EKO Asset Management Partners

SUSTAINABLE FISHERIES FINANCING STRATEGIES

SAVE THE OCEANS FEED THE WORLD PROJECT

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In cooperation with Oceana and Rare
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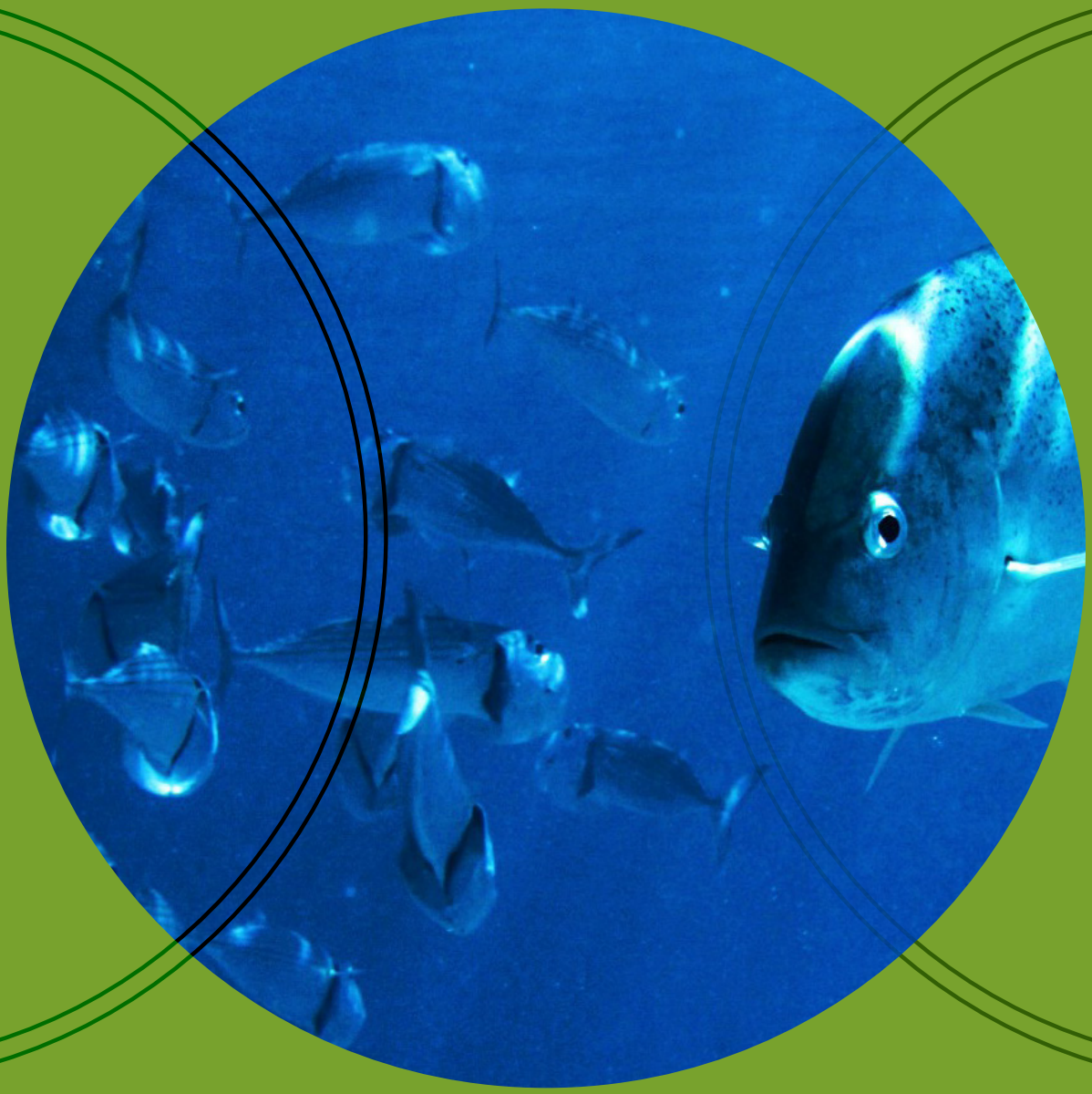


SUSTAINABLE FISHERIES FINANCING STRATEGIES

EXECUTIVE SUMMARY

Traditional strategies supporting ocean conservation and protection of fisheries have most often involved political advocacy, community engagement, and media campaigns that target protection of charismatic species and threatened habitats. In recent years, actors seeking to protect ocean environments have increasingly turned to market-based policies and incentives to better align commercial and conservation objectives. These strategies have included certification schemes, the emergence of eco-brands, small investment funds, and consumer-marketing efforts that generate greater demand for sustainably sourced seafood. Market principles also shape the use of rights-based fisheries management, or "catch share" systems, which attempt to integrate property rights into fishing access as a way to incentivize better long-term resource stewardship.

Recently, more attention has been focused on the development of impact investing strategies that utilize private, return-seeking capital to support sustainable fisheries management. In the fall of 2012, EKO Asset Management Partners (EKO) conducted research in four fishing countries — Brazil, Chile, India and the Philippines — that have important differences and similarities in their governance structures, economics, ecosystems and fisheries to explore opportunities and risks associated with potential impact investments used to finance shifts to more sustainable fishing practices in wild capture fisheries. Transitioning to more sustainable fisheries has the potential to support the livelihoods and wellbeing of fishing communities that depend on the health of those fisheries, increase protein supply for poor and vulnerable communities, and restore and sustain critical ecosystems.

More specifically, in our work with our partners Oceana and Rare, we concluded that:

- Restoring fisheries can lead to an increase in the sustainable supply of fish protein, and that increased availability of fish has the potential to decrease hunger in poor and vulnerable coastal populations.

- Building sustainable local and national fishery management systems can develop social cohesion, build local leadership capacity, ensure access to financial capital, enable a political voice for marginalized communities, and may lead to long-term protection and maintenance of ecosystems.
- Innovative financing strategies can be deployed to accelerate the impact of sustainable fisheries strategies.

