



**STAFFORD**  
CAPITAL PARTNERS

# The Stafford Agriculture & Food Diaries

*Aquaculture: A  
compelling opportunity  
for private markets  
investors*

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## In this edition of The Stafford Agriculture & Food Diaries...

In this edition of Stafford Diaries we focus on the aquaculture value chain and the opportunities it presents for private market investors.

The aquaculture sector has become a major focus for Stafford Capital Partners due to its exceptionally attractive growth drivers. Aquaculture is the world's fastest-growing animal protein-producing industry and currently accounts for more than 50% of global seafood production<sup>1</sup>. In just six years, between 2010 and 2016, the value of the aquaculture industry grew by USD 93 billion (a compound annual growth rate of 10%)<sup>2</sup>. Before 2010, it took 15 years to grow by approximately the same amount. Today, aquaculture represents a USD +230 billion global and diversified industry.

This rapid growth is expected to continue through the next decade and beyond. Per capita seafood consumption is forecast to rise 5% by 2025 (on 2015 levels), as consumers increasingly shift their focus towards healthy proteins as part of a balanced diet (see Figure 1 below). With seafood consumption increasing and production from marine (wild-catch) stocks at maximum capacity, production from aquaculture systems is essential to meet future demand growth.

Despite its size, the aquaculture industry is relatively immature in comparison to other animal protein sectors. The industry is characterised by a fragmented value chain, high levels of

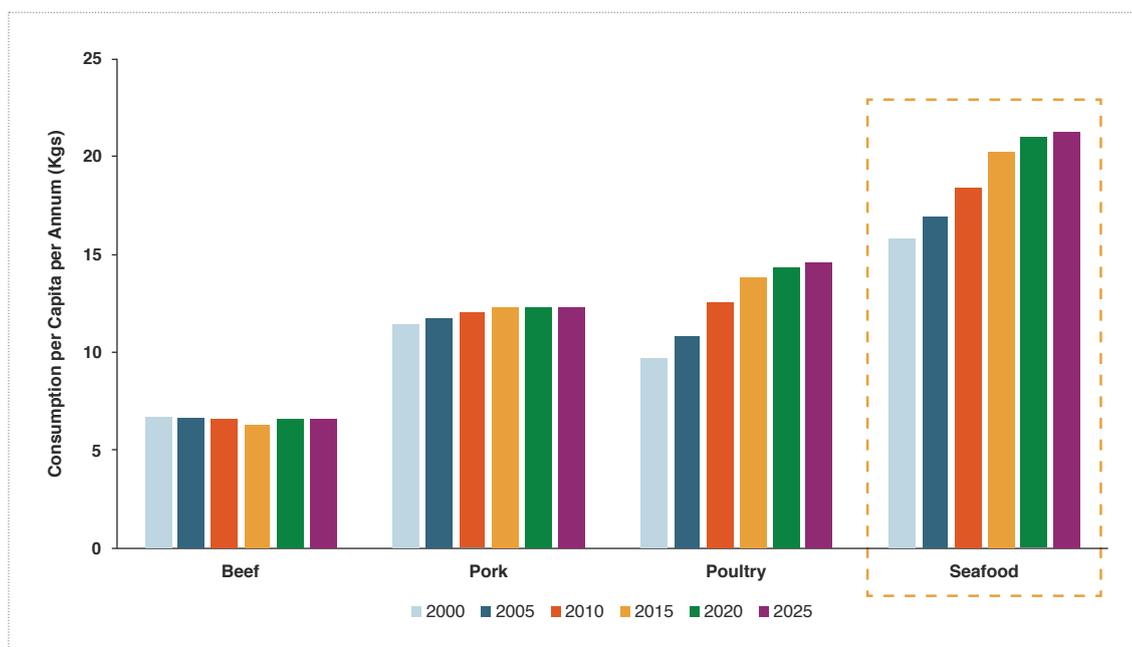
private ownership and a predominance of small-to-medium sized enterprises. This lack of concentration and scale provides a compelling opportunity for investors to drive value creation through business consolidation, expansion, the implementation of industry best practice and the development of integrated business platforms.

However, this opportunity does not go without its challenges. The specialised nature of the industry means there are high barriers to entry. Institutional investment has been limited by the availability of skilled and experienced investment professionals with a track record in the sector. Many attractive companies have been tightly-held by family owners who are not used to dealing with corporate and institutional investors. All of which makes the opportunity more exciting and potentially rewarding for investors who can gain access to the sector.

