CORPORATE CONCENTRATION IN AGRICULTURE AND FOOD

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Corporate presence in the agriculture sector is not a new phenomenon. Private companies have been involved in financing and trading agricultural commodities for at least 200 years. The British and Dutch East India Companies were formed in the early 1600s for the exploitation of trade with South and Southeast Asia. In the nearly three decades that India adopted neoliberal reforms however various policies in industry, services, and agriculture were deregulated, thereby further opening up the Indian market to the private sector, to foreign trade, and foreign investment. As in other sectors, agriculture has also been impacted by this process.

Even as evidence shows otherwise, the dominant thinking amongst policy makers is that it is the private sector and consolidation of small farms that will help address the multiple crises in Indian agriculture. The recent mega-mergers of six of the world's largest agrochemical and seed corporations has further consolidated corporate power with the so called "big four" comprising Bayer-Monsanto, ChemChina-Syngenta, Dow-Dupont and BASF. These four companies now control over 70percent of the global agro-chemicals and commercial seeds markets. Much of the agricultural credit is also being cornered by agribusiness rather than actual cultivators. Lack of access to affordable, institutional credit is reported as one of the key reasons for the over 300,000 farm suicides in the last 25 years. It is also essential to track and analyse emerging trends in technology and its implications for agriculture and food, as the mega-mergers mentioned above are part of a corporate agenda to control big data in agriculture. Consolidation amongst a few dominant players will result in monopolistic market conditions with adverse consequences. These companies seek to control the entire supply chain, thus making peasants, vendors, and consumers dependent on them. The framework of the Agreement on Agriculture (AoA) and other agreements at the World Trade Organisation (WTO) and various free trade agreements (FTA) also ensures that intellectual property rules are harmonised and tariff barriers are reduced to benefit agribusiness. The central government and various state governments, through

proposed laws on contract farming, amendments to the Agricultural Produce Market Committee (APMC) acts and other legislations are also seeking to make it easier for corporations to control agriculture.

Consolidation: domination of global agricultural inputs and equipment markets

Up until 2016, the global seed and agrochemicals markets were dominated by six corporations: Monsanto, Syngenta, Dupont, Dow, Bayer and BASF. These six controlled more than 60percent of the commercial seed market, 100percent of transgenic seeds and 70percent of agrochemicals. By the end of 2017, the big six became the big four: ChemChina bought Syngenta and controlled 24percent; Bayer bought Monsanto and controlled 23percent; Dupont merged with Dow and had 11percent; and BASF controlled 12percent. Four corporations controlled two-thirds of the global commercial seed market: Monsanto-Bayer; Dow-Dupont; ChemChina-Syngenta, and; Vilmorin (owned by Limagrain). The top farm machinery companies are Deere & Company (USA); Kubota (Japan); CNH Industrial (UK/Netherlands); AGCO (USA); CLAAS (Germany), and; Mahindra & Mahindra (India).

CONTROL OF THE AGRICULTURAL SECTOR

Supply and value chains: These include sourcing commodities directly from farms, processing and packaging, storage, transportation and distribution, marketing (wholesale, retail, online, and brick & mortar), and investment and trade. Corporations involve well known commodity traders such as Cargill, Archer Daniels Midland, Bunge, Louis Dreyfus, Charoen Pokphand and Olam, as well as Walmart, Nestle, Carrefour, Unilever, Kellogg, Betagro, Amazon, etc. In India, agri-food corporations are increasingly interested in distribution and marketing operations, given the increasing purchasing power and international tastes of India's middle and upper classes.

Knowledge and technology production: Large corporations are invested in the production of knowledge and technology to further their financial interests. Corporations develop their own research in agricultural sciences (transgenics, pest resistance), plant/ animal varieties (hybrid seeds, factory farmed poultry and pigs), technologies (gene editing), technological and scientific infrastructure (data laboratories, genomics), and financing public and private universities,

THESE SIX CONTROLLED MORE THAN 60% OF THE COMMERCIAL SEED MARKET, 100% OF TRANSGENIC SEEDS AND 70% OF AGROCHEMICALS

technical agencies such as the Food and Agriculture Organisation (FAO), etc.

Agri-Finance: Banks and financial companies are important sources of direct and indirect financing in the agricultural sector for production costs, equipment, land lease and purchase, insurance, business start-ups and expansion, etc. Agricultural finance (agri-finance) is a complex set of operations that involves multiple actors, from local moneylenders and micro finance institutions (MFIs) to state and private agricultural banks, multilateral institutions (e.g., IFC and IFAD), insurance companies, pension funds, and other finance corporations. Many large financiers channel finance through financial intermediaries such as agricultural credit cooperatives and regional agri-finance companies. International banks team up with governments and UN agencies to finance schemes aimed at small and medium scale agricultural producers.

