in the long-term portfolio benefits of natural resources as a diversifier.

Natural Resources in 2020: Key Facts



\$7.8bn

Aggregate capital raised by unlisted natural resources funds in 2020, excluding private equity and infrastructure fund types with a focus on natural resources. If those were included, aggregate capital raised would be \$90bn.



\$215bn

Industry AUM as of June 2020, excluding private equity and infrastructure fund types with a focus on natural resources. If those were included, AUM would be \$866bn.



21

Average number of months spent on the road by unlisted natural resources funds* closed in 2020 (vs. 17 months in 2019).



383

Number of unlisted natural resources funds* in market as of January 2021, collectively targeting \$202bn.



76%

Proportion of surveyed investors that intend to commit as much or more capital to natural resources in 2021 as they did in 2020.



-5.9%

Annualized net return generated by unlisted natural resources funds* in the three years to June 2020.

**Includes private equity and infrastructure fund types with a focus on natural resources.*

How Technology Is Shaping the Future of Farmland

Martin Davies, President and CEO of Westchester Group Investment Management, an affiliate of Nuveen, explains how technology advancements will play a larger role in the future of farmland investments

When we think of technology, the food on our plate is not the first thing that comes to mind. How has technology impacted agriculture historically?

Expanding populations and changing diets have put increasing pressure on the world's farmland; discovering and employing technologies that increase productivity is becoming more essential. Farmers have been using technology to increase production and reduce inputs from the earliest days of plant cultivation, when digging tools for seed planting were first used back in 8,000 BC. During the Agricultural Revolution of the 18th and 19th centuries, machines such as the seed drill were first used, ushering in more modern techniques that have been incrementally improved upon ever since.

In recent years, advancements in machinery and plant breeding have been most prevalent. The impact of technology implementation on agriculture can be seen clearly in key measures of agricultural productivity. Total Factor Productivity (TFP) is a measure of efficiency and shows the ratio of total agricultural output relative to total production inputs has increased significantly over the years. In fact, global TFP in agriculture has increased by 73% since the 1960s, or more than 1.0% p.a.

What specific technologies are being deployed now that you think will drive future productivity?

Just like the Green Revolution before it, the Data Revolution is likely to provide a significant and sustained lift in agricultural TFP. Among the plethora of new technologies being introduced are sensors, robotics, drones, artificial intelligence, precision agriculture and predictive analytics, smart irrigation, farm management software, and genetic engineering from mapping crop genomes.



Martin Davies
President and CEO

**Westchester
Group Investment
Management, an
affiliate of Nuveen**

Nuveen, the investment manager of TIAA, is one of the largest asset managers in the world with more than \$1tn in AUM. Managing a broad array of diverse asset classes, across geographies and investment styles, we provide access to a range of liquid and illiquid alternatives strategies. **Westchester Global Investment Management**, our farmland investment-specialist affiliate, leverages more than 30 years of agriculture real estate investment experience. It manages over 500 properties across seven countries, and is the largest manager of farmland assets globally.

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The gathering of data and automation underpin many of these technologies. For example, automation of combine harvesters uses cameras and sensors to identify changes in crop conditions, which then automatically adjusts the combine settings to deliver optimal performance in varying conditions. Drones provide a platform for scouting land and crops, checking for weeds, monitoring overall crop health, managing

¹ As of 30 Sep 2020

² Pensions & Investments, 05 Oct 2020. Rankings are based on institutional tax-exempt assets under management as of 30 Jun 2020 reported by each responding asset manager

livestock, and monitoring for health issues. Virtual reality may bring forth remotely operated farm machinery, which can help staff farms and provide consumers an opportunity to ‘visit the farm’ to learn more about how food is produced at a time when provenance and traceability of food is in high demand.

How do these advancements impact farmland investment outcomes?

Technology helps to expand the income a farmer can expect to earn from each acre of land by either improving yields or reducing costs. This higher income generation improves the value of the underlying farmland. For owners of farmland, rising farm income also generates higher lease revenue. Crop yields may also be improved via increased resilience to negative weather events, reduction of input costs, and data to improve decision-making and efficiency. These factors combined help stabilize farm income against negative shocks associated with weather, commodity pricing, or input cost escalation, reducing the risk of rent delays or defaults to farmland owners. Furthermore, technology can improve many environmental and sustainability factors. For example, the targeted application of fertilizers and pesticides reduces their use, lowering the risk of watercourse contamination and reducing the impact on biodiversity, while fuel-saving technologies can achieve lower greenhouse gas emissions.