In this edition of Stafford Diaries, we speak to the Founder and Managing Director of Neptune Natural Resources Capital Partners, Thor Talseth, to get his insights into the future of aquaculture investing.

We hope you enjoy this edition of the Stafford Diaries!

**Figure 1: Global per Capita Consumption of Animal Protein 2000-2025**



<sup>1</sup> Source: FAO, 2018

<sup>2</sup> Source: Rabobank, 2018

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## Overview of the Aquaculture Value Chain

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“Aquaculture” refers to the aquatic farming of seafood. The aquaculture value chain includes the services, inputs, technology, processing and other businesses that directly support both the aquaculture and wild-catch industries. The aquaculture and wild-catch industries are highly interdependent when it comes to providing services and inputs and hence are often considered as part of the same value chain.

The rapid growth in size and profitability of the sector in recent years has transformed aquaculture from relatively unsophisticated beginnings into a highly professional, innovative and specialised industry. Advanced computing, underwater cameras, vessel technology, pharmaceuticals, food and feed science, supply chain logistics, marine services, processing and value-adding are just some of the critical services that today’s modern aquaculture business depends on.



Wild-Catch



Farming



Supply Chain



Services & Inputs



Technology & Equipment



Processing & Value Adding

Below we give a brief overview of the most important aquaculture industry sub-sectors:

**Wild-Catch:** The wild-catch sector encompasses the regulated fishing of wild marine fish stocks and other edible marine species, such as lobsters, shrimp, crab and clams. Wild-catch fishing in most seas of the world is based upon a quota system that gives a ship owner the right to fish a limited weight of specified species per year. How well the quota system is defined and enforced varies a great deal from region to region and there is a strong correlation between profitability and the strength of the regulatory framework. We have consistently seen over time that a framework based on science and firm but fair enforcement improves wild marine biomass and ultimately secures production. In recent years, high demand for seafood and strict quota limitations have led to improved industry profitability, resulting in greater investment in equipment and technology to improve health, safety and fish handling capabilities on-board fishing vessels. Larger fishing vessel owners are also investing in equipment that can process fish trimmings and waste to deliver valuable byproducts to onshore processors, thereby increasing fish utilisation and maximising profitability.

**Off-Shore Fish Farming:** The off-shore fish farming sector, of which salmon is the largest and most advanced contributor, is centred around the coastal waters of Norway, Scotland, Chile, USA and Canada. Atlantic salmon is the largest (by volume) farmed salmon species and has a higher feed conversion ratio compared to most other animal proteins, including beef, pork and poultry, meaning it is more efficient at converting feed (input) into body weight (output).

This advantageous feed ratio reflects the benign combination of a species with natural physical advantages and an industry segment that has focused on driving operational professionalism and improvements in productivity. Transferring some of the operational best practices, technologies and personnel from the mature salmon farming industry to other fish farming segments will help to improve business profitability and sustainability across the sector into the future.

**Supply Chain:** As the international trade of seafood grows, a more co-ordinated and integrated supply chain between local and international markets is evolving. Stricter animal welfare, environmental, work-place health and safety, food safety and product traceability regulations are increasing the demand for sophisticated service providers that can deliver complex business functions. As consumers change the way they eat, the need to develop more dynamic supply chains that can meet changing consumer preferences, such as 'ready-to-cook' and even 'ready-to-eat' products, will drive further expansion and innovation in the aquaculture supply chain.

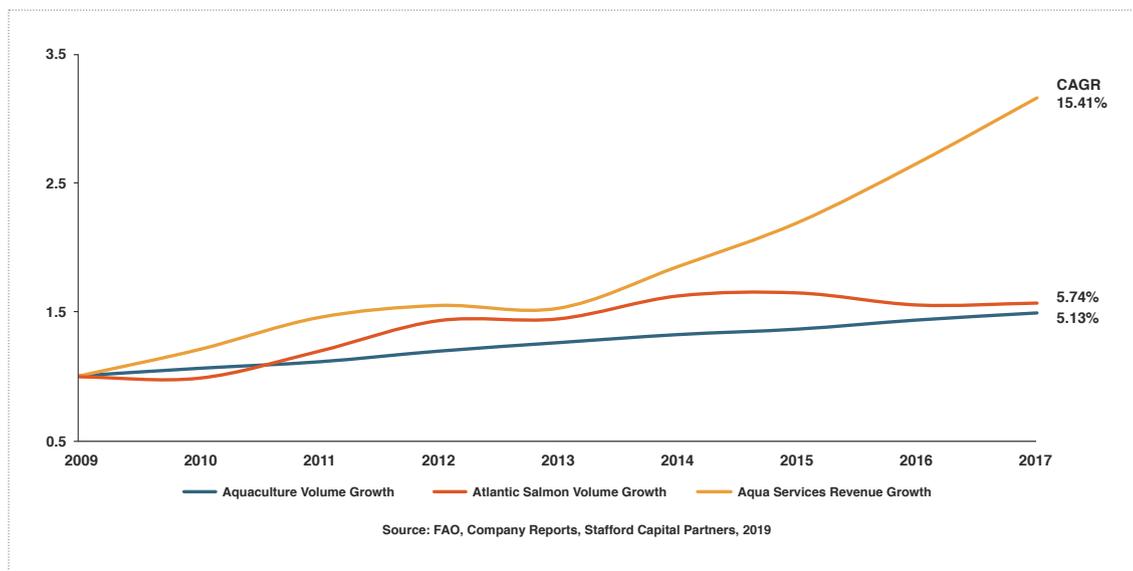
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**“Atlantic salmon is the largest (by volume) farmed salmon species and has a higher feed conversion ratio compared to most other animal proteins, including beef, pork and poultry...”**