EKO identified three impact-investing strategies that have the potential to help transition fisheries to sustainability:

- **A microfinance/SME route-to-market vehicle** that finances a) low-cost improvements to processing activities including icing, packaging, and cold storage; b) distribution logistics such as trucks and interim storage depots; and c) marketing capacity to manage sales efforts to higher-value buyers of fish products. Importantly, the vehicle could be structured to allocate an ownership stake to fishers directly, so that they may benefit from the profitability of the enterprise and have an incentive to make it successful through ongoing sustainability practices and commercial activities
- **A public-private partnership vehicle** that utilizes new technologies and systems to enhance enforcement of fisheries regulations and provide jobs that benefit local communities.
- **A fisheries impact vehicle** that would work with the broader fisheries supply chain to structure long-term purchasing commitments that can in turn be used to finance a transition to a more sustainable fishery.

These strategies could be implemented through the use of funds, the establishment of companies, or through the deployment of other innovative financial structures, all of which will be referred to as vehicles throughout this paper.

This paper attempts to evaluate the factors that affect the financial viability of sustainable seafood investments, and in doing so: a) examines the underlying industry dynamics, opportunities, and risks associated with investing in the seafood sector; b) summarizes lessons learned from existing approaches to sustainable fisheries investments; and c) describes in greater detail the three aforementioned impact-investing mechanisms that could support the development of more sustainable wild-capture fisheries. The design of these strategies reflects, to the best of our understanding, the unique characteristics of the countries studied. We recognize that these strategies will evolve through further research and development and will vary meaningfully in their design and execution depending on the specific characteristics of the fisheries and countries where they may be deployed. We hope that these strategies can be adopted, modified and executed by a range of public, private, and non-profit players over time, and that the execution of these or similar strategies will catalyze the flow of new sources of private capital towards sustainable fisheries with positive environmental and societal impacts.

FISHERIES INVESTMENT OPPORTUNITIES AND RISKS

The creation of investment value in the fisheries and seafood sector is driven by industry dynamics that also affect the social, economic, and ecological impacts of any changes in fisheries management. These dynamics create investment opportunities and risks and can broadly be grouped into three categories: commercial, regulatory, and scientific.

Key Drivers of Value	
Commercial	The commercial dynamics associated with the fisheries and seafood sector include: • Potential stock recoveries • Rising seafood demand and seafood prices » Rising global demand for protein and seafood » Rising retailer demand for sustainable seafood » Wild catch supply constraints • Price and supply volatility • Supply chain complexity • The credit quality of counterparties
Regulatory	The regulatory dynamics associated with the fisheries and seafood sector include: • Inadequate regulatory management and oversight • Instability of the regulatory regime
Scientific	The scientific dynamics associated with the fisheries and seafood sector include scientific uncertainty.

COMMERCIAL DRIVERS

Potential Stock Recoveries

Researchers estimate that the maximum sustainable yield of the world's fisheries could be between 95 and 115 million metric tons, which represents an increase of 2% – 23% from current wild catch levels.[1] In a widely read report titled The Sunken Billions, published by the World Bank, researchers assert that underperforming fisheries cost the world economy an estimated $50 billion per year in forgone economic benefits.[2] This suggests that overfished or depleted fisheries experiencing stock recoveries have significant potential for economic value creation. For example, as the hake fishery in South Africa recovers from an overexploited state, it is expected that AVI Fishing, a company with controlling access to the fishery, will likely see its earnings before interest, taxes, depreciation, and amortization (EBITDA) margin increase from 1.5% in Fiscal Year (FY) 2011 to 12.2% in FY 2015 as the company expects to benefit from a larger resource and cost efficiencies related to the growing scale of the fishery.[3] Scientists estimate that fishery recoveries could increase global catch yields between 8% and 40%, with significant variation among specific species depending on the level of stock depletion.[4] For example, some severely depleted stocks may be able to increase yields by several multiples of current allowable catch levels after rebuilding such as the New England Georges Bank Cod, where in the 2013/14 fishing year, fishermen will only be allowed to catch 6% of the estimated Maximum Sustainable Yield (MSY).[5] Stock recoveries will vary widely depending on the state of the fishery, the biological features of the species in question, climatic factors such as El Nino and other natural ecosystem-driven fluctuations. As such, upside potential may exist where investors' returns can be tied to resource growth or increased capture efficiencies, whether directly in the fishery harvest and supply or in supply chain businesses that similarly benefit from increasing volumes.

Rising Seafood Demand and Seafood Prices

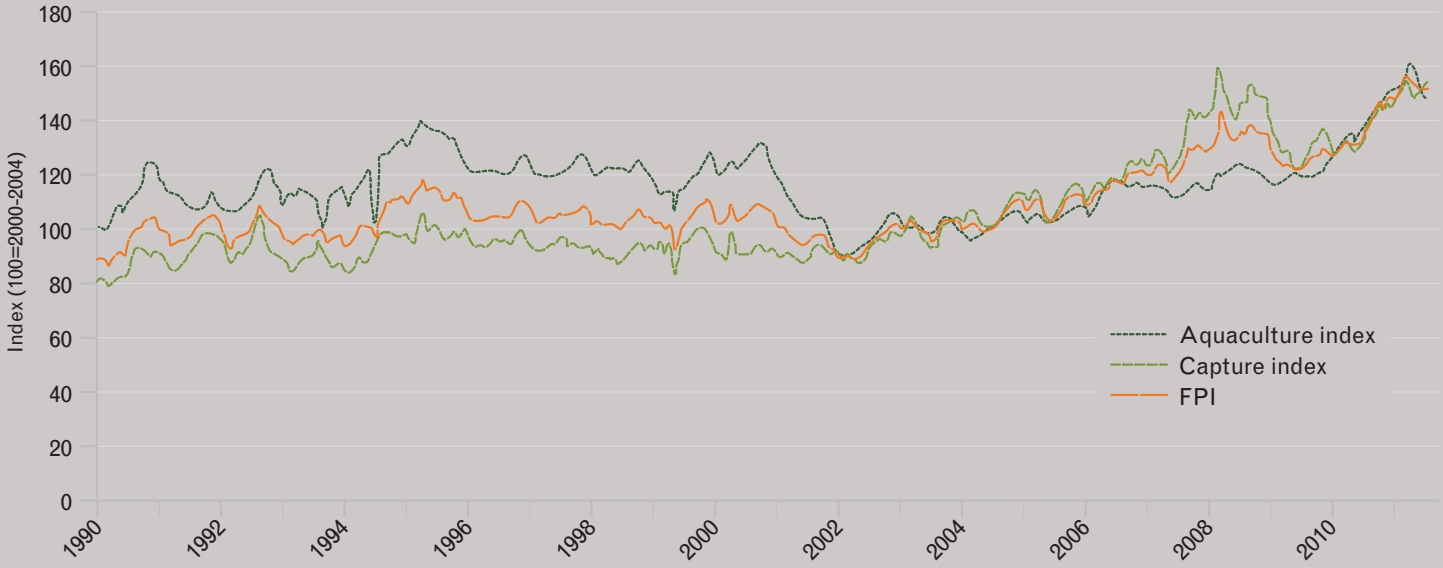
Growth in the seafood industry should create opportunities for investors and is supported by three key industry dynamics:

