

USING MARKETS TO DRIVE SUSTAINABLE AGRICULTURAL SYSTEMS

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Agriculture and sustainable land use

The growth of human and livestock populations is exerting great pressure on the planet's finite resources. Land is required for growing food for consumption and cash crops for income, for providing pasture land for cattle and for building space for new residential areas and industrial sites, as cities expand. Agricultural productivity has increased to make land use more efficient, but the gains have been accompanied by social and environmental difficulties. In India, the Green Revolution relied heavily on the capacity of farms to install irrigation systems, apply external inputs such as chemical fertilizers and pesticides and acquire high-yielding seeds. Clearly, that approach does not work for smallholders, who produce 84% of India's agricultural crops on rain-fed farms with low technology and of whom many are experiencing diminishing yields, shrinking profits, decreasing soil quality, lowered groundwater tables, and spiraling debts.

The productivity of agricultural land is dependent on the quality of the soil on the farm and the health of the surrounding natural environment. Between 1990 and 2016, global deforestation amounted to 1.3 million square kilometers. The largest cause of deforestation is agriculture, as farmers cut trees and expand into forested areas. Impacts of deforestation include: loss of livelihood for forest-dependent people; threat to their cultural traditions and traditional land use rights; loss of habitat for animals and plants, loss of canopy to protect soil from extreme heat and rainwater and reduced ability of the forest to sequester carbon, resulting in climate change. Farmers in India and elsewhere talk about changing climate patterns that make their livelihoods less secure. Although India has increased tree cover through reforestation, plantation forests cannot deliver the same level and quality of ecosystem services as natural forests. Forests are one of the planet's key defences against climate change. Forests clean the air, absorbing nearly 40 percent of the fossil-fuel emissions produced, while also providing habitat for 80 percent of the world's terrestrial biodiversity and livelihoods for 1.6 billion people. Deforestation represents around 10% of greenhouse gas (GHG) emissions.

Land degradation compromises efforts and investments to increase agricultural productivity, improve soil and water conservation and

maintain forest cover. It is estimated that India lost 2.5% of its Gross Domestic Product (GDP) in 2014/15 due to land degradation and that 96.4 million ha of land are degraded (29% of India's total geographic area). Smallholders, marginal farmers and landless people are the most affected populations by land degradation, due to their limited skills and opportunities for adapting their traditional practices. Drastically different weather patterns, shorter growing seasons, droughts, and pests pose daunting problems for smallholder farmers. To reduce their vulnerability to the effects of climate change, building their capacity in climate-smart agriculture techniques is critically important for their income and food security.

It is not just upstream in the value chain and in society at large that environmental problems have impact. Industry experiences two important negative consequences from land degradation and climate change. First, supply of raw materials becomes insecure, as harvests become less certain and young people, viewing agriculture negatively as a viable livelihood, leave the rural areas. Companies may find that costs increase, and more time is needed to manage procurement. Second, corporate reputations may be at risk. Campaigning non-government organizations (NGOs) and activists, informed through social media, track supply chains and are quick to seize on evidence that a company is contributing to environmental degradation or social exploitation.

The Indian government has set an ambitious goal to double farmers' income by 2022 to boost the agricultural sector and rural wellbeing. It has also set ambitious targets to reduce GHG emissions in response to the 2016 Paris agreement on emissions mitigation, adaptation and finance. A range of policies and investments are in place to support farmers produce more while using natural resources more efficiently. Certainly, productivity increases that do not depend on high agrochemical use or land expansion is the way forward. The 2018 report from the United Nations Intergovernmental Panel on Climate Change (IPCC) acknowledges the critical importance of nature-based climate solutions and clearly states that enhancing carbon sinks in natural ecosystems through afforestation, reforestation, land restoration, and soil carbon sequestration is key to limiting warming to 1.5°C. While conventional thinking around the 1.5°C target has focused on reducing fossil fuel use, recent research and analysis confirms

that forest conservation and natural climate solutions are essential in meeting these goals.

While the government's response is positive and its programmes extensive, the effectiveness of its measures is limited by three major factors.

First, its technical approach is rather incomplete and disjointed. It focuses on production but does not contain much in the way of environmental safeguards to secure the health of the natural ecosystem over the long-term. For example, policies include price supports for irrigation systems that may threaten groundwater levels. Moreover, there are insufficient extension services available to farmers that could guide them in practices that conserve the ecological integrity of the ecosystem, while delivering productivity increases on their farms. Extension officers and support institutions do not generally have the tools and capacities to equip farmers with the understanding required to support agricultural production and maintenance of ecosystem services. India's extension services emphasize production and productivity. Governmental efforts are also rather fragmented; they are dispersed over several Ministries and effective coordination mechanisms are rarely in place or effective. For example, the Ministry of Agriculture provides extension services on farm related approaches and best practices, whereas issues relating to land management and watershed treatments are dealt with by the Department of Land Resources, housed in the Ministry of Rural Development, and land degradation and desertification are the concern of the Ministry of Environment, Forest and Climate Change.