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**Services & Inputs:** The development of ever-more sophisticated aquaculture and wild-catch technologies and equipment is increasing the need for specialised service providers who can supply, maintain and operate these systems. Examples of outsourced operations include; the transportation of fish in wellboats, the treatment of pests and diseases, the cleaning of cages and nets to remove algae, fish harvesting, on-board fish processing and the establishment and maintenance of fish farming sites. Other critical inputs include fish feed, therapeutics and vaccines, which are vital to ensure farmed animals are healthy and productive throughout their life-span. The recent growth of the aqua-services sector is reflected in Figure 2.

**Figure 2: Growth of Aqua-services Revenues vs Farmed Salmon Volume**



**Technology & Equipment:** The development of world-leading fish farming technology has been a key growth-enabler for the Norwegian and later the global salmon farming industry. The development of larger production sites, more sophisticated vessels and highly specialised equipment such as underwater camera systems and tailor-made Enterprise Resource Planning (ERP) systems, have made it possible for the industry to drive productivity improvements and achieve healthy EBITDA margins (approximately 20-25%).

The development of new technology and equipment has been facilitated by the growth of specialised technology companies that work across the value chain to improve productivity, with a particular focus on animal welfare.

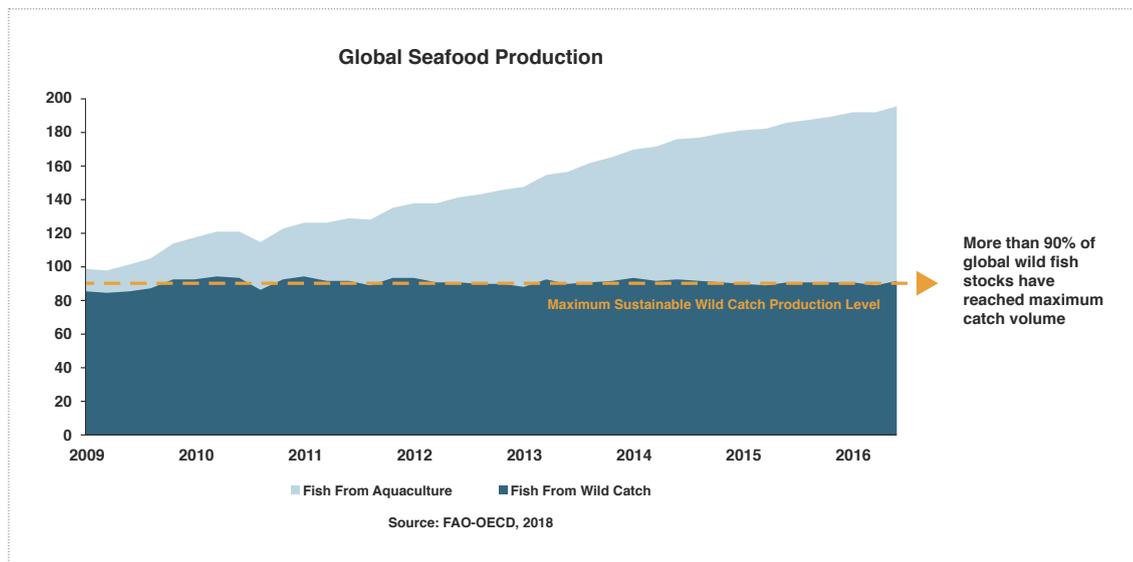
Some companies focus on providing a differentiated service to producers, while other companies act as a one-stop-shop, providing software and hardware solutions as well as a broad range of equipment such as cages, sensors and pumping systems.