Digitalization and big data: Agribusiness and agri-finance corporations compete to control the entire agricultural production chain through data—including soil conditions, seed selection, chemical inputs selection, seeding and spraying, irrigation, harvesting, etc. They have also insinuated themselves in the nexus between food and public health, through vitamin, mineral and protein additives in grain and food. Recent advances in digital and genomic technologies blur borders between production, storage, processing and consumption. The fingerprints of particular corporations are hard to trace unless we are familiar with and have the resource for data monitoring.

RECENT ADVANCES IN DIGITAL AND GENOMIC TECHNOLOGIES BLUR BORDERS BETWEEN PRODUCTION, STORAGE, PROCESSING, AND CONSUMPTION.

CORPORATE INFLUENCE OVER REGULATION

Corporations use their financial resources, large market presence and sectoral domination to shape national, regional and international regulations, policies and governance to enable, boost and secure corporate investments, financial gains, and market concentration. Corporations hire professional researchers, lobbyists, public relations (PR), media and image firms, policy experts, etc. to populate key spaces and processes, develop policy and regulatory proposals,

negotiation texts, and organize interactions among policy makers and corporate actors. Regulatory influence and/ or capture is evident in many areas:

- Domestic (national and subnational) laws, regulations and policies: corporate lobbyists work directly with legislators and government officials at various levels to secure their interests; they finance pet projects of key officials, and buy influence through various kinds of payments.
- Trade and investment agreements: corporations are aggressive in shaping the content and rules in the World Trade Organisation (WTO), Regional Comprehensive Partnership Agreement (RCEP), new generation Free Trade Agreements (FTAs), bilateral and plurilateral deals, etc. In several trade negotiations, corporate lobbies have access to negotiating texts before national legislators and many trade delegations.
- Intellectual Property Rights (IPRs): a crucial profit source for agribusiness corporations is IPR protections on seeds, breeds and agro-chemicals. Corporations have been extremely aggressive in the WTO, RCEP and all FTA negotiations to secure stringent IPR protection laws for themselves; they also wield tremendous influence in the International Union for the Protection of New Varieties of Plants (UPOV).
- International policy and financing institutions such as the FAO, the United Nations Environment Programme (UNEP), International Fund for Agricultural Development (IFAD), the World Bank, International Finance Corporation (IFC), Asian Development Bank (ADB), United Nations (UN) technical agencies: corporations place staff in key positions in many institutions (the World Bank has a Global Secondment Programme and an EU-WB staff exchange programme); they finance "partnership" programmes, platforms, events, and conferences to build consensus with policy makers, etc.
- Investor protection: corporate investors protect their interests through regulation, lawsuits for IPR/ patent infringement, libel (for e.g. SLAPPs), and dispute resolution mechanisms in trade and investment agreements. Particularly egregious are Investor-State Dispute Settlement (ISDS) provisions in trade-investment agreements that allow corporations to sue governments for policy or contractual changes that corporations perceive as undermining their profits and operations. Governments and people on the other hand, do not have such legal protection mechanisms.

BUILDING PUBLIC AND SOCIAL SUPPORT

Corporations use numerous channels to present themselves as a necessary, positive force in addressing agriculture, health, governance, technology, climate change, etc. They use press, media and PR firms to present their narratives to the public. They finance policy think-tanks, civil society organisations (CSO), films, entertainment products, events, local initiatives and even public spaces often through Corporate Social Responsibility (CSR) programmes. One of the most insidious ways by which corporations engage the public sphere is through financing and participating in multi-stakeholder processes (MSPs), for e.g., in the Committee for World Food Security (CFS), the World Economic Forum (WEF), the International Land Coalition, universities, and events/ spaces convened by private foundations. MSPs offer few or no opportunities for challenging corporate power, and are increasingly viewed by policy makers as ways to resolve disputes/ conflicts related to land and natural resources between local communities, corporations and governments.

Privatization, public-private partnerships (PPPs), deregulation and pro-corporate reregulation have blurred the lines between direct and indirect corporate operations. Corporations have now become powerful actors in determining the costs of production, input prices, food preferences, food and commodity prices, public policy, etc. It is imperative to deepen our understanding about the various ways in which corporate power is being entrenched in the agriculture sector in India, in order for us to better formulate our collective responses—in terms of research, campaigns and advocacy.