How have farmland assets performed during the pandemic?

Farmland has performed well, similar to its performance in other periods of economic disruption, and has provided investors with a store of value. According to the National Council of Real Estate Investment Fiduciaries (NCREIF) Farmland Index as of 30 September 2020, the asset class has delivered stable returns YTD despite volatile macro and market conditions, with a total return of 1.5%. This compares to farmland’s YTD performance of 2.4% for the previous year.

Agriculture was classified as an essential activity in most countries, so farmers continued to operate within the regular seasonal patterns with limited disruption. In 2020, US row crop farmers were able to plant, produce, and harvest their crops during the normal seasonal windows. Grain exports have been unaffected by lockdowns and related restrictions, and Brazil’s soybean export volumes are up 34% YTD.

At the beginning of the pandemic, there was concern for the demand of some discretionary agriculture products, such as wine, with restaurants and winery tasting rooms forced to close during lockdown. Yet, off-premises wine

sales in the US increased by over 24% YTD, driven by consumers ordering wine from online platforms. This dramatic growth in off-premises wine sales helped offset the fall seen in the traditional restaurant channel. Overall, global demand for agricultural products has been characteristically stable during the pandemic, leading to consistent returns in farmland.

What characteristics make farmland performance resilient during periods of economic turmoil?

Farmland values and income are tied to food demand; given the inelastic nature of food demand, they are not tied to the economic cycle. Farmland provides investors with a strong income yield relative to fixed-income alternatives globally, and low volatility compared to other financial assets such as equities.

Despite ongoing shifts of people transitioning to home-cooking and away from dining out during the pandemic, farmland return characteristics are not expected to differ from past downturns. Independent of the benefits that farmland offers to portfolios, it is a compelling time to invest in farmland due to the potential for productivity gains and the associated influence on farmland returns.

What structural changes are occurring within this asset class, and how can institutional ownership help ensure food security?

Driven by consolidation, economies of scale, and sector specialization, structural change in the agricultural industry remains a widespread trend. Farm operators continue to seek operational efficiencies, expanding the capacity of farmed area by leveraging technologically driven productivity advancements so we can produce more. Institutional ownership interests are closely aligned with driving higher productivity, thereby supporting food security.

While family farming and privately owned businesses are expected to continue to dominate the agricultural landscape, the ownership structure is likely to change as it becomes less essential for farm operators to retain complete ownership of their capital assets. This change will be facilitated by institutional investment in farmland, which will provide much-needed liquidity to farm operators to finance operations and take advantage of the many technologies discussed here.

We aim to partner with entrepreneurial tenants who are early adopters of technologies to drive efficiency and support sustainable production of nutritious food. Long-term financial returns and thematic benefits to farmland owners will be driven by adherence to global best practices and social responsibility.

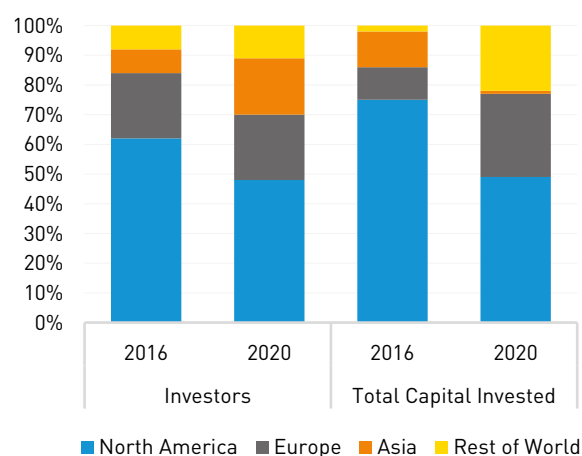
Natural Resources Draws Broader Pool of Investors

More family offices, wealth managers, and Asia-based investors will deploy capital

Investor interest in natural resources is expanding. In 2020, the number of investors in the asset class tracked by Preqin rose 29% on the previous year, to more than 5,300. Natural resources typically form part of an investor's infrastructure or private equity allocation. Given that competition for quality private equity and infrastructure opportunities has intensified,¹ rising prices and yield compression in these assets is prompting a wider variety of investors to explore how they can gain exposure to natural resources instead.