**Processing & Value-adding:** Processing encompasses the primary processing of fish meat for human consumption and the secondary processing of by-products and wastage into food-grade products and ingredients with a range of applications. Some of the larger fish farming and wild-catch companies, who are able to produce a consistent and reliable supply of product all year-round, are now looking to acquire well-positioned processing and distribution companies to allow them to capture additional margin and get closer to the consumer. Other producers are focusing on new product development and forging long-standing offtake partnerships with wholesalers and retailers. Fresh fish and 'ready-to-cook' products, for example, are high-growth even in established consumer groups in well-defined geographies.

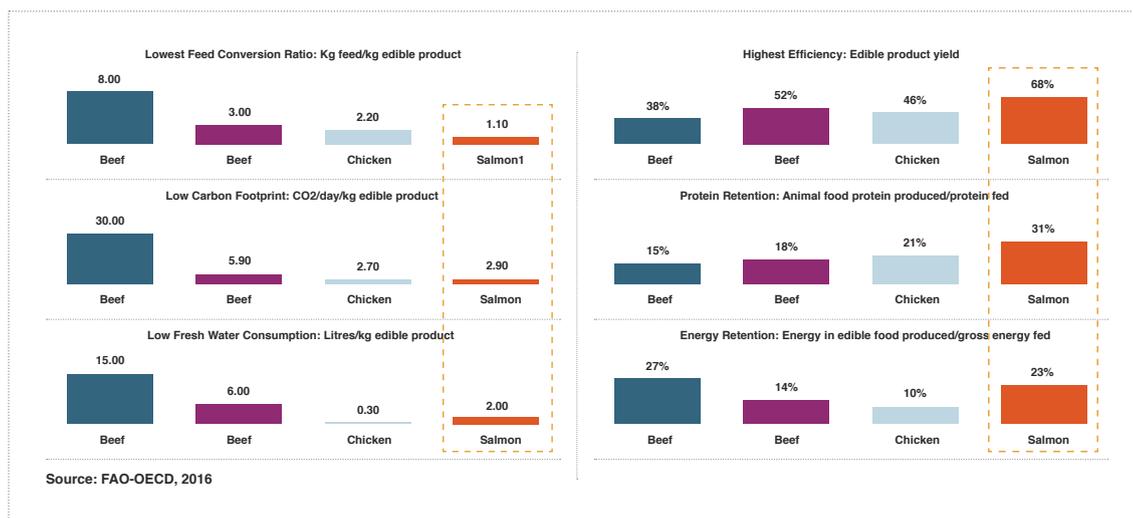
## Aquaculture's Sustainability Profile

As we saw on Page 1, seafood demand is expected to rise significantly over the next decade and beyond. However, according to the FAO, 93% of wild stocks have already reached maximum production capacity and can no longer sustain the rising consumer demand for seafood (See Figure 3). As a consequence, seafood production from Aquaculture is essential to meet this increased demand.

**Figure 3: Seafood Production from Wild-Catch has Reached Maximum Sustainable Capacity**



Farmed fish, in particular salmon, is a highly resource-efficient source of animal protein. Salmon has the highest feed conversion ratio and highest edible yield of all major animal protein sources, as well as being a source of long-chain omega-3 fatty acids, iodine, vitamin D and calcium. Other farmed fish species have the potential to increase their productivity – through investment in innovation, technology and best practice – to similar levels.



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## Managing the Intensification of Fish Farming

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In any animal protein producing industry there are a number of biological challenges that can impact animal health and growth, in turn impacting upon business profitability. The aquaculture industry is no different. Indeed it has its own distinctive set of challenges that result from its setting in diverse marine ecosystems, as opposed to being on land.

Sea lice, for example, are marine parasites that occur naturally in marine ecosystems, living off the epidermal tissue and blood of host fish. A failure to control sea lice populations in fish farming environments can lead to a reduction in productivity and, in some cases, a rise in fish mortality. Such is the scale of the challenge, the salmon industry invests between USD 600 million to USD 1 billion each year to reduce production losses caused by sea lice.

The aquaculture industry is also susceptible to other common fish diseases; the risk of fish escaping from their pens; and the release of excessive nutrients from poorly-sited farms into surrounding ecosystems, which may damage local marine life. As the industry matures, aquaculture producers are increasingly seeking ways to mitigate these biological challenges to drive profitability and to minimise any negative impacts that the production of farmed fish may have on the surrounding ecology.