- Rising global demand for protein and seafood
- Rising retailer demand for sustainable seafood
- Wild catch supply constraints

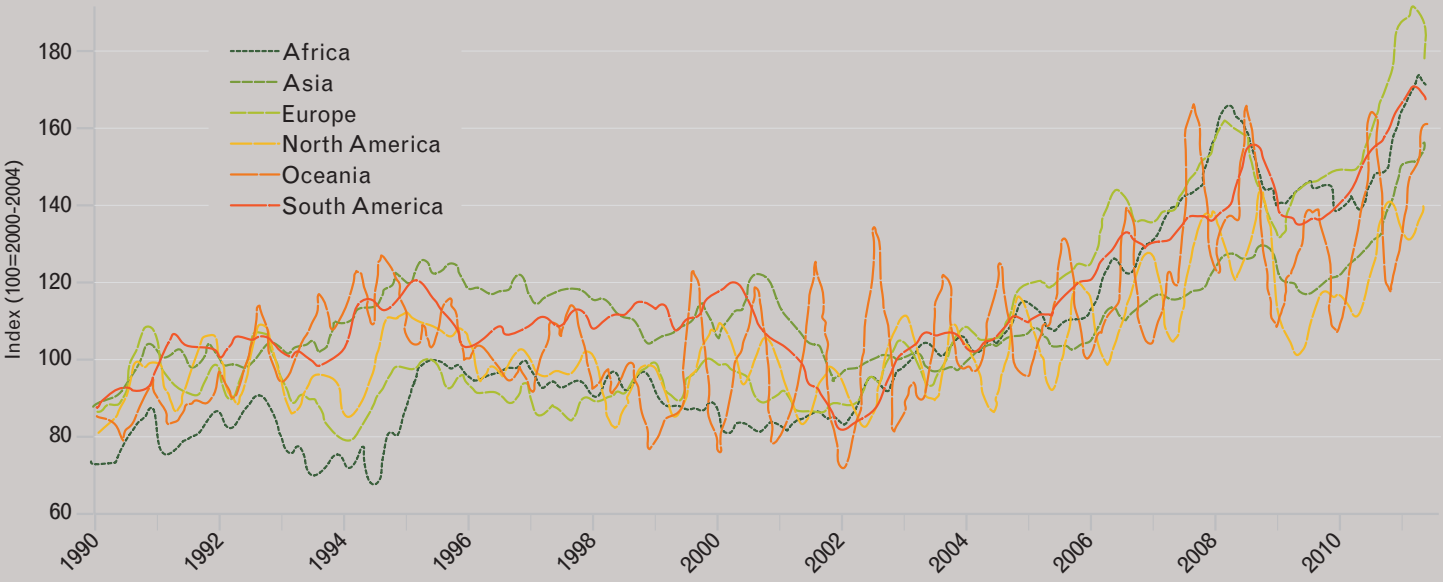
Rising Global Demand for Protein and Seafood: The United Nations projects that global population will increase 17.6% by 2030 and 33.4% by 2050.[6] Rising incomes worldwide will in turn drive increased per capita protein consumption as new consumers enter the middle class. In 2009, seafood made up 16.6% of global animal protein intake, and 6.5% of total protein intake.[7] The Organization for Economic Cooperation and Development (OECD) and the Food and Agriculture Organization of the UN (FAO) project that world per capita fish food consumption is projected to reach 20.6 kg in 2022, up from nearly 19 kg on average in 2010–12.[8] The combination of rising per-capita consumption and population growth leads the FAO to project that animal protein demand will increase 78% by 2050.[9] Global human consumption of seafood has already more than doubled between 1980 and 2011, from 50 million tons to 131 million tons.[10] Based on current trends, total demand (including non-human consumption) is projected to grow from 154 million tons in 2011[11] to 164 million tons by 2020, and then to 232 million tons by 2050.[12] This rising demand creates financial opportunity for investors. Developing more sustainable strategies to meet this demand can create immense positive ecological and social impacts.

Rising Retailer Demand for Sustainable Seafood: Similarly, retailer demand for sustainably harvested seafood appears to be increasing. Many U.S. and European seafood distributors have incorporated or expect to incorporate sustainability targets and certification standards into their sourcing strategies. Large retailers have set ambitious sustainability sourcing goals, and other seafood processors and distributors are structuring sustainable sourcing partnerships such as CleanFish, Sea to Table, and WildPlanet. SeaFood Business Magazine conducts a regular survey of seafood processors, and released data suggesting that 72.1% of seafood processors reported increased requests for sustainably sourced products in 2011 vs. 2010, an increase of 8.6% compared to 2009 results. Relatedly, 23.5% of seafood processors reported that sustainability seafood buying guides like the Monterey Bay Aquarium's Seafood Watch has changed their product inventory, an increase of 7.4% versus 2009 results.[13] Rising retailer demand is a powerful driver supporting the development of sustainable financing strategies demonstrating strong interest for sustainably harvested seafood.

