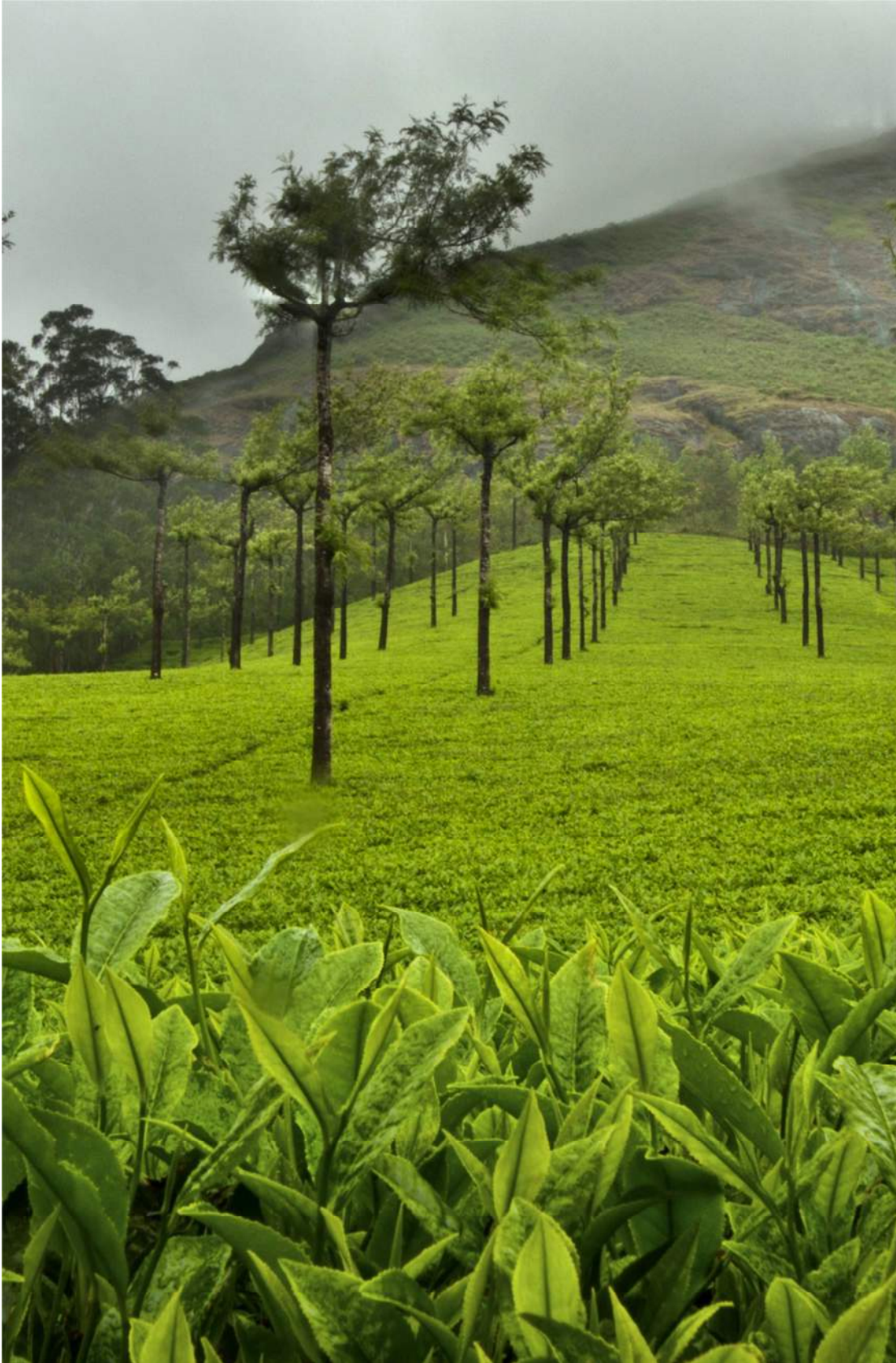


Transforming Food Processing & Agribusiness in India

A Role for Private Equity in Resource Conscious Growth



A COLLABORATIVE CONTENT PARTNERSHIP WITH
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PRIVATE INVESTMENT IN FOOD PROCESSING AND AGRIBUSINESS IS GROWING RAPIDLY. Some of this investment activity is attributed to greater participation by private equity/VC investors; while in other cases, there is significant strategic interest by domestic and foreign food & agribusiness companies to invest in India. The strategic investors are looking for entry points into new markets and/or expansion in new product categories. However, while the sector has demonstrated resilience in growth rates over the last decade, the key challenge for the food and agri-business sector going forward is to efficiently utilise the available resources including land, water and energy.

GROWTH WILL INTENSIFY IN PROCESSED FOODS, DAIRY, MEAT & ORGANICS

Food constitutes the largest portion of the Indian consumer’s spending — more than a 30% share of the wallet. The growth in consumption has been in the range of 7-8% per annum in the last decade. Approximately one fourth of the total Indian consumer spending on food (estimated at approx US\$ 300 bn) is on tertiary value-added processed products (estimated at US\$ 75 bn), where the consumption growth has been in the range of 12-14 % per annum.

Further, there is a strong correlation between GDP growth and demand for processed food. India’s GDP is expected to continue to grow in the range of 5 - 6 %, over the medium term. It is estimated that with every rupee increase in GDP, food expenditure increases by Rs. 0.41.