Many of the sector's challenges are being met through the use of new technologies, as well as implementation of industry best practice, increasing producer knowledge of animal health, stricter industry regulations and the introduction of key performance indicators to measure, monitor and report on environmental performance.

Aquaculture producers are beginning to face pressure from downstream stakeholders and consumers who demand stronger ESG performance from their suppliers. The rising importance of sustainability is creating favourable tailwinds for investors in the aquaculture services sector, as producers increasingly need to outsource complex operational activities to sophisticated service providers to deal with environmental concerns. There are therefore significant opportunities for investors and service companies alike to bring greater operational expertise, new technology and market capacity to customers who demand these important services.

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**“The rising importance of sustainability is creating favourable tailwinds for investors in the aquaculture services sector...”**

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## Investor Profile: Thor Talseth – Founder and Managing Director, Neptune Natural Resources Capital Partners

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*Thor is Founder and Managing Director of Neptune Natural Resources Capital Partners. As a former senior executive of public and private aquaculture and agriculture businesses, Thor brings a hands-on approach to investing in and adding value to portfolio companies.*

Thor was previously the Head of Private Equity at AMERRA Capital Management and a voting member of its investment committee. Prior to joining AMERRA in 2015, Thor was founding partner of an investment management and advisory company focused on the international seafood and aquaculture industry.

Thor has more than 20 years' experience in the international seafood and aquaculture industry as an investor, senior executive and as a sector-focused corporate banker. He was previously Head of Seafood (Corporate Finance) at Arctic Securities, Executive Chairman of a public marine biotech company, Managing Director & Country Manager of Landsbanki Norway and CEO of OTC-listed international aquaculture company Fjord Marin ASA.

Thor has also been a speaker and organizer of industry-focused investor conferences in New York, Chicago, London, Oslo, Hong Kong and Singapore.



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## Stafford Diaries Interview with Managing Director of Neptune NRCP

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In July 2019, Stafford Capital Partners Ltd partnered with Neptune Natural Resources Capital Partners to launch the Neptune Aquaculture PE Fund, the world's first private equity fund dedicated to investing across the global aquaculture value chain.

In this edition of Stafford Diaries, Stafford Ag & Food's Managing Partner, Jos Boeren, sits down with the Managing Director of Neptune NRCP LLC, Thor Talseth, to discuss the key attractions of private equity investing within the aquaculture sector.

**JB:** Thor, please tell us broadly why PE investors should be interested in the aquaculture sector today?

**TT:** Aquaculture is benefitting from a combination of rising demand for fish protein and a fixed level of supply from wild sources. It is also a highly fragmented industry with many small or medium-sized companies (SMEs) lacking the capital and resources to produce efficiently. So there is a great combination of market potential and a lack of real competition from generalist PE investors currently – which makes a dedicated approach to aquaculture very attractive.

**JB:** What size of investment does the Neptune fund seek and what are the potential returns to investors?

**TT:** Generally we are talking deals in the USD 25 million to USD 75 million range, with returns starting in the high teens.

**JB:** What market imperfections do you identify?

**TT:** Being an immature and fragmented industry there are many examples of imperfections. Most companies lack access to public capital markets despite strong underlying earnings, as there are few banks and investors that have a deep understanding of the sector. Different regions have very different levels of maturity. The Mediterranean, for example, is less developed than Norway in terms of scale and market concentration. In addition, there are companies still being run today like they were 10 or 20 years ago; they haven't embraced new technologies, haven't improved their management and operational procedures and haven't focused on developing new product lines to better suit the needs of their customers. These

*imperfections offer opportunities to investors who can gain access to the market – through having a network and having a track record in the industry of being able to deliver – and who can pair that access with a concrete plan for transforming the target companies to make them more efficient, more profitable and more sustainable.*

**JB:** You mentioned that there are few generalist PE investors alive to the opportunity currently. When do you think that will change?

**TT:** Some of the PE community are beginning to take notice. I'm thinking of the Antin acquisition, Cargill buying Ewos and so on. However, larger investors are focusing on the limited number of big, top-tier companies with great management teams, defined strategies and sufficient scale etc. This shows you where the opportunity is for us now – as a global dedicated aquaculture investor we can consolidate the smaller players and build these large integrated platforms, with strong cash generation profiles and top-quality operational excellence, that will in turn attract the bigger mainstream PE investors.