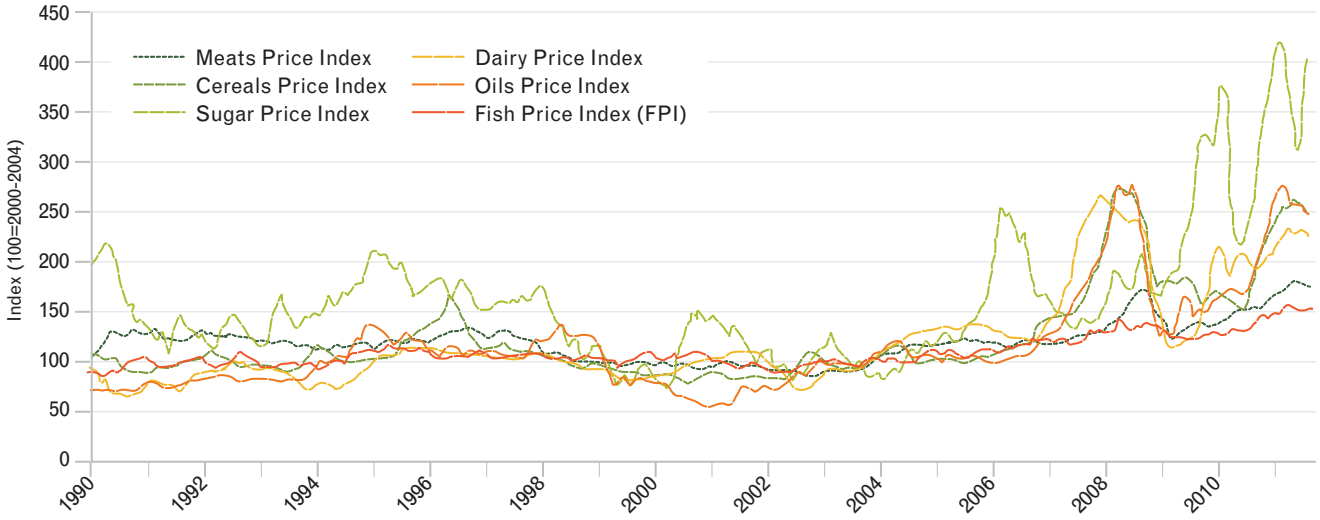
Wild Catch Supply Constraints: Under the most optimistic supply recovery scenarios, the wild-caught seafood supply is projected to rise by 25 million tons,[14] or a 28% increase to current catch levels in comparison to the projected 78% increase in protein demand.[15] Many observers believe that wild-catch landings could decrease, as catch stability has been in part driven by expansion into new fisheries, which are now thought to be fully exploited. Geographical expansion and improved technology (e.g., using radar and sonar equipment to locate fish schools) have masked decreasing yields in fishing on a comparable year-on-year basis. Aquaculture (farmed seafood) is expected to grow rapidly to meet the demand, but the demand scenario is so strong that pressure on wild catch supplies should remain intense. Given the constraints on wild-catch supply and the rising global demand for animal protein, and seafood as a source of that protein, an investor will benefit from the rising prices that will reflect the increased demand



FAO Fish Price Index 1995–2011[19]



FAO Fish Price Index by Continent[20]



Fish Price Index Compared to Other Food Price Indices[23]

in the face of decreasing supply. In addition, wild-catch supply constraints are driving mainstream and sometimes short-term oriented stakeholders in the seafood industry to be more likely to partner with initiatives seeking to bring more sustainable practices into fisheries.

Rising demand combined with constrained supply has led to seafood price inflation. As shown in the FAO Fish Price Index chart below, the FAO reports that wild-capture fishery prices have historically been more inflationary than aquaculture prices, with rolling average prices growing nearly 60% between 2002 and 2008 before collapsing with the recession, but then reestablishing growth by increasing 16.4% over 2011.[16] As shown in the FAO Fish Price Index by Continent chart, we can see that although volatility in prices varies by region, upward pressure is visible in pricing across the globe. In the U.S., the average price for landed fish catch grew at a compounded annual growth rate of 4.9% per year between 2006 and 2011.[17] Respondents to SeaFood Business Magazine's most recent biennial retailer survey reported that wholesale seafood prices rose on average 20%–25% in 2012 versus 2011, and 56% of retailers said that rising wholesale prices are their number one challenge versus 42% who reported so in 2010.[18]

The FAO projects that wild-capture fish prices will increase by 25% in 2022 relative to 2013 prices.[19] Analysts believe that wild capture fish prices could grow even more sharply, particularly for species for which there are no farmed substitutes such as tuna, crab, and lobster, as well as the pelagic species used for fishmeal.[22] Seafood pricing trends are also likely to mirror, to varying degrees, overall global food price inflation. The IMF food price index has resumed a high growth rate, with meat prices rising 17% from 2010 to 2011, and is expected to continue to demonstrate strong growth in the future. The price of seafood benefits in two powerful ways from rising protein prices: a) it is buoyed by the overall increase in the price of protein, and b) because seafood is typically a cheaper source of protein than other foods, the demand for seafood has the potential to increase in an inflationary environment, thereby further buttressing the price of seafood on a relative basis.

Rising seafood demand and increasing seafood prices should support growth in the seafood sector and create a wide variety of investment opportunities for investors and benefits for other industry participants.

Price and Supply Volatility

The underlying volatility in the seafood industry is dramatic and has significant impact on business models throughout the supply chain. There are multiple drivers of occasionally extreme volatility in both supply volumes and price. Volume swings are driven by natural biomass fluctuations, overfishing that can drastically deplete catch volumes over time, fishing policy that creates incentives to flood the market at certain times of the year or over multi-year periods, and unexpected shifts in permissible catch in regulated fisheries. As such, although supply volume in aggregate globally has been relatively stable for the past 20 years, individual fishery volume volatility can be extreme, with landings in some cases dropping to zero, or recoveries doubling or tripling volumes relative to a starting point. Not surprisingly, volume fluctuations can have a dramatic impact on price, which has demonstrated significant volatility in 'dockside' values globally, sometimes trading significantly higher or lower than average prices from month to month and over multi-year periods. Drivers of price volatility include supply changes as described above, as well as the ability to substitute products from other regions or species (such as farmed tilapia substitution for locally harvested whitefish) and shifting consumer preferences and demand trends. Investment strategies that reduce price and supply volatility would be attractive to fishers and investors alike.