It is in this context that Alternative Law Forum and Focus on the Global South came together to organise, in Bangalore in June 2019, a symposium titled "Corporate Concentration in Agriculture and Food". The symposium brought together members from farmers' groups and national networks, lawyers, researchers, academics, and interested organisations to share critical information on a wide range of issues surrounding corporatisation of agriculture and to make sense of the emerging trends. Over the course of two days, the panels discussed rise of corporate power in agriculture and response of farmers' movements, the financialisation of Indian agriculture, the privatisation of research and policy making, the corporatisation of livestock, the privatisation of seeds and biodiversity, the changes in land laws that enable corporate land grabs, land conflicts and loss of agriculture land, the role of International Financial Institutions and foundations in undermining progressive farming agendas, mega-mergers in agribusiness and the failure

of the competition commission, corporate exploitation of weak regulatory frameworks (such as in the case of biopiracy), Israeli interventions in Indian agriculture, the rise of digital monopolies and implications for food and agriculture, and corporate capture of trade agreements.

SELECTED PAPERS PRESENTED AT THE SYMPOSIUM ARE PROVIDED BELOW.

The paper titled **"Concentration in Global Seed & Agro-Chemical Industry: Implications for Indian Agriculture" by Dinesh Abrol** discusses the megamergers in the agribusiness leading to corporate consolidation of critical agricultural inputs and technology.

The paper titled **"Corporatisation of the Livestock Sector: Through the Lens of Milk and Meat" by Dr. Sagari R Ramdas** argues that corporatization of the livestock sector in India, particularly of milk and meat, has impacts on the lives and livelihoods of producers and consumers, particularly the small and marginal producers.

In the paper titled **"The Value of Land", by Preeti Sampat** traces the history of land acquisition and land rights in India through frameworks of right to property and eminent domain.

In the paper titled **"Corporate Complicity: Israeli Interventions in Indian Agriculture", by Apoorva Gautam** discusses the increasing presence of Israel in India's agriculture sector, despite the lack of evidence for hailing 'Israeli technology' as a solution to the agrarian crisis.

The paper titled **"On How Corporations, IfIs and Large Funders Undermine Progressive Farming Agendas" by Bhargavi S. Rao** provides the big picture of IFIs and large foundations and their role in shaping agendas in the global south, particularly their interventions in agriculture.

The paper **"Effective 'Interventions' to Tackle Agrarian Crisis in India" by Dr. T.N. Prakash Kammardi** is a set of recommendations to deal with the current agrarian crisis.

The final paper **"How trade agreements enable corporate concentration in agriculture and food" by Benny Kuruvilla** discusses global trade agreements in the context of the agribusiness sector, how such agreements have become a means towards deregulation in developing countries, and their impact on small farmers in countries in Africa, Asia and Latin America.

CONCENTRATION IN GLOBAL SEED & AGRO-CHEMICAL INDUSTRY: IMPLICATIONS FOR INDIAN AGRICULTURE

Dinesh Abrol[1]

1 Former Professor at Jawaharlal Nehru University, New Delhi and is with the Nation for Farmers

INTRODUCTION

This paper suggests that with the approval of megamergers by the competition authorities of over 26 countries a new structural pillar which is capable of providing a material basis to the relations of agro- imperialism with the agrarian south has come to be established. This new structural pillar is capable of accelerating the worldwide control of the "big six" (currently merged into the "big three") of agrichemical and seed business. With this pillar the corporate agro-food regime has been able to complete the journey that transnational capital had begun during the decade of eighties leading to the WTO Agreements on Agriculture, Intellectual Property, Sanitary and Phytosanitary Measures (SPS) and Trade Facilitation. The megamergers of agricultural input industry are going to allow the new consolidated entities of the "big three" not only to corporatize agriculture worldwide but also to colonize agriculture in the global south in a way never ever seen before. Achieving in effect the elimination of national controls over investment, which the WTO agreements did not offer. Increased appropriation of land and value of biodiversity, allowing accumulation through encroachment and promoting primitive accumulation for capitalist classes, building a new dependence on the Advanced Countries and the global market can be expected to sweep the developing world. Armed with this altogether a new structural pillar with material basis, the transnational capital in agribusiness is in a better position to advance its grip over the development of system of productive forces.

While formulating the strategy and tactics of worker-peasant alliance building, the agrarian south will need to proactively pursue the processes of delinking agriculture from the emerging global chains of agrichemicals, seeds and seed traits production and R&D. Megamergers substantively provide a material basis to the neo-colonial system of agricultural production and will allow these companies to advance the process of hollowing out of manufacturing of seeds and associated agricultural inputs in use by the peasantry. Analysis shows that the megamergers would allow these companies to become extractive in respect of their relationship with the local nature, labour and economy. There will be the formation of relations of resource use that are destructive for labour, soil, water, biodiversity, materials and energy use. After gaining control of the material basis of production of critical agricultural inputs and technology,the relations of agro imperialism now have far more possibilities to cause greater

harm to economy and environment than what these countries experienced during colonialism or even during the introduction of green revolution in the countries of agrarian south. The new pillar of megamergers will need the countries of agrarian south to move away from the imperialist production relations of industrial agriculture and shift the peasantry and rural workers to a system of ecological farming-based rural industrialization.