**JB:** What are the pitfalls of investing in aquaculture and how do you avoid them?

**TT:** Like any investment sector there are risks in aquaculture, for sure. Pricing of inputs and outputs can be volatile. There is always a risk of weather damage to production facilities, disease, sabotage, even theft. But generally speaking these risks are manageable. The crucial thing is to be aware of all the risks and actively manage these risks. So do not try to farm too many fish in one place, for example, which is something you see sometimes. Don't hire the cheapest service provider just to cut costs. Above all, make sure your portfolio is diversified both geographically and across operational segments so you are not exposed to a specific challenge in any one market. And continue to invest in the portfolio companies to develop best-in-class practice.

**JB:** Which operational segments do you favour?

**TT:** Well, as I was just saying, you do not want to put all your eggs in one basket, so investing across multiple segments is best. Having said that there are definitely attractive opportunities in the Mediterranean – today – to consolidate newer, smaller producers of species like sea bass and sea bream and to transform them through new operational practices and procedures. Also, I like the waste recycling segment very much; there is a significant advantage to being able to produce new sources of feed and if we can recycle as much of the waste produced in aquaculture production as possible that will help both from an environmental perspective as well as a financial one.

I would add that there are interesting possibilities in the broader services sector, which is growing just as fast, in fact faster by some estimates, than the farming sector. So I'm thinking for example of pharmaceuticals, marine services, new technologies, processing, feed and so on.

**JB:** What geographies do you think are most suitable for a PE strategy?

**TT:** There are plenty of opportunities in Europe, as I've mentioned before, but also in North America, Australasia and South America. Chile is the second largest producer of farmed salmon globally, but faces operational pressures and would greatly benefit from increased investment across the industry. There are opportunities too in Asia, especially in the huge onshore freshwater fish production sector (predominantly carp and tilapia), but we tend to focus on the more developed markets which have a lower risk profile from a sovereign perspective.

**JB:** How do you approach sustainability?

**TT:** Well, as you know, aquaculture is highly sustainable because fish from aquaculture have the highest feed conversion ratio of all animal protein segments and the highest edible product yield, which means less wastage.

Furthermore, aquaculture is highly competitive when it comes to greenhouse gas emissions and fresh water usage. But there are ESG challenges in aquaculture and we take these seriously. We are committed to improving the sustainability profile of aquaculture further and implementing operational best practice throughout our portfolio companies. Ultimately we believe it is via improved operational processes and the use of new technologies that sustainability challenges can be best addressed.

To give you an example, as Chairman of the Board of Amerra's portfolio company, Andromeda, I led the first implementation of the Aquaculture Stewardship Council's program for sea bass, sea bream and meagre (corvina), which basically created a strict transparency and third-party auditing regime to ensure that fish farmers sited farms in the right locations (taking account of local environmental concerns), controlled the use of feed, maintained water quality, minimised waste and greenhouse gas emissions and adhered to international labour regulations.

At Neptune NRCP we have put the IFC's Sustainability Framework on Environmental and Social Risks & Impacts and the UN's Sustainable Development Goals at the core of our ESG policy and practice. We believe that by proactively measuring and investing in operational improvements we will deliver not only ESG gains but also superior financial returns to our investors.

**JB:** Thor, thank you very much, that concludes our interview for today. Thanks for your time and insights into the aquaculture sector. We are confident investors will be keen to hear more about the Neptune Aquaculture PE Fund in the coming months!

**TT:** My pleasure, thank you Jos.

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**“We are committed to improving the sustainability profile of aquaculture further and implementing operational best practice throughout our portfolio companies.”**

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## Update: Stafford Australian Agricultural Real Estate Fund (SAAF)