In line with the evolution of global food demand, with the rising incomes in India, there has been a shift from carbohydrate staples to calories from animal protein and perishables such as fruits, vegetables and milk. The per capita consumption of edible oils, milk, fruits, vegetables and meat products are all rising at higher rates than those for cereals and pulses. Venture Capital Firm, SEAF focused on investments in this sector, expects there to be a rapid increase in demand in the medium term for prepared meals, snack foods and convenience foods, and the start of demand for functional, organic and diet foods.

FIG 1: Pattern of Changing Share of Indian Consumer Palate (2000-15)*

Decreasing	Constant	Increasing	New Categories
Wheat	Milk & Milk Products	Fruits & Vegetables	Functional foods
Rice	Sugar	Meat & Poultry	Health foods
Coarse cereals	Spices	Beverages	Organic foods
Pulses		Snack Foods	
		Out-of-home consumption	

**the market is growing in absolute terms for all food categories, however the share of expenditure on various food items is changing. Source: SEAF*

As populations in India begin to further diversify their diets and consume more animal protein, demand for grains that serve as animal feed tends to rise exponentially as every kilogram of poultry requires 2.7 kilogram of animal feed and every kilogram of beef requires 7 kilogram of grains.

Grain yield growth rates have been slowing over the last decade in comparison to the previous 35 years. Hence, meaningful acreage expansion—or productivity enhancement-- is needed if supply is to keep pace with demand. Unfortunately, no massive new productivity gains are expected soon, at least not along traditional R&D trajectories.

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PRIVATE EQUITY IS POISED TO TRANSFORM THIS SECTOR

Virtually all parts of the food supply chain are attracting some level of private investment.

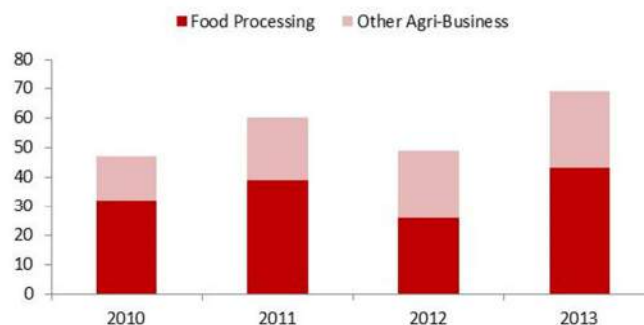
VC/PE funds, is the dominant source of capital, followed by investments by other players in the industry. Equity investment activity, particularly via acquisition of small minority stakes, has been a popular approach to test opportunities in this sector. The total number of PE investment deals in the last four years has been increasing.