Second, innovative financial mechanisms are needed for small-scale farmers to rejuvenate their farms, apply new technologies, diversify their cropping systems and manage their seasonal cash flows. Smallholders are not bankable. They do not have the capacity to develop business plans and usually lack the collateral to take loans. Lack of capital causes dependency on intermediary traders who pay low prices, thereby perpetuating a cycle of debt and poverty.

Third, farmers lack incentives and support from the market to change practices. To apply sustainable land management practices, India's agricultural producers must have the motivation for change, such as being able to access markets that recognize and reward them. Even if smallholder farmers are able to learn new techniques for increased production that also deliver environmental benefits, their interest to apply them will be limited if there are no market signals encouraging them to do so. Conversely, the potential for positive impact at scale is substantial if the market sends the signal and it is followed by making technical and financial services available.

Incentives for change

Over the last decade, markets have in fact moved discernibly towards rewarding high social and environmental standards in production sites and supply chains. In 2010, member companies of the Consumer Goods Forum (www.theconsumergoodsforum.com), including many major global brands and retailers, declared that they would remove deforestation from their supply chains of palm oil, soy, cattle and pulp and paper. Major supply chain companies belonging to the Global Agribusiness Alliance (<http://globalagribusinessalliance.com>) made a similar commitment in 2016. International donors have stepped up to support the private sector

initiatives with public investment. In 2012, the United States Agency for International Development (USAID) launched the Tropical Forest Alliance 2020 (www.tfa.org) and in 2016 the United Kingdom (UK) government's Department for International Development (DFID) began Partnerships for Forests (<https://partnershipsforforests.com>). The UK is one of the countries that signed the 2015 Amsterdam Declarations, with the intention of achieving fully sustainable and deforestation-free agricultural commodity supply chains in Europe by 2020. In 2017, the leading companies in the cocoa and chocolate industry likewise declared their commitment to deforestation-free supply chains.

In this context, many international companies have made individual commitments to sustainability targets and launched programmes to support farmers, often in public-private partnerships with a government donor and with the participation of non-government organizations (NGOs), which have the technical and community engagement capacities to implement the programmes. One mechanism that has been adopted by many companies is voluntary certification. Rainforest Alliance (www.rainforest-alliance.org) is one of the best known and widely accepted certification programmes. Its Sustainable Agriculture Standard guides best social and environmental management practices for farms and smallholder groups. Producers that apply the standard can achieve a certificate and companies that buy from them may use the certification seal on their products in the market. This enables them to make claims about their corporate responsibility to their customers and consumers.

Financial markets have also taken initiatives to support emissions reductions and resilience to climate change. For example, the Green Climate Fund was launched in 2010, with a target of mobilizing US\$100 billion a year to support governments of developing countries cope with the cost of managing their economies for climate change. New financing mechanisms have come up specifically to channel investment into sustainable agriculture. For example, the Rabobank-UN Environment Agri-3 Fund facility, announced in November 2017, aims to support achieving the 2015 Sustainable Development Goals (SDGs) and 2016 Paris Agreement.

Companies in India, though slower to follow the momentum that has gathered in other major markets, even the Indian branches of international companies that have made global commitments, are beginning to join the global supply chain sustainability movement. Voluntary certification schemes have grown in India over recent years, most notably in the tea sector, where both Rainforest Alliance (250,000 tons) and another scheme, Trustea (<https://trustea.org>) (600,000 tons), have developed important markets. Multi-stakeholder initiatives have come up, in which companies can tackle key sustainability issues jointly and pre-competitively, with the participation of NGOs to guide and implement investments. The Commodity Board are engaged; for example, the Tea Board maintains a close relationship with Trustea; and the Spices Board collaborates with the Sustainable Spices Initiative (<https://ssi-india.org>), which brings together leading international companies and NGOs to embed sustainable practices across the value chain. In May 2019, the multi-stakeholder Indian Sustainable Palm Oil Coalition (www.indiaspoc.org) was launched.

Companies that make commitments to sustainable supply chain management build the concept into their business operations and invest, as they do in any other core business strategy. They provide not only a market incentive to agricultural producers to apply best sustainable management practices but also often support the producers from whom they buy their raw materials. This could cover a range of activities, such as quality testing, training in good agronomic practices and advance payments to cover cash flow cycles related to harvest times. Rainforest Alliance collaborates with many global companies to implement their sustainability commitments through providing technical support to farms and smallholder groups, in addition to operating its standard and certification programme. It has recently signed an agreement with the Indian government and UN Environment to lead an initiative financed by the Global Environment Facility (www.thegef.org) to “transform agricultural systems and strengthening local economies in high biodiversity areas of India through sustainable landscape management and public-private finance”. It will engage companies in the coffee and spices sectors as key drivers of change.