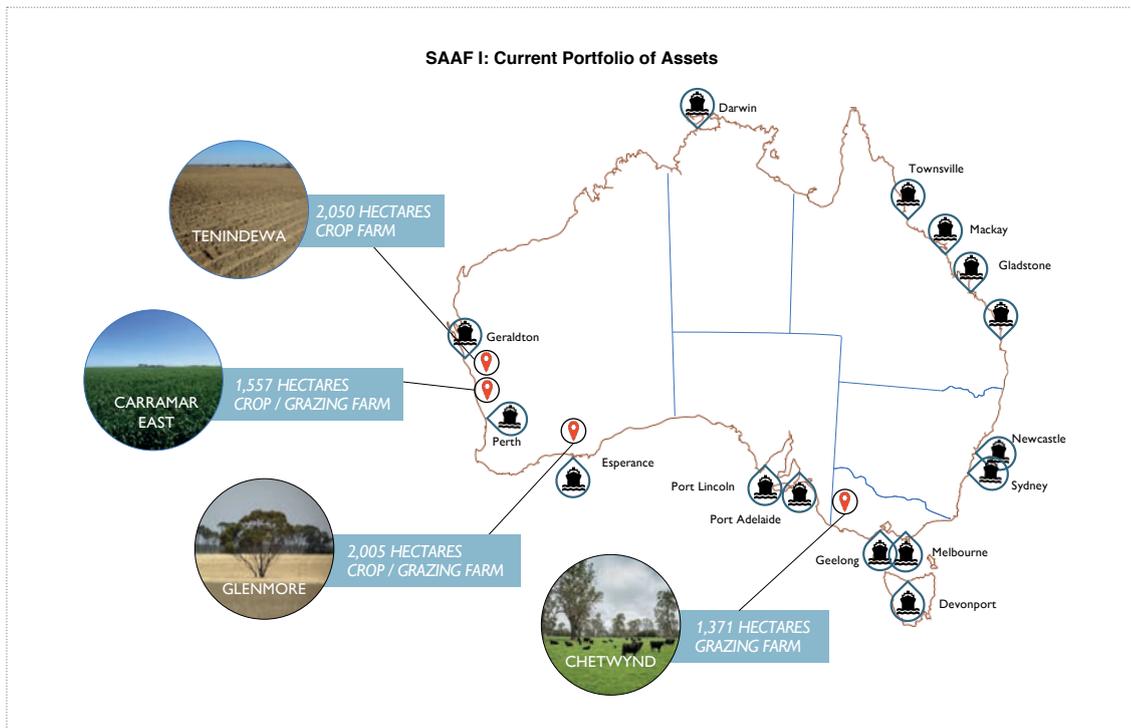
Stafford has partnered with two leading Australian farmland groups to invest in a diversified portfolio of medium-sized grazing and row cropping farmland assets across Eastern and Western Australia, with associated infrastructure and water rights. The assets are leased to top-tier local farmland operators with proven track records and strong credit profiles, who also provide bank guarantees. Known as “SAAF”, the platform is structured as an AUD 33 million co-investment between an Australian superannuation fund and a European pension fund, which targets stable cash income and capital appreciation from a dozen or so farmland assets, with minimal direct exposure to operating and commodity price risk.

Following closing in December 2018, SAAF has so far acquired three assets in Western Australia and an asset in Victoria: an AUD 1.9m cropping property called “Tenindewa”, an AUD 1.6m mixed use property (cropping and livestock) called “Carramar East”, an AUD 2.4m mixed farming property called “Glenmore” and an AUD 6.7m grazing/mixed use property called “Chetwynd”. A fifth asset is under contract. Gross lease rates achieved on these assets average 5.1%, above the budgeted average lease rate of 4.5-5%. These healthy yields are indicative of the attractive entry prices achieved on the assets as well as strong demand from local operators for farmland assets of an appropriate size and production capacity to lease.

Persistent drought in parts of northern New South Wales and southern Queensland appears not to have weakened Australian farmland prices, which rose by an average of 10.7% in 2018 according to Rural Bank, albeit on limited purchases in some regions. While this rise in land prices has inevitably made asset selection more difficult in certain parts of Australia, nevertheless SAAF continues to secure productive farmland assets at good underlying value. A recent example is Chetwynd, an improved mixed grazing asset located in the highly-regarded Western District region of Victoria, which was secured at a value of AUD 560 per livestock unit, versus AUD 600-700 per livestock unit for comparable transactions in the same region this year. This pricing rigor reflects both the benefits of our strategy to buy medium-sized assets, which have higher liquidity than large assets (as well as being more easily incorporated into tenants’ existing businesses), and the local expertise, diligence and exemplary track record of our fantastic local partners.

Our pipeline of acquisition targets remains healthy in both Eastern and Western Australia, totalling more than AUD 250 million of farmland and associated water and infrastructure assets.

Stafford is currently fundraising for a follow-on fund to SAAF, which will pursue a very similar strategy. For more information about how you can invest, please do not hesitate to contact the Stafford Ag & Food Team.



## About Stafford Capital Partners

Stafford Capital Partners is a leading private markets investment and advisory group with a global presence and USD5.3 billion under management and advice from over 75 institutional investors across Asia-Pacific, Europe, and the US. Founded in 2000, the firm has specialist investment teams in infrastructure, timber, agriculture, private equity, and credit. The team consists of over 60 professionals investing from offices in Austin, Boston, Curitiba, London, Seoul, Sydney and Zurich. Stafford Capital Partners is a member of the Principles for Responsible Investment.