A second major source of investment activity is by industry / strategic players. In many cases, this is driven by domestic businesses looking for assets sales and expansion opportunities; and foreign players looking for an entry into India.

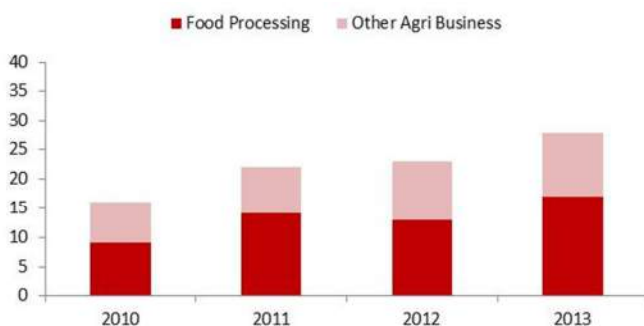
Investment trends in the food and agribusiness from January 2010 to December 2013 (as reported in media) have been analysed below.

FIG 2A: Investment Trends in Food Processing

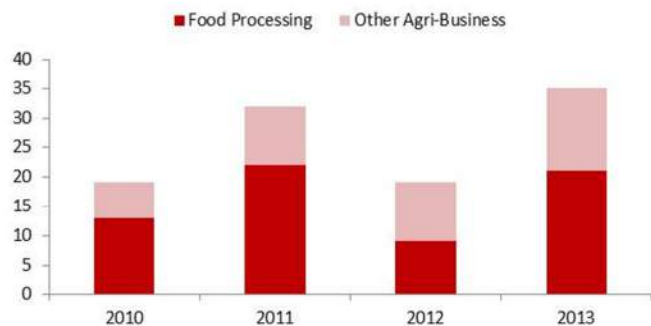
Total Investment & Finance Deals



Investments By PE/VC funds



Investments By Industry Players



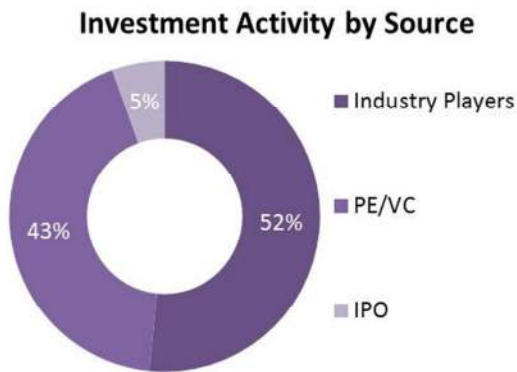
Sources: Sustainability Outlook analysis

NB: Food processing sector includes processing of beverages, dairy, fruits & vegetables, meat, oils, rice, grains, RTEs, packaged foods, snacks, spices and so on including companies with diversified processing chains.

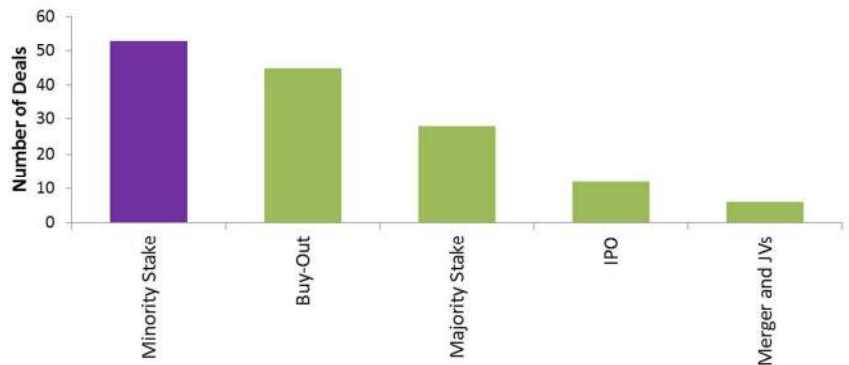
Other 'All Other Agri Business' includes:

- Producers, sellers, and distributors for fresh food (no processing)
- Agri input suppliers & biotech companies (e.g. fertilizer, seeds)
- Logistics & infrastructure (e.g. cold storage and transport, equipment)
- Food retailers, floriculture, non-food processing

FIG 2B: Investment Behaviours in Food Processing



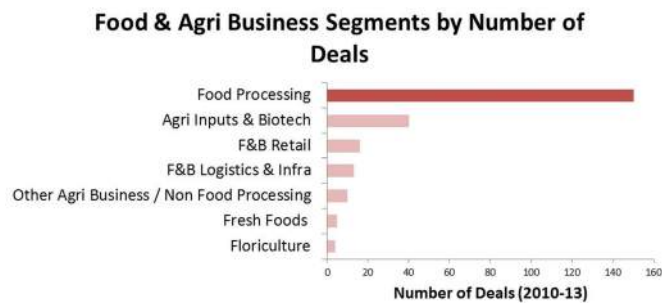
Total Deals in Food Processing & Agribusiness By Instrument Type (2010-13)



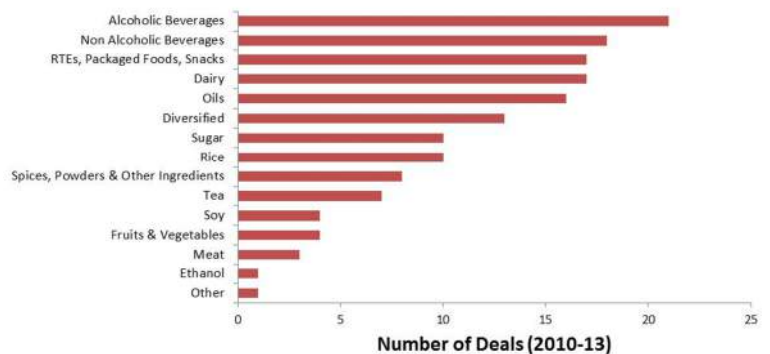
Sources: Sustainability Outlook analysis

Compared to all other categories, food processing has attracted the most number of PE deals. One key reason is that there has been a gradual homogenization in consumption patterns. Food companies have the opportunity not only to serve domestic markets but also regional or overseas markets with same or similar product mix. Further, the sector has shown a high degree of resilience of this sector as proven in the recessionary times.

FIG 3: Number of Deals by Segment



Food Processing Segments by Number of Deals



Source: Sustainability Outlook analysis



Image: Flickr/Chandrashekhar Basumatary

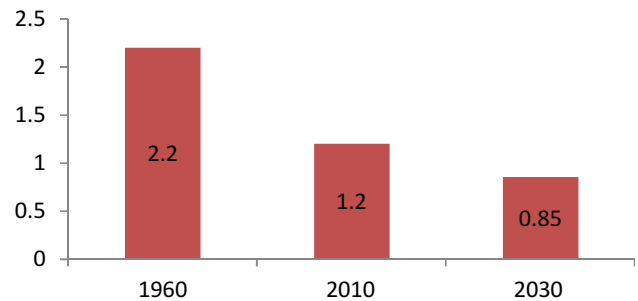
TOP 3 RESOURCE RISKS FACING FOOD & AGRI-GROWTH

1

Water, Raw Materials & Land Scarcity

Key resources such as land and water for the raw material for food products are in scarcity. The per capita availability of arable land globally has come down from approximately 2.2 acres to 1.2 acres in last 50 years. Accordingly the supply of food would seem to face significant constraints unless there is substantial growth in productivity and/or reduction in waste.