The majority of capital invested in natural resources comes from investors based in North America and Europe; Asia-based investors accounted for only 1% of combined allocations to the asset class in 2020. However, coming off this low base, Asia is now home to the fastest-growing pool of natural resources capital. By the end of 2020 the region was home to 924

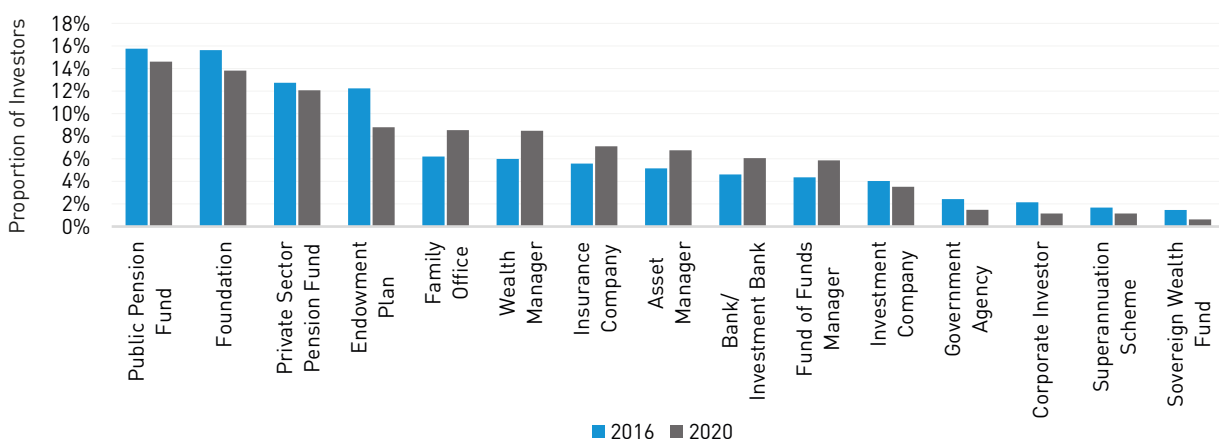
Fig. 5.1: Proportion of Investors and Total Capital Invested in Natural Resources by Investor Location, 2016 vs. 2020



Source: Preqin Pro

¹ <https://www.ubs.com/us/en/asset-management/institutional-investors/insights/top-infrastructure-trends-for-2020.html>

Fig. 5.2: Investors in Natural Resources by Type, 2016 vs. 2020



Source: Preqin Pro

League Tables: Largest Investors

Fig. 5.7: Largest Investors in Natural Resources by Location

<u>Region</u>	<u>Investor</u>	<u>Allocation to Natural Resources (\$bn)</u>	<u>Investor Type</u>	<u>Location</u>
Global	Investment Corporation of Dubai	53.1	Sovereign Wealth Fund	United Arab Emirates
	ABP	26.0	Public Pension Fund	Netherlands
	Prudential	25.1	Insurance Company	UK
	CPP Investment Board	13.2	Public Pension Fund	Canada
	DWS Group	9.1	Asset Manager	Germany
North America	CPP Investment Board	13.2	Public Pension Fund	Canada
	Ontario Teachers' Pension Plan	6.8	Public Pension Fund	Canada
	Public Sector Pension Investment Board	6.0	Public Pension Fund	Canada
	Manulife Financial Corporation	5.5	Insurance Company	Canada
	Washington State Investment Board	5.0	Public Pension Fund	US
Europe	ABP	26.0	Public Pension Fund	Netherlands
	Prudential	25.1	Insurance Company	UK
	DWS Group	9.1	Asset Manager	Germany
	ING Private Banking	5.8	Wealth Manager	Netherlands
	KGAL Real Investments	3.8	Asset Manager	Germany
Asia	Eurasian Development Bank	1.5	Bank	Kazakhstan
	National Federation of Fisheries Cooperatives	0.1	Bank	South Korea
	Yantai Jereh Oilfield Services Group	0.1	Corporate Investor	China
	Emtek Group	0.0	Corporate Investor	Indonesia
	West Japan Metal and Machinery Pension Fund	0.0	Private Sector Pension Fund	Japan
Rest of World	Investment Corporation of Dubai	53.1	Sovereign Wealth Fund	United Arab Emirates
	Corficolombiana	4.6	Corporate Investor	Colombia
	Sovereign Fund for Strategic Investments	2.5	Sovereign Wealth Fund	Senegal
	New Zealand Superannuation Fund	2.0	Sovereign Wealth Fund	New Zealand
	QIC	1.6	Asset Manager	Australia

Source: Preqin Pro

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