Consumer trends continue to demand sustainable sourcing. The 2015 Nielsen report on Corporate Social Responsibility and sustainability, which surveyed 60 countries, including India, reported that brands with a demonstrated commitment to sustainability grew over 4 percent, while those without saw less than 1 percent growth. The trend for purpose-led purchasing is greater among consumers in emerging economies than in developed markets, with 88 percent of shoppers in India saying they feel better when they buy products that are sustainably produced, compared to 53 percent in UK and 78 percent in USA. The reasons suggested are: the proximity of emerging market consumers to the negative impact of unsustainable business practices, such as water and energy shortages, food poverty and poor air quality; and higher pressure from friends and family in Brazil, India and Turkey to buy greener, more socially responsible products than is evident in UK and USA.

Environmental and social aspects of Sustainable Agriculture

Many initiatives exist in sustainable agriculture and each may define the concept differently. For example, organic agriculture asserts that chemical products must be removed completely, and Sikkim has become the first state in India to declare all its farming organic. The Rainforest Alliance Sustainable Agriculture Standard permits the rational and reducing use of legal chemical products on farms but aligns with the organic movement in asserting the primacy of natural solutions to managing pests and disease and not defaulting to agrochemicals, which smallholders often lack the information to apply properly and the resources to sustain the applications.

Key to any approach is maintaining a healthy ecosystem in which biodiversity can flourish, soil can retain its nutrients and climate is regulated. Agroforestry approaches, incorporating intercropping, which will diversify sources of income and/or nutrition, and maintaining native trees on farms are encouraged. Smallholder farmers need training and technical support to adopt practices that reduce use of chemicals and, as a result, reduce run-off into rivers and streams and also GHG emissions, such as composting and learning to distinguish weeds that are harmful to production from

those that are not and control them with minimal use of herbicide, while using the ground cover of harmless weeds to protect the soil.

Over recent years, the Zero Natural Budget Farming (ZBNF) movement has grown in India, taking root especially in the state of Andhra Pradesh, which has declared its ambition to apply it across the whole state (<http://apzbnf.in>). ZBNF emphasizes the importance of locally-adapted crops and livestock breeds and sees environmental conservation and food security as mutually dependent.

Sustainable agriculture also requires social change. Stronger farmer organizations will enable smallholders to access more services, share experiences and aggregate their output for more effective sales and marketing. Gender equity will empower women to make a full contribution to the growth of the family farm. Women do much of the work on smallholder farms, including critical growing and processing activities that affect yields and quality. Women bear a disproportionate burden of roles within and outside the household typical household responsibilities, include child rearing, caring for the elderly, hauling water, collecting firewood, cooking meals, washing clothes, and cleaning. The weight of those responsibilities often excludes them from taking part in training. Social norms often exclude them from decision-making processes in the household. Women are under-represented in the leadership of community, cooperative and producer groups. Their social and economic lesser status impacts negatively on the income, health, nutrition, and education of their families. When women have more influence over economic decisions, their families allocate more income to food, health, education, children's clothing and children's nutrition.

What business can do

Over many years of working with leading companies that commit to responsible sourcing policies, Rainforest Alliance has learnt several lessons that may guide companies to effective actions:

- 1) Balance long-term vision and large ambition by small tangible steps; setting achievable short-term targets helps motivate employees and demonstrate results to senior management;
- 2) Bring everyone in the supply chain into the plan, as many actions may need to be delivered through suppliers, which are closer to the producers;
- 3) Counter resistance by linking buying policy to demonstration of cooperation;
- 4) Harness technology to build transparency into supply chains; even smallholder farms can be accurately mapped to ensure they are not encroaching into protected areas;
- 5) Think of Return on Investment not only in quantitative terms but also in terms of corporate reputation and risk reduction;
- 6) Embrace the concept of shared value; better-off farmers make more reliable suppliers;
- 7) Think of investments as business growth and not CSR, if smallholders are critical to the business;

Congratulations

Mr. Shailesh V. Haribhakti

on taking over the coveted post of the, Honorary Chairman IOD- Western Region, Mumbai.

Mr. Haribhakti is a Board Chairman, Audit Committee Chair and Independent Director at some of the country's most preeminent organisations. He is a well-known thought leader on the Indian Economy and Public Policy. He is an ESG & IR (Environmental, Social, Governance + Integrated Reporting) evangelist. He is also author of 2 books - "The Digital Professional" and "Audit Renaissance".

He represented India on the Standards Advisory Council (SAC) of the International Accounting Standards Board (IASB). He worked with PBAS, an affiliate of IFC Washington, to establish Activity-based costing and Strategic Planning Processes, in Polish SMEs.

He is an inspiring thought leader who defines Haribhakti Group's future. Over decades of hands-on professional involvement, he has worked through myriad engagements, which have defined the next steps at Haribhakti Group. His passion for quality is reflected in the ISO 9000 certification for various processes of the Group's operations.

He is a staunch believer in Corporate Social Responsibility, Governance and in promoting a greener environment.

The 'Director Today' Editorial Board wishes him **all the best** in this role too.



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- 8) Take senior managers and clients to meet producers and build their understanding and motivation to support sustainability;
- 9) Tolerate imperfect information and avoid waiting until everything is clear before moving to research to action;
- 10) Design programmes participat orily with the farmers; not in headqu arters or the NGO's office. ■

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