Per Capita Agricultural Land Availability (in acres)



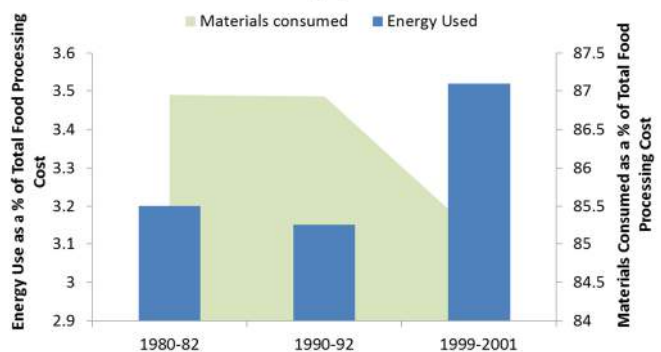
Source: SEAF analysis

2

Energy Cost for Processed Foods

Energy as a composition of cost for different types of processed foods is also increasing. In fact, energy costs are a rising component of Indian food processing industry costs (while costs of both materials consumed and labour have fallen over 1980 – 2001, according to Annual Survey of Industries Data).

Cost Composition of Food Processing Industry in India (%)



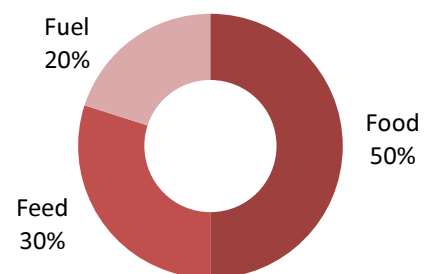
Source: Sustainability Outlook analysis

3

Inter-Dependent Food, Fuel & Feed Supply Chains

The demand scenario is further complicated when one considers the use of raw material for processed foods for purposes of fuel and animal feed. The share of demand for agricultural commodities as input for the animal feed and biofuels sector has substantially increased. For example, the share in demand for cereals is shown, with the trend gradually shifting in favour of feed and fuel.

Share of Demand for Cereals



Source: SEAF analysis

Given the risks above, it is difficult to see how expansion of existing companies could occur without a focus on general business improvement and resource management.

A COMMON AGENDA: RESOURCE CONSCIOUS GROWTH & INVESTMENT RISK IN FOOD PROCESSING


Within a paradigm of growth, typical capital requirements of businesses in this sector would be for capacity addition, regional expansion, strengthening of sourcing and distribution network and meeting incremental working capital requirement. Under this paradigm, there is often little availability (or allocation) of affordable capital to invest in long term risk mitigation strategies.

In this context, private equity – especially at the SME level – is well-positioned to drive sustainable growth opportunities and risk management in the sector by providing ‘resource-conscious’ expansion capital.

PE investors have recognized areas of mutual interest in promoting resource-conscious growth. In the food processing, there is a huge margin improvement opportunity on the back of supply chain efficiency (including reduction in transaction cost between supply chain members; efficient use of energy and water; reduction in wastages) and economies of scale:

- Scalability opportunity of investments which have the potential to gain a scale of 3x-4x either in a typical investment period of 3-5 years will be driven by productivity increases and growing consumer demand.
- Improvement in infrastructure for storage and transportation is facilitating companies to address demand in India and overseas markets (seasonal and regional arbitrage opportunities)
- Further, by focusing on improving margins through supply chain efficiency and value addition, investments in this segment can gain substantial increases in their valuation multiples.

Two recent case studies below illustrate the market response for investors who have pursued low-resource risk investments in the food processing sector:

 ABHAY COTEX PRIVATE LIMITED	
Innovation Description	<ul style="list-style-type: none"> • Developed zero discharge technology for food processing • Currently processing cottonseeds and other oil seeds for protein extraction which is used in animal feed • Developed Single Stage Cotton Extraction (SSCE) Integrated with Miscella refinery which has resulted in large efficiency gains in energy and water • Technology has potential to disrupt grains processing for human consumption, and for animal and aqua feed industries
Business Performance	<ul style="list-style-type: none"> • Turnover of approx INR 3500 Mn in FY 2013-14 • Processing capacity of 360,000 Metric tons of oilseeds across two locations – Jalna and Dhule in Maharashtra • Market segments include: <ul style="list-style-type: none"> ○ Deoiled cake used in cattle, poultry and aquafeed; ○ Cotton seed oil, especially in Gujarat and western India, and ○ Cotton seed Linters and Hulls sold to China for non-food requirements.