To find out more about our Ag & Food business, please contact:



**Jos Boeren**

Managing Partner  
Agriculture & Food, London  
josboeren@staffordcp.com  
+44 20 7535 4911



**James Allen**

Investment Manager  
Agriculture & Food, London  
jamesallen@staffordcp.com  
+44 20 7535 4927



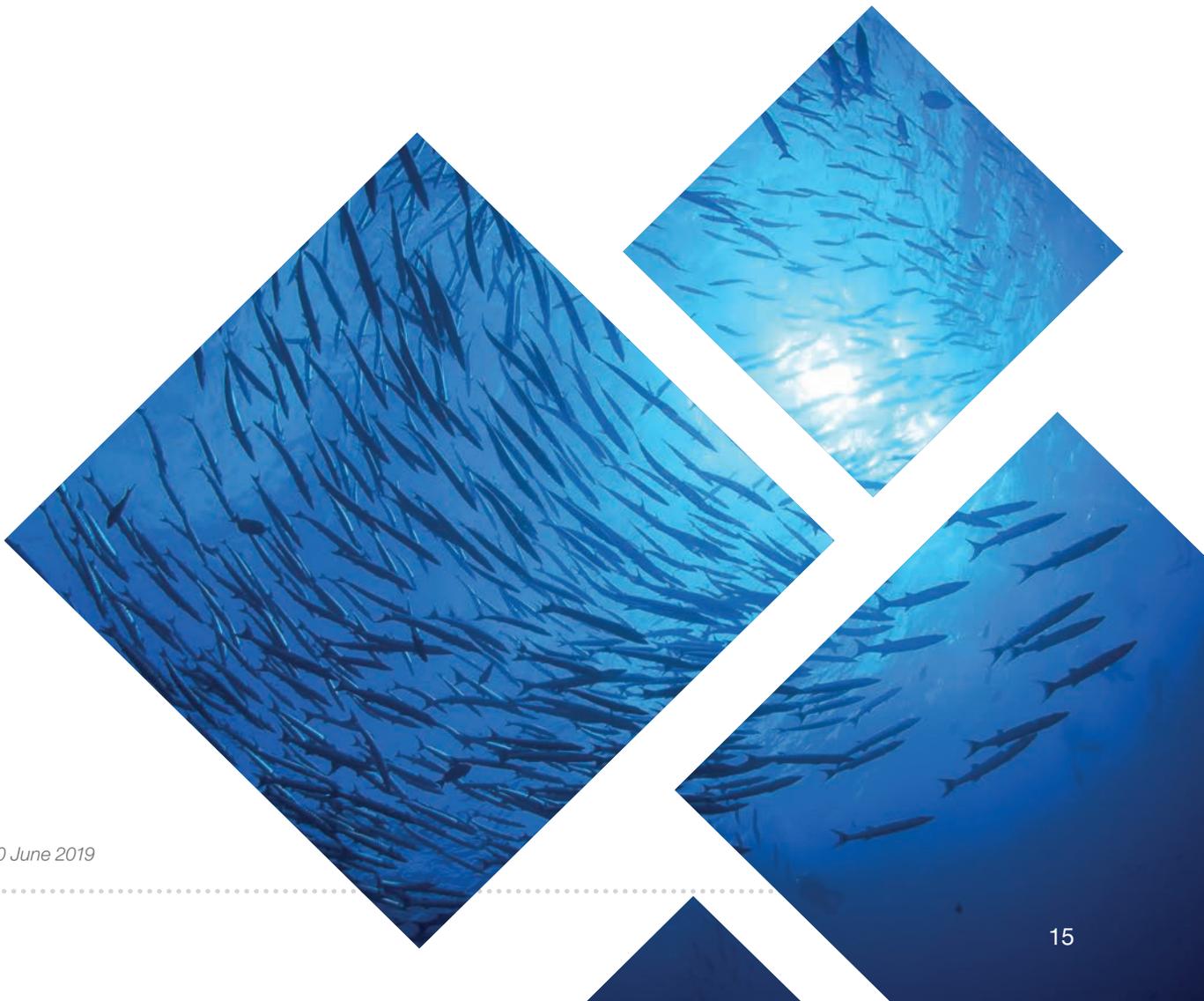
**Bill Travers**

Investment Analyst  
Agriculture & Food, London  
billtravers@staffordcp.com  
+44 20 7535 4921



**Bernd Schanzenbaecher**

Partner  
Agriculture & Food, Zurich  
berndschanzenbaecher@staffordcp.com



<sup>1</sup> As at 30 June 2019



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