Supply Chain Complexity

The seafood industry is unique in its market structure in three distinct ways. First, seafood is the only remaining wild-harvest production system serving customers at any scale. Although farmed seafood is growing rapidly as a market segment, wild-catch seafood still generates 58.7% of the product delivered to end customers around the world.[24] A production system that involves the hunting of hard-to-locate species of fish around the world lends a significant amount of volatility to the business models that attempt to provide a service in the value chain. Secondly, the seafood industry is comprised of thousands of species landed worldwide, each of which is caught under distinct conditions with dramatic shifts that can occur as part of the natural cycle of species population expansion and contraction. Each seafood species can have its own supply chain and set of business models, with unique characteristics in terms of market demand, supply features, pricing dynamics, players, etc. By comparison, the pork, poultry, and beef industries are managed as monoculture businesses, where single species are produced with relatively precise and consistent systems, schedules, and quality. Finally, the seafood industry is a highly fragmented industry with hundreds of players across the supply chain. In comparison, the market structures of the traditional protein industry segments have evolved into very large, vertically integrated systems that operate as monopolies or oligopolies to control all aspects of production and distribution. Complexity in the seafood supply chain makes underwriting of specific investments more difficult but also suggests opportunities for innovative operators across the supply chain to create greater efficiencies and economies of scale that to date have not been fully realized.

The Credit Quality of Counterparties

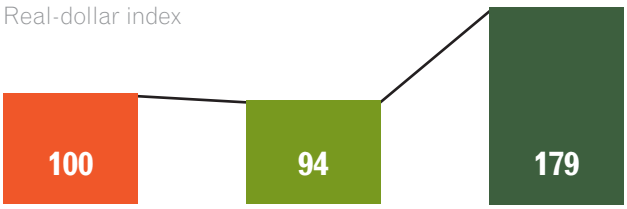
Many financing strategies attempt to invest directly into fishing operations, which present difficult credit risks to investors that may be challenging to overcome. Individual fishing operations are often very small in scale, offer no recourse or security in the event of bankruptcy or default,

and are subject to a wide variety of risks not present in larger or more diversified business models. For example, fishers may retire, can be injured, and may not carry insurance. Their businesses tend to be subject to the most volume and price volatility in the seafood supply chain given their undiversified exposure to a particular region or species. To minimize the risks associated with this dynamic, financing strategies should attempt to identify higher-credit quality counterparties with greater sourcing diversification, a healthy balance sheet, and scale. Investment strategies that can look to counterparties with strong credit quality could appeal to a wider range of impact investors.

REGULATORY DRIVERS

Inadequate Regulatory Management and Oversight

Regulatory frameworks greatly impact the health and sustainability of fishery resources. Regulatory policies vary significantly by region and species, and are made complex by the multiple layers of management oversight offered by international, federal, state, and local authorities that govern the access to, catch volumes from, and harvesting practices of a given fishery. Where a specific regulatory framework is inadequate in its reach, stock recovery and long-term sustainability are at risk. For example, fisheries authorities may implement a catch share system that provides for limited access to the fishery, theoretically reducing pressure on fish stocks. But that same policy may not direct sufficient funding for enforcement to minimize illegal fishing, or may not have sufficient jurisdiction to protect fish stocks that cross national borders or have seasonal migrations into other regions. Where investment returns are predicated on projected stock recoveries, investors will need to have confidence that the regulatory strategies implemented are comprehensive in nature. Incremental policy advances, while important from a long-term conservation standpoint, may be too weak to result in fish stock recovery. Investments predicated on stock recoveries that are in turn dependent on adequate regulatory oversight will need to consider the degree of risk associated with regulatory dynamics.



Revenues per Fishing Vessel Increase[25] **

**Red bar index represents 5 years prior to catch share implementation, green bar shows real-dollar index at one year prior to catch share implementation, and dark green bar shows real-dollar index 5 years after catch share implementation

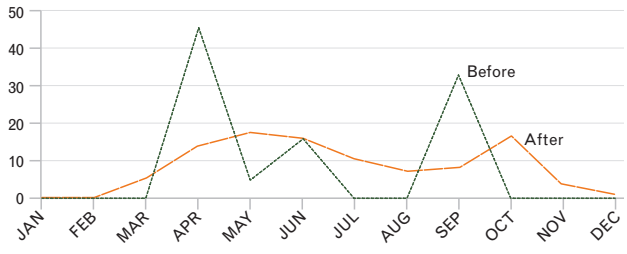
Instability of the Regulatory Regime

Pressures from industry, politics, local community interests, and environmental concerns can result in a tension between short-term economic interests and long-term stewardship. Where regulatory policy is unstable in the face of those competing interests, investors will be reluctant to place investment bets that require visibility beyond the immediate time horizon. Even in fisheries where fish stocks are unlikely to grow, strategies that increase regulatory stability can create significant value for investors given the increased certainty of future fishery performance.