MARKET ANALYSIS

FOOD PROCESSING & AGRIBUSINESS

[APRIL 2014]

Resource Impact	<p><i>Core Energy & Water Savings</i></p> <ul style="list-style-type: none"> • 30 – 40% Reduction in foot print of the plant. • 20-22% reduction in consumption of power • 10-12% reduction in consumption of steam & utilities and • 9-10 times reduction in consumption of process water • Zero discharge of effluents in refining plant <p><i>Other Productivity Gains</i></p> <ul style="list-style-type: none"> • 20%-25% Cost Reduction in CAPEX both on equipment & civil construction. 	<ul style="list-style-type: none"> • No additional cost on ETP chemicals operations. • No recurring expenses on maintenance of processing equipment like expellers & separators. • 50 to 60% Reduction in handling of number of process equipment. • Reduction of RED color unit is excellent with less consumption of lye. • Enhanced recovery of cotton neutral oil • No need of multi stage Centrifugal Separators • No water wash & No vacuum drying • Unique & Consistent Oil Quality of PBSY grade
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Innovation Description	<ul style="list-style-type: none"> • Developed a thermal battery that stores and releases cold thermal energy. Thermal battery takes advantage of any available grid power to re-charge itself using an automated refrigeration system and a proprietary combination of fluids and phase-changing materials (PCM) • Chilling systems operate 24 hours a day, 365 days a year with a typical cooling capacity of 250 liters per day and storage capacity of 500 liters • Chilling systems use hybrid-power optimizer uses proprietary algorithms to efficiently transfer solar and grid power to the thermal battery and electrical loads • Enables rapid milk cooling from 35 °C to 4 °C for areas which grid-power is unreliable, and in off-grid areas • Core technology has medial, residential and other commercial uses. Currently, it has been deployed only in the dairy sector, but applies to fruits and a vegetables sector too.
Business Performance	<ul style="list-style-type: none"> • The rapid milk chiller (RMC) and thermal battery costs US\$ 7,000 (INR 3.5 lakh) per unit, which is on average 30% lower than most conventional BMCUs, with a payback period of two-to-four years. • Using the RMC could increase the per-liter price paid to farmers who directly sell to the market from US\$ 0.18 (INR 9) to US\$ 0.60 (INR 30). • Low maintenance & operating costs, and chilling is match to the quantity and production needs of the milk • Always 100% capacity utilization • As of 2012, developed demonstration units to Amul (1,000 units), Mother Dairy (1,000 units), Chitale (500 units) and Hatsun Agro (3,000 units).
Resource Impact	<ul style="list-style-type: none"> • Cold storage back up - eliminates diesel generator • Costs are 80% lower than a diesel-powered unit • On average, 88L of diesel fuel is needed to collect 5,000L of milk via trucks twice a day, and 2.7 kg of carbon dioxide is released for every 1L of fuel burned. If village coolers are installed, 33% of diesel fuel can be saved, and carbon dioxide emissions would decrease by 2.9 tons with just one of PPS's • Eliminates spoilage of raw milk, and premium quality of raw milk enables longer shelf life of processed milk • Potential for solarisation at the right price-points

Source: Sustainability Outlook analysis

Given energy / materials are both significant inputs to the food processing and agri-business, this is a significant potential for risk exposure to investors and businesses in this space. Some initial steps have been taken up by investment firms, such as SEAF, to promote resource considerations in the overall due diligence process. While this is a trend that we expect will pick up, the identification and pricing of resource risk element of investments in this space is yet to be assessed.

From the Frontline: How SMEs in food processing are responding to resource risks

From SEAF's experience on the ground, integrating sustainability practices in SMEs is a challenge as well as a big opportunity.

From an investor perspective, the process for integrating sustainability starts with the evaluation of investment. Typical environmental (and social and governance) risks are identified during the diligence process and an action plan is prepared to mitigate these risks. Hence, the process for integrating sustainability typically starts with a risk mitigation mind-set.