Analysis shows that the agrarian south is not able to deal with the impending neo-colonial challenge in the agriculture sector with the neo-liberal laws for the regulation of competitive interactions in place in the world of knowledge, technology, finance and production. The author suggests that the measures in use to assess the impacts of the mergers by the competition authorities remain partial, fragmented, narrowly defined in terms of concerns, and grossly inadequate with regard to the consideration of remedial measures to be utilized to control the impact of growing corporate concentration in the sector. In the final section of this paper the issues of political and economic importance surrounding the large transnational agribusiness megamergers are briefly examined with relevant examples taken from the Indian experience. The broader implications of this consolidation for the politics of food and agriculture sector are noted for the framing of the interventions on the agrarian question in the countries of global south.

INDUSTRIAL AGRICULTURE AND THE RISE OF CORPORATE CONCENTRATION

Rising concentration in the global seed and agrochemical industries is intertwined with the rise of industrial agriculture.[1] In the United States, Europe and around the rest of world, BASF, Bayer, Monsanto, Syngenta, Dow, and Dupont, known as the "big six" of agricultural input industry, already dominate quite deeply the markets for seeds and pesticides. In the advanced capitalist world, the"big six" dominate the production of seeds and agricultural chemicals, and also control the supply of technology of seed production and associated agricultural inputs.

1 Consistent with the argument in this paper, it is also necessary to point out that the rise of agricultural biotechnology in the 1980s and 1990s, the rise of neoliberal policies, and the increase in corporate concentration in the agricultural input industry coevolved. These developments promoted deregulation of corporate investments and a reduced role for the state in agricultural R&D and encouraged private investment, including in R&D for technology development through public sector. A stronger version of intellectual property rights (IPR) protection was pushed into the Uruguay Round of GATT Negotiations. Further with the extension of the influence of finance capital on the policy regime characterized as liberalization, privatization and globalization in the developing world including India saw a wave of corporate mergers, acquisitions, and joint ventures that transformed the sector, as the chemical firms sought to capitalize on the prospects for biotechnology to enhance product complementarities between seeds and agrochemicals. See Dinesh Abrol (2013), Political Economy of Agricultural Biotechnology, CSA, Hyderabad.

Table 1: Profiles of merging agribusiness companies

Company	Bayer	Monsanto	Dow	Dupont	ChemChina	Syngenta	BASF
Size of the deal	$ 66 bn		$ 130 bn		$ 43 bn		NA
Sales (2015)	$ 51.4 bn	$ 15 bn	$ 49 bn	$ 25 bn	$ 45 bn	$ 13.4 bn	$78.1 bn
Employees (2015)	116,800	20,000+	53,000	52,000	140,000	28,704	112,435
Parent Company location	Germany	US	US	US	China	Switzerland	Germany
% of global seed market in 2013	3	26	4	21	Not available	8	NA
% of global pesticide market in 2013	18	8	10	6	Not available	20	13

Source: Company websites and ETC Group, 2015

With the megamergers having been approved in 26 countries, the "big six" would be extending and consolidating its hold over the hardware, software, and fintech to be promoted in the domains of industrial agriculture to complete their own monopolistic oligopoly over the global system of input production andt echnology generation. There were nearly 400 ownership changes involving the "big six" in the last twenty-three years. See Table 2 for the developments with regard to the acquisitions made in the domain of biopesticides and seeds by agrichemical companies.

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Today in the agrarian south the local private sector is up for grab by the "big six" of agribusiness. The role of public sector is changing. Public sector production and R&D, which the governments had helped the countries to build during the green revolution period,has become extremely weak. Entry barriers are greatly reduced for the "big six", mainly on account of the weakening of public sector in

production and R&D in the countries of agrarian south. A new wave of technological change is sweeping the domain of industrial agriculture. Today the "big six"s upply seeds, seed traits, agrichemicals and technologies for many different products in use for the practice of both types of farming—chemical as well as biological. India is a major target country for the "big six"for the sheer size of the seed and agrochemical markets. The "big six"are in search of markets, aided by acquisitions and agreements that they successfully made with local companies and public sector in the domain of agricultural biotechnology and seed business.