Where new regulatory or policy regimes are being introduced, there may be disruptive forces that positively impact the value chain. The Environmental Defense Fund and the Redstone Group analyzed the impacts of catch share policies and reported that for fishers, such policies

can have the effect of doubling revenue on fishing vessels, increasing vessel efficiency, increasing flexibility in port of sale, and increasing the average annual prices for catch volumes that no longer flood the market all at once. For processors, catch share policies can improve product recovery (the percent of fish cut from a whole fish) as larger fish begin to repopulate the fishery, increase variety of species landed at proximate ports, and correct for overcapitalization and contract labor dynamics that were formerly required to manage processing gluts. For example, before catch share policies were implemented in the British Columbia halibut fishery, approximately 45% of the catch was landed in April with a second spike of 33% in September. After catch share policy implementation, the highest percentage of landings in a given month was 17%.[26]

Depending on the nature of the policy shifts, participating businesses may be able to anticipate smoother monthly catch volumes and pricing, which could improve conditions for capital deployment in infrastructure construction or maintenance, improve labor efficiency, as well as optimize marketing, customer account management, and branding activities. In addition, smoother catch volumes and pricing may facilitate the negotiation of larger and longer-term contracts, which would create financeable value in cash flow streams. Where investors can identify



% of British Colombia Halibut Catch by Month[27]

constructive regulatory shifts, an assessment of the specific fishery and value chain impacted may yield compelling investment opportunities across the supply chain.

SCIENTIFIC DRIVERS

Scientific Uncertainty

Accurate scientific data collection is important for assessing current species population levels, changes to population levels, changes to ecosystems that portend longer-term impacts on population levels (e.g., temperature changes), and so forth. Such data is critical for use in designing effective management systems, annual limits on catch, and fishing practices. The ocean environment is a relatively inhospitable and expensive place in which to conduct high-quality research, and many species' biology, ecosystem dynamics, and oceanographic systems are poorly understood. Analogous terrestrial investment opportunities have lower scientific risk associated with them, such as forestry, agricultural, and livestock investments.

Data collection for fish stocks can be expensive, inadequate, and thus inaccurate, and can be biased by political or industry interests. Over 80% of the world's fisheries do not conduct formal assessments of biomass levels.[28] Without accurate data to inform fisheries management activities, stock recoveries and sustainability are at risk, regulators' credibility can be questioned, and regulatory stability can be threatened. For example, where data collection efforts overestimate fish stocks, catch limits can be set too high, resulting in overfishing and depletion of stocks. Where data collection efforts underestimate fish stocks, catch limits can be set too low, and frustrated or economically distressed fishers can destabilize otherwise strong regulatory systems, either directly through regulatory change, or indirectly through illegal fishing activities.

Where an investment strategy is highly reliant on scientific predictions of fish stock recovery or performance, investors should be aware of the wide range of potential error, especially in longer-term projections. This is further burdened by the potential impacts of climate change, which may have widespread impacts on fishery population dynamics, species interactions, and so forth. There will always be some inherent difficulty in accurately determining stock biomass and allowable catch levels, but investment strategies that support improved data capture should increase their likelihood of success.

II LESSONS LEARNED

Grant-makers, advocates, policy-makers, and investors have expressed great interest in the development of impact investing strategies focused on sustainable wild-catch fisheries. It is too early to tell whether many existing fisheries-focused investments will generate strong financial or impact returns, however it is possible to observe some common challenges and several potential best practices. Below is an outline of some of the challenges, lessons learned and potential risk mitigants drawn from a variety of sustainable fisheries investment funds and impact investing projects.

Challenge	Lesson Learned	Potential Risk Mitigant
Overcoming Fishers' Aversion to Risk	Fishers are very risk averse in certain ways, especially when it comes to adopting new technologies, changing their practices, or capitalizing their businesses with long-term financing.	Help fishers understand the long-term benefits of fisheries reform and practice changes, and identify investment counterparties other than fishers that stand to benefit from reform to take on certain commercial counterparty risks.
Creating Alignment of Political Interests	Strategies that do not align with the interests of powerful stakeholders are vulnerable.	Find structures to give politically influential parties a financial stake in the sustainability strategy.
Overcoming Lack of Price Transparency	The complexity and opacity of seafood supply chains often prohibit transparent price discovery, thereby discouraging investment.	Investors should seek ways to better value and monitor the pricing dynamics affecting their investments over time. Public auctions, fisheries indices, or futures exchanges may improve price discovery.
Define Investment Covenants	Local governance of commercial and investment entities can be inconsistent and often unstable. One promising strategy deteriorated when the governing board of the company redirected the strategy toward non-conservation oriented goals.	Develop strong legal and governance structures for commercial and investment entities that ensure strategies stay aligned with conservation or livelihood objectives.
Ensuring Community Support	Investments that do not have sufficient community sponsorship and engagement risk being undermined by commercial interests.	Invest in strategies with appropriate conservation or livelihood partners with credible holistic strategies that engage and mobilize community interests.
Identifying a Robust Pipeline of Investment Opportunities	Existing strategies have reported low numbers of investment opportunities. Funds with time-limited commitment periods find this especially challenging.	Investors could proactively structure and incubate opportunities before raising deployable capital instead of relying on traditional deal generation methods.
Exiting Portfolio Investments	Investors may find it difficult to exit certain investments, including illiquid holdings in small businesses or companies with no obvious buyers.	Structure investments to be self-amortizing over a specific time period. Structure investments around assets with transparent or ongoing value, such as long-term contracts or infrastructure investments.

III INVESTMENT STRATEGIES

Investors generally seek opportunities where projected financial returns compensate them for the level of risk undertaken. Impact investors add metrics around social, economic, and ecological effectiveness of strategies. The appropriate risk/reward for an investment must consider the impacts of macroeconomic dynamics, industry-specific risks, transaction-specific risks, ability to execute, and the terms of the capital structure. Lower risk investments with regular, certain, low-volatility cash flow can be financed with debt instruments that have capped returns. Such investments are generally expected to yield between a 3% and 15% return depending on recourse options in the form of foreclosable assets, balance-sheet strength of the counterparty, guarantees, credit enhancements, and other factors. Investments with more volatile cash flows, risk of loss of principal, deferred cash flows that backload the return, or investments without recourse to any creditworthy party are likely to require equity capital where the investor's upside is unlimited in order to compensate for the additional level of risk. Equity investments are generally expected to yield between 8% and 40% returns depending on the growth potential over time, price volatility, range of best and worst case scenarios possible, country risk, and other risks. For some impact investments where the market rate of return required for the risk associated with the transaction is not feasible, it may be possible to incorporate additional tiers of subsidized capital to reduce the risk to the private sector investors in order to lower the risk to their capital. Critically, the potential for positive and measurable social, economic or ecological impact of the strategy can compensate for lower than market-rate expected risk-adjusted financial returns.