The investor can play an important role in using sustainability tools to move towards "value addition" rather than restricting them to just "risk mitigation". In the initial investment period, many entrepreneurs are dismissive as investors ask them to prioritise corporate governance issues (such as implementation of ERP, induction of auditors / CFOs etc.) and the company has limited bandwidth to address sustainability concerns. The investors need to keep educating entrepreneurs and top management on the need for making practices and resources more sustainable.

The investor can play an important role in using sustainability tools to move towards "value addition" rather than restricting them to just "risk mitigation".

From SEAF's experience, it can take anywhere between 6-18 months post investments for institutionalising these processes. The energy and water efficiency parameters are usually quick wins since the cost saving impact improves the bottom line of company. Gradually, the management buy-in into monitoring and improving sustainability parameters increases and there is more ownership within the team. Over time, we have seen that the management realises that ESG governance is as important as corporate governance.

From the Frontline: To what extent are investors exposed / responding to resource risk

The demonstration of benefits arising out of sustainability practices is the key. The demonstration leads to acceptability which ultimately leads to institutionalisation of the best practices.

Investors are exposed if the resource risk is not addressed at the beginning of the investment. The availability as well as management of resources in food processing is at the core of any investment decision.

The company's ability to source more raw materials and efficiently process raw materials is key to achieving scale as well as margins. The solution lies in handholding the company management and identifying one or two champions within the team who can monitor and encourage resource awareness and optimisation on a day to day basis. The champion could be the founding entrepreneur or a head of department.

The demonstration of benefits arising out of sustainability practices is the key. These can include outcomes such as lower transaction and processing cost; increase in vendor and employee retention; less breakdowns / accidents etc. The demonstration leads to acceptability which ultimately leads to institutionalisation of the best practices.



Image: Flickr/CIAT

CONCLUSION

We need to prepare ourselves to feed a population of 9 billion by 2050 – this is in addition to feeding livestock and meeting the demand for biofuels. While 2050 is still 35 years away, the alarming rate of depletion of resources coupled with impacts of climate change necessitates prompt action plan to maintain demand-supply balance. Chronic food inflation is a clear sign that demand is outstripping supply putting enormous pressure on the resources.

We are clearly borrowing resources from future generations and leaving gen-next to live in a resource-constrained world. If the situations don't change for better, it is likely we will witness water and food riots in next few decades. It is a collective responsibility of the government, policy makers, research institutions, farmers, processors and consumers to safeguard and optimise the use of resources.

In this context, investors are uniquely positioned to accelerate the process of integrating sustainability. The conventional investment period of 5-7 years is adequate to get the investees ahead on the sustainability curve. The investee companies can set benchmarks and demonstrate their resource optimization framework for the industry peers to follow, setting in a multiplier effect. In this process, investors would also generate more tangible value for their investments and can make their exits more attractive.

A resource-conscious investment ecosystem is becoming increasingly prevalent and it is here to stay. For Indian food processing & agribusiness, achieving resource sustainability is no longer a matter of managing risks, but a fundamental litmus test for whether a business is capable of generating enduring value.

For access to the Agri-Business Investment Trends 2010-13 Database underlying this report, please contact Sustainability Outlook.

This report is a Collaborative Content Partnership by Sustainability Outlook with SEAF India Investment Advisors.

About Sustainability Outlook

Sustainability Outlook is a market access, insight and collaboration platform tracking actions related towards enhanced resource management in the Indian economy. Sustainability Outlook provides market analysis and data tracking services, news and intelligence updates, and creates momentum towards specialised sustainability interventions by facilitating a structured process for multi-party collaboration.

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About SEAF India Investment Advisors

SEAF is one the leading global organisations in the world for SME financing in emerging markets. In India, SEAF manages "SEAF India Agribusiness Fund". The Fund is first-of-its-kind fund dedicated for investments in SMEs in the food processing and agribusiness sectors. The Fund invests across the food value chain from inputs to post harvest aggregation to food processing to distribution.

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