Table 2: Acquisitions and agreements of the "big six" between 1996 and 2015

Company	Acquisitions 1996-2015				Agreements 1996-2015			
	Pesticides	Seeds	Bio-Pesticides	Total	Pesticides	Seeds	Bio-Pesticides	Total
Monsanto	0	51	2	53	25	39	7	71
Bayer	12	21	4	37	43	34	6	83
Dow	7	28	0	35	25	25	2	52
Syngenta	4	28	3	35	41	31	8	80
Dupont	4	17	1	22	21	19	2	42
BASF	8	3	1	12	33	42	3	78
Total	35	148	11	194	163	151	21	406

Source: Victor Pelaez and Gabriel Mizukawa (2017), Diversification strategies in the pesticide industry: from seeds to biopesticides in Ciencia Rural, Santa Maria | http://dx.doi.org/10.1590/0103-8478cr20160007

CONCENTRATION, TECHNOLOGICAL INNOVATION, FINANCIALIZATION, AND GLOBAL INTEGRATION

Currently the diffusion of technological innovations in industrial agriculture is essentially embedded in the convergence of powerful digital technologies—computer data and genomics.[1] In October 2018, Pat Mooney of the ETC Group mapped the emerging agribusiness landscape of technological innovation, global integration, and fintech. It is clear that hardware (robotics and its sensors) combined with software (gene editing methods that can compose DNA as wished) and with fintech (blockchain and cryptocurrencies) are opening up incredible possibilities to bring together diverse collections of data. It is not difficult to see that many more changes and greater monopolies are on the way in the domain of industrial agriculture.

The answer to the questions of—who will exercise control over this data, who will profit from its usage, and to whose disadvantage this data will work—is clear. The big companies will have access and decide what data will be produced and used. There is evidence that even if start-ups and publicly funded institutions develop technologies, they would be incorporated by these big companies and diffused by them in the countries of agrarian south. Since the agribusiness wishes to push the developing world to adopt and make profits out of the concentration through the expansion of more of such megamergers, these companies are going to do their best to extend their control over the system of production and technology of other inputs such as fertilizers, big data platforms and industrial agri-biotechnology.[2]

In India and elsewhere, the merger process got completed in 2018. In 2017, the size of global agri-input business was USD 4100 billion. The agribusiness has much more scope to grow in the countries of agrarian south. With the latest megamergers, 70 percent of the agri-input industry supplying seeds, agrochemicals, plant growth promoters, and microbial products is now estimated to be controlled by the three combines. Although the global agri-food industry has witnessed a spate of mergers, acquisitions, and deals since the eighties, the recently announced mega mergers will allow the corporate control of R&D and production of agricultural biotechnology to multiply manifold. Here below, the complexity of competitive interactions that were involved in the merger assessment in the case of megamergers of Syngenta and Chem China, and Monsanto and Bayer are briefly described.

1 Pat Mooney, ETC group, "Blocking the chain: Industrial food chain concentration, big data platforms and food sovereignty solutions", ETC Group, GLOCON, INKOTA and RLS, October 2018 is correct in pointing out that it is as foolish for competition regulators today to judge cross-sectoral food chain mergers in isolation from other events along the Big Data platforms as it was 40 years ago for regulators to ignore the takeover of plant breeder by pesticide manufacturers. The tragedy is that over the last forty years, the companies and technologies have changed a lot, but the regulators have not. Vertical and horizontal integration continues, but neither the capacity to monitor it nor the legal tools to control it.

2 With an eye on the markets of global south, Bayer-Monsanto is getting together with Yara (a Norwegian fertilizer company), Climate Change Corporation, Deere, an agricultural machinery producer and so on.

SYNGENTA – DEVGEN AND CHEM CHINA

The merger control assessment failed to consider prior acquisitions of Syngenta. For example, Syngenta had acquired Devgen in 2012. Devgen leads in hybrid rice seed production; its research capabilities encompass a deep pipeline of innovative hybrid rice products, germplasm and biotechnologies such as RNAi, bioinformatics and gene-based discovery platforms. Syngenta's capabilities in crop protection, genotyping, genomics, and trait development are highly complementary with Devgen—resulting in a market-leading R&D platform. Devgen is one of five dominant players in hybrid rice in India, and maintains good market share in the seed market. It also owns the germplasm collections acquired from Monsanto. The organized sector seed industry in India is currently valued at more than Rs.2000 crores, of which hybrid rice is valued at about Rs.300 crores. The merger of Syngenta with Chem China will allow the combine to pursue complementarities that are possible with off-patent chemicals whose life will now be extended by Syngenta through the bundling of seeds and off-patent agrochemicals in the Indian market.

One component of the new strategy of Syngenta is to pull the seed and crop protection units into a single entity that centralizes around the crop. Pulling the seed and crop protection units together has changed the way Syngenta functions as a company. The new strategy is known by a host of names including "Integration," "One Syngenta," or "Integrated Crop Solutions." The financial report, management structures, and the sales force calling on retailers and growers has seen changes. The company creates high-level platforms that decide the efforts for improvement to be undertaken at a global level. The impact of bundling and the drain of surplus from India—which has worked wonders for the benefit of Syngenta's profitability and prior acquisitions, R&D collaborations, IP and cross licensing agreements—was not even assessed.

Monsanto Bayer (MB), merger control and competition assessment

Monsanto Bayer (MB) merger forms a critical part of the recent wave of megamergers. It is expected to have an impact on the genomics-based business of seeds and agrochemicals and on the valuable big data and IT platforms becoming now important for "climate smart farming". In India, the focus of the Competition Commission of India (CCI) in the case of merger control law application also largely failed to take into account the effects of the merger on innovation and the likelihood of constrained choice for farmers, who will be locked in integrated one-stop shop solutions. The assessment only succeeded in getting the CCI to focus on the change in relationship of Monsanto Investment India Private Limited (MIPL) and Maharashtra Hybrid Seed Company Limited (Mahyco).[3]

In India, the law on monopolies and restrictive trade practices was diluted in 2000s. It does not capture the ways in which the mergers are known to affect economic fairness, technological choice, environmental sustainability, public health, national autonomy, food security, and political power. India's competition law of 2002

3 Mahyco is a foreign controlled company. Monsanto controls this entity. As per RBI regulations, FDI means investment through capital instruments by a person residing outside India in an unlisted Indian company; or in 10 per cent or more of the post issue paid-up equity capital on a fully diluted basis of a listed company.

does not have provisions to deal with the monopoly power bestowed upon corporates by intellectual property.The competition authorities could not therefore take in to account the de facto market power bestowed by intellectual property. Of course, the same can be said of the competition authorities of 26 countries. Megamergers have been permitted with the recommendation of merely a divesture of some assets which have in no way dented their control over technology and finance.

Here below some of the important suggestions that the author offered to Competition Commission to deal with the megamergers:

- Interpreting the Section 20 (4)[4] widely for the purpose of the preservation of competitive process in the potential disruption zone and review the products in pipeline, R&D portfolio and IP (intellectual property), royalties and fees, payments for services and import of raw materials to related parties, and know-how portfolio of the combines because it is necessary to consider:

i. Actual and potential level of harm to competition through imports of active ingredients (AIs);

ii. Development of barriers to entry into the markets for agricultural inputs (seeds and agrochemicals), technology inputs and product (agrochemicals, seeds, microbial) through unfair and unreasonable terms for the sale of new technological packages;

iii. Adverse effects of the possible level of combination in the market for R&D resources, finance and knowledge not only in the case of agrochemicals but also seeds;

iv. Weakening of countervailing power of publicly funded R&D sector, MSMEs and farmers;

v. Likelihood that the combination would result in the parties to the combination being able to significantly and sustainably increase prices or profit margins in the case of seed and agrochemicals;

vi. Significant impediments to innovation on account of the access to new entrepreneurial resources that the combination would be gaining; and

THERE ARE 156 MILLION MEN AND 88 MILLION WOMEN WORKING IN AGRICULTURE, AND AGRICULTURE HAS STARTED TO BECOME AN UNVIABLE SOURCE OF LIVELIHOOD FOR THE MAJORITY OF THESE WORKERS: SO WE ARE IN THE MIDST OF AN AGRICULTURAL CRISIS.

4 It was suggested that Competition Commission of India (CCI) should not interpret Section 20 (4) of the Competition Act 2002 narrowly but widely to control the harm to competitive process from control over R&D resources and intellectual property.

vii. Nature and extent of harm through enhanced potential to force farmers to adopt a single model of farming capable of impoverishing farmers and related producers of agricultural inputs.

Of course, the likely harm to competition will arise not only due to the enhanced potential for disruption of local (traditional, conventional modern and indigenous) system of production and innovation on account of the rise in their oligopoly power but also due to the reason of acceleration of deregulation of agriculture and related industries in respect of investment, labour, land, livelihoods, health and environment.

CONSEQUENCES OF MEGAMERGERS FOR INDIAN AGRICULTURE

When the competition law was applied by India's competition authorities, they chose not to straddle into technology transfer domain. The government as well as competition authorities chose to stay away from applying the remedies capable of compelling the combines to agree to share the rights to intellectual property on reasonable prices with the Indian competitors. In order to make the local market competitive the local companies will have to fight their battle for the domestic markets individually with these companies. While the Indian patent law has the provision to issue compulsory licenses, this provision is neither being invoked by local industry nor by government. Vikram Singh and Kajal Chakraborty (2019) report that Bayer (314) and BASF (313) were the leading companies that received the highest number of granted patents, followed by Syngenta (169), Dupont (101) and Monsanto (44)[5]. Below table gives the current status

Table 3: Status of Working and Non-working of patents granted to the agrochemical and seed companies by the Indian Patent Offices (2015-16)

Company Name	Patents Granted	Working	Non-working
BASF	313	40	273
Bayer	314	22	292
Dow Agro	15	4	11
Du Pont	101	44	57
Monsanto	44	41	3
Syngenta	169	19	150

5 Vikram Singh and Kajal Chakraborty (2019), Transfer of innovations: a case of working of patents in India, in Current Science, VOL.117, NO.6, 25 September 2019, p 1032-1044.

of working and non-working of patents granted to these companies. It is clear from even their preliminary and partial assessment of the status of working of patents granted that the majority of patents in force in 2015-16 report their status as non-working. It is to be noted that the Indian patent law allows the companies to claim the status of patent as working even if the company is merely importing the product into local market. Working does not mean the technology is in use for local production.

Close to 80 percent of the private sector R&D investment and agricultural related IP is already under the control of three combines—Monsanto Bayer, Dupont and Dow, Syngenta-Chem China—and if BASF is included, then the control of multi-national corporations is close to 90 percent. These combines are known to be developing more of new varieties, not with just new novel traits, but also varieties with stacked traits. They have cross licensing agreements that have patent protection like effect and would not be affected by the divestures of assets recommended in India and elsewhere. Integration of seed with agrochemicals, and control over information platforms will allow these companies to be able to collect and use data from the farms (digitization of agriculture-big data) and gain unfair competitive advantage over the rest of companies and R&D organizations.

Intellectual property, corporate control and global south.

With the latest megamergers, the control of close to 70 percentof the agricultural input industry supplying seeds, agrochemicals, plant growth promoters and microbial products for the farm sector is going to pass into the hands of these three combines. Close to 80 percent of the private sector R&D investment and agricultural biotechnology related intellectual property will be under the control of these three combines. Today, the global agricultural input business is of USD 4100 billion per year. These companies are developing more new varieties, not just with novel individual traits, but also varieties with stacked traits and cross licensing agreements that have the patent protection like effect. The current push for consolidation is for both the integration of seeds and agrochemicals and the control over information platforms that these companies use to collect data from farms. In India, their local R&D is devoted to the objective of collection of data for regulatory purposes and development of chemical-seed packages that are exclusive and allow them to practice tying and bundling of agricultural inputs.

The latest mergers announced include the merger of Dow and Dupont, Chem China and Syngenta, and Bayer and Monsanto. These megamergers are different. The new big three will globally change the face of the agricultural inputs sector. The markets of Africa and South Asia are the new targets for agribusiness expansion.The companies involved control a number of plant transformation technologies (exclusive licenses with them for CRISPR-Cas9 involving gene editing/silencing technologies are the latest additions), genes and plant genomics, genetic traits for the production of new seeds, and all the other related technologies for the supply of technical grade active ingredients for the production of agrochemicals. In particular, their control over plant genomics, gene sequences, technologies of plant gene-editing and gene-silencing, bio-pesticides, digital platforms for data gathering, germplasm collections, and plant variety protection certificates gives these companies monopoly power of the kind that is unprecedented in the global

south. Locking farmers into the packages, marketed as integrated solutions, is expected to get a big push through the information platforms using big data being applied increasingly to farming.

Cross-licensing agreements existing among the companies involved in these combines already shows that they have no intention to compete with each other. The cartel-like behavior can be expected to prevail in the market. The megamergers allow these companies to establish a seed business platform providing for enhanced vertical integration, which will be used for the purpose of the creation of exclusive packages of traits, seeds and agrochemicals that are less likely to interoperate with rival's products. The companies post combine would able to use the marketpower to entrench their control in the market, both through licenses and through bundling its technologies in such a way that farmers are obliged to use the companies' proprietary brands.

THE PRICES OF AGRICULTURE INPUTS WILL RISE AND ACCORDINGLY FARMERS' INCOMES CAN BE EXPECTED TO GET SEVERELY AFFECTED.

Competition in seed breeding,production, and input supply would attenuate and create barriers to entry to access and use of alternate technologies.The prices of agriculture inputs will rise and accordingly farmers' incomes can be expected to get severely affected. The adverse impact on the ability of domestic producers of agricultural inputs to compete with the companies in the provision of agricultural inputs is also not ruled out.While in the approval process the competition authorities could get the merging parties to agree to sell certain assets to other firms, the impact of mergers on prices charged to farmers, and innovation process is obviously still a matter of huge concern. These concerns need to be mapped and monitored appropriately. With the approval of megamergers, the goal of increased control of upstream technological inputs (seeds and agrochemicals and genetic traits), downstream multiplication, and distribution of the agro-food industry by the "big three" can be expected to accelerate the drain on account

Table 4: Companies deficit from forex transactions- Difference between Forex Earnings and Forex Spendings (Rs in million)

	1994-1999	2000-2005	2006-2011	2012-2017
Bayer	-347.40	-470.00	-5820.60	-18437.50
Dupont	-593.30	-2180.00	-0	-27587.20
Monsanto	0	-102.70	-3241.00	-4703.30
Syngenta	0	-4181.20	-3188.10	-34653.70

Source: Calculated from CMIE Prowess, Dec 2107

of the growth in foreign exchange payments to the headquarters of these companies.

See also the figures provided above for the details of the sources of acceleration of the drain of foreign exchange from India on account of the agribusiness operations of these companies. Compiled by the author from annual reports, the figure shows quite clearly that the trend of drain of foreign exchange has continued unabated. Greater drain of wealth from global south to north would occur unchecked in the absence of the public sector and lack of control over technology; foreign exchange outflow will increase on account of royalty, dividend payments, tied imports and technology dependence. The most valuable productive asset in production will not anymore be the control of genetic material (seeds) but the control of genetic sequences and related biological tools enabling the systematic design of phenotypes by manipulation of genotypes. The entry of new competitors will depend on particularly those who hold control strategically of abstract information (DNA designs) and finish by controlling physical living DNA designs. As the development and diffusion of new technologies and the introduction of innovative ways of farming in India could go into the hands of these companies, the bargaining power differential between farmers and the global oligopoly of agricultural and biotech firms would change and increase manifold in favour of these companies. The tendency of hollowing out of manufacturing will be accelerated. Private sector accounted for 85 percent of the imports of transgenic research materials between 1997 and 2008. Monsanto-Mahyco, Bayer, Syngenta and Pioneer (Dupont) are importers of transgenic materials for cotton, maize and wheat. Monsanto-Mahyco and Bayer imported for rice as well. Imports will continue to rise. The share of these companies in field trials is close to 80 percent. Field trials are pre-market indicators of concentration. Monsanto-Mahyco and Bayer account for largest number of field trials.

FINANCIALIZATION AND DISINVESTMENT IN PUBLIC SECTOR AS SOURCES OF VULNERABILITY

In 2002, when the competition law amendments were passed under the influence of neo-liberalism, the domain of intellectual property-based market power was left to be dealt with by the Indian patent law amendments by the

policymakers. Further consolidation can be expected to occur in the sphere of agribusiness. Because of the approval of megamergers globally technological 'innovation', integration, and increased financialization that prioritizes investor demands for profits in ways that encourage corporate consolidation would now be able to drive the consolidation process. Professional asset management firms, who are typically rewarded based on their investment performance, have been pushing the companies involved in these combines to invest for higher returns.

Already, even before affecting the mergers in these companies the percentage share owned by the top six asset management firms like BlackRock, Capital Group, Fidelity, The Vanguard Group, Inc., State Street Global Advisors, Norges Bank Investment Management (NBIM) is on average over twenty percent. Their common shareholder structure is not being taken note of by the competition authorities. In their latest study titled Financialization of the Food Value Chain, Common Ownership and Competition Law (2019), Ionais Lianos, Alina Velias, Dmitry Katalevsky and George Ovchinnkov point out that it is possible to identify considerable common ownership in other parts of the food chain, particularly with the highest levels of economic concentration.The competition authorities need to develop adequate legal tools to deal with the issue on the basis of economics but also social network analysis will also enable a better mapping of the complexity of competitive interactions in the sector.

The capital control regulations and competition law have become weaker in the last two and a half decades. Dominance per se is no more an issue for the competition authorities. Abuse of dominance is taken note of, but that implies post-merger conduct control rather than ex-ante assessment and action.Beyond concentration ratios which focus on the product market shares and search for overlaps in the case of these companies in agrochemical and seed markets, there are aspects like multiple and overlapping patent claims, control over plant variety related intellectual property, collaborative R&D agreements, cross-licensing arrangements which also contribute to the erection of barriers to entry into market for the micro, small and medium scale enterprises and farmers' cooperatives. Since the increased concentration of control will lead to increase in risks for food security,food safety, and biodiversity, in addition to the more traditional parameters of consumer welfare (affordability, food prices, high quality, variety and innovation, there will be a new set of challenges arising out of the proposed technology use for environment and health.

Impact on productivity, labour and environment.

The impact on primary productivity (soil, water and biodiversity) will grow as a concern in several agro-ecological regions of the global south. India is particularly vulnerable because its current strategy of capitalist development of agriculture is completely dependent on the promotion of high external input system and the advancement of GM-based farming for both food and non-food crops. Although the claim of merging firms is that their enhanced technology integration plans will result in greater overall agricultural production which would offset price increases, the truth