EKO proposes three investment concepts that are designed to facilitate the flow of private capital to transition wild-capture fisheries to sustainability. In crafting each approach, we worked with several specific design principles to guide our work: 1) the investment opportunities must have meaningful conservation and livelihood impacts; 2) the strategies must leverage the underlying value drivers while minimizing the underlying risks, particularly volatility, regulatory, and credit risk; and 3) the lessons learned from prior attempts to invest in sustainable fisheries must be captured in the design.

A FISHERIES MICROFINANCE/ SME ROUTE-TO-MARKET VEHICLE

Microfinance (MFI) and small and medium enterprise (SME) strategies are well known for their focus on supporting poor and vulnerable communities. One of the concepts EKO proposes for consideration is the establishment of a $1–5 million microfinance/SME route-to-market vehicle, which would use capital to improve processing and distribution logistics that source sustainable seafood in developing countries. The vehicle would incubate businesses in supply chains committing to sustainable practices and offer an ownership stake to local fishers, which would provide a financial incentive for the maintenance of those practices over time. The impact objectives of the vehicle would include increasing local fishers' income and income resilience, increasing the use of sustainable fishing practices particularly in near-shore fisheries, and increasing near-shore fish stock levels.

We envision the microfinance/SME route-to-market vehicle as a single, vertically integrated operation with the ability to capitalize on: a) low-cost improvements to processing activities including icing, packaging, and cold storage; b) distribution logistics such as trucks and interim storage depots; and c) marketing capacity

to manage sales efforts to higher-value buyers of fish products. Where MFI and SME strategies often look for small-scale entrepreneurs and provide training and capacity building to support microenterprise businesses, this strategy would attempt to achieve scale in a very limited number of investments, or even in a single investment, in order to support a business model in the seafood processing and distribution sector where economies of scale are critical for success, and to reduce the diligence costs involved in making multiple distinct investments. We also believe that the business model should incorporate a micro-financing service to fishers in order to compete with existing fish brokers who typically secure supply through the provision of trade or longer term financing for their customers. For this strategy to work, it would be necessary to partner with a local MFI/SME institution. Furthermore, we think it is critical to structure the fund to allocate an ownership stake to fishers directly, so that they may benefit from the profitability of the enterprise and have an incentive to make it successful through ongoing sustainability practices and commercial activities.

The viability of such a strategy will depend on several key drivers including per unit catch values, the scale of the catchment area in which it would operate, whether or not there is higher market potential associated with a local community's catch, the opportunity to capture market share and margin from competitors in the supply chain, and the dynamics of changing supply, demand, and price as they affect the intermediaries in the supply chain.

While this strategy has the potential to enable wealth creation and support sustainability, it may involve incubating a new entrant competitor within an existing supply chain. As such, it could displace less efficient players and the workers associated with those businesses. In addition, by seeking to identify higher-value buyers for fish catch to achieve income gains for fishers, the strategy could have the effect of reducing affordable fish catch that would otherwise be consumed by local residents. Greater income generation could in theory be re-invested to the communities' advantage in substitute products, but the local impacts of such dynamics were beyond the purview of our preliminary research and would be subject to site-specific analysis. Further development of the strategy should attempt to mitigate negative social impacts.

A FISHERIES PUBLIC-PRIVATE PARTNERSHIP VEHICLE

A second concept EKO proposes for consideration is the development of a $20–50 million public-private partnership (PPP), similar to the PPP structures commonly used in infrastructure construction. A PPP would fund private partners to deliver services such as science and stock assessments, data monitoring, regulatory enforcement, ecosystem services management, quota buyback programs, or subsidy payments, under the arrangement of a long-term services and repayment contract with government authorities. The impact objectives of the fisheries PPP would be to provide increased employment opportunities to members of fishing communities, increase the resilience of fishing communities, and improve fisheries management services that in turn support sustainable fishing practices, stock recoveries, and increases to protein supply.

Public-private partnerships have been used by governments around the world as a means to meet the growing demand for infrastructure construction and maintenance. In an environment of constrained public sector budgets, PPPs are seen as a way to engage the private sector to help fund upfront infrastructure costs. PPPs are a means to reduce project costs, accelerate implementation, access new sources of higher risk/reward seeking capital, and shift performance risk from the public sector to the private sector.

There is enormous capital capacity to fund traditional infrastructure in the U.S. and beyond. Over $31 billion in 2010 and $17 billion in 2011 was raised for infrastructure funds. Some 224 transactions were executed in 2012. Investors find PPPs attractive because they can provide high levels of transparency and generally offer investment premiums in comparison to municipal bonds for similar risks.

A PPP structure for scientific monitoring or fishery enforcement activities would be an innovative extension of a familiar structure to fund such services, and could provide a compelling impact investment opportunity with a lower risk profile than direct investing in smaller, less creditworthy structures and counterparties. For governments, a PPP strategy could offer a way to solidify a funding stream for such services over a longer period of time, reduce implementation costs overall, and insulate the programs from undue political or industry influence, which has typically plagued the quality and durability of fisheries management efforts globally.

A FISHERIES IMPACT VEHICLE

A pay-for-performance fisheries impact vehicle would use private capital to fund a collection of sustainability interventions targeting a specific species recovery. This approach would improve the long-term economic viability of the fishing industry, including both near-shore and far-shore fishers, support sustainable fishing practices and stock recoveries, and increase protein supply for both local and international markets.

One challenge with strategies focused on supporting sustainable fishing practices is that the costs of transition are borne entirely at the front end of the supply chain, while the economic benefits of sustainability in terms of financial returns are generated throughout the supply chain. For example, if fishers are asked to bear the full cost of transition and recovery by investing their capital to buy new gear, and limit fishing for a period of time, but cannot capture the full value generated by increased volumes of seafood throughout the supply chain, there may not be enough of a financial incentive for fishers to utilize sustainable practices. In fact, it is possible for fishers to suffer as resources recover if supply increases cause declining dockside prices. As such, innovative financing solutions should explore the creation of triangular financing structures, where capital is invested into specific fishing practices but repaid by those in the supply chain that stand to profit most from it.

The fisheries impact vehicle contemplated by EKO attempts to address this by utilizing an innovative feature that would structure long-term supply contracts between fishers and downstream branded seafood products companies which stand to benefit from stock recoveries.

The benefit of a long-term supply agreement to an investor is twofold. First, the investor can rely on the

larger, more creditworthy companies to make good on payments versus relying on individual fishing businesses. Second, the existence of the long term supply contract creates greater stability and certainty around the off-take and sale of the fish from the fishery, thus reducing the risk of default on future cash flows needed to recoup the investment.

A fisheries impact vehicle would look to strike a long-term supply agreement with a creditworthy fish buyer, capitalizing on fish buyer's increasing concerns about securing enough supply at competitive prices to fuel their operations. Securing a supply source can give companies a competitive advantage, particularly if the terms of the supply agreement offer favorable pricing arrangements in the event of high price inflation. In exchange for this security of supply, the fish buyer would agree to pay a commission on every pound of fish delivered through the supply agreement that would be paid directly to the issuer and in turn, used to repay investors. This structure eliminates the need of the vehicle to collect payments directly from fishers, which would present difficult credit risks.

Long-term supply contracts could offer security of sale to fishers that may benefit through the capture of better dockside pricing possible with the elimination of middlemen. In exchange for these benefits, fishers would agree to use sustainable practices.

The structure of the vehicle suggests it would be most successful in fisheries where there is interest from a creditworthy downstream fish buyer and where the fishery is of sufficient scale and value that it would be able to absorb the burden of a commission adequate to repay investors for the up-front interventions necessary to repair the fishery. Such species might include white fish that are processed in large volumes for breaded or packaged products, or high-value species that have few substitutes, such as tuna or swordfish.

We anticipate that there are two primary risk factors in making the fisheries impact vehicle work. First the vehicle is structured to shift the risk of fishery recovery to the investor. Within this structure, fishers and fish buyers are not subject to the risk of recovery, as neither put in up-front capital to repair the fishery, nor are obligated to repay the investment except in the event of a fishery recovery. The advantage of the structure is its ability to engage the relevant parties to implement sustainable practices where they bear no financial risk if the sustainability strategy does not result in increased fish catch. Instead, the investor bears the risk of efficacy of the strategy, and that of any unanticipated biological factors that slow or otherwise impair the fisheries' recovery. Because of this, investors will need to have confidence that the sustainability strategy is holistic in its approach, eliminating or substantially eliminating any human induced factors that would derail a recovery. It remains to be seen whether or not there would be sufficient investor appetite to assume this risk.

Second, the vehicle issuer would need to create a mechanism for adequately aggregating fish catch for delivery to the fish buyer, both physically and contractually. Fishing cooperatives and other entities that have attempted to do this in the past have encountered difficulties in securing membership and establishing stable organizational governance. Further work will need to be done to determine how best to strengthen fishing cooperative structures and durability. In addition, the structure would ideally deliver a high percentage of the catch exclusively to the contracted buyers, in order to avoid a moral hazard in which non-contracted buyers benefit but do not contribute to repayment.

COMPARISON OF STRATEGIES

The table below summarizes the financial aspects of the three potential innovative approaches suggested by EKO's work. Each concept offers a different profile of risks, opportunities, and characteristics of interest to potential investors.

Features	Route-to-Market	PPP	Impact Vehicle
Targeted Conservation Impact	Creates financial incentives to fish sustainably	Fixes broken regulatory services and increases the likelihood of fishery recovery	Capitalizes on industry trends and anxieties to finance sustainability reforms and enable fishery recovery
Targeted Livelihoods Impact	Increases artisanal fisher incomes, income resilience, and local protein supply	Creates alternative fishing employment, income resilience, and local and global protein supply	Increases local and global protein supply
Targeted Financial Impact	Start-up business-type risks and returns	Sovereign bond plus premium returns	Equity returns, with potential for opportunistic equity returns
Source of Repayment	Small business profit	Government credit	Corporate credit
Key Value and Risk Drivers	Small business performance and fishery stability and/or recovery	Government revenue capacity and contract terms; execution and performance risk	Holistic efficacy of the recovery strategy and rate of fishery recovery; biological risk factors present
Comparative Advantages	Provides most direct opportunity to impact artisanal fishers	Offers opportunity for impact investors to supply critical resource without relying directly on a fishery recovery to recoup investment	Incentivizes comprehensive fishery interventions tied to performance outcomes

IV CONCLUSION

The three concepts proposed herein attempt to weave conservation and livelihood outcomes into viable commercial investment strategies. While we are optimistic that the Route-to-Market, Fisheries Public-Private Partnership, and Fisheries Impact Vehicle can facilitate the flow of private, return-seeking capital to support sustainable fisheries, further work will need to be done to explore their viability. In particular, we highlight the following three key research questions that should shape additional work done around sustainable fisheries impact investing:

1. Identification of and dialogue with commercial partners willing to consider the implementation of the Route to Market, PPP and Impact Vehicle strategies, including local and regional seafood processors and retailers, branded seafood product companies, and companies capable of providing fisheries management services.

2. Identification of local project sponsors and supporters within fishing communities facing the threat of stock declines who are equally interested in maintaining the integrity of the environmental, economic and social benefits.

3. Surveying of existing impact investors to gauge interests in and constraints of the Route to Market, PPP and Impact Vehicles as sustainable fisheries investment opportunities.

EKO has developed these potential strategies by building on decades of funding and work by others, and wishes to continue to collaborate with leading non-profits, grant-makers, policy makers and private-sector actors to adapt and implement these strategies wherever they may potentially be impactful.

For more information about these ideas or EKO's broader work, please contact Kelly Wachowicz at kwachowicz@ekoamp.com or (212) 974-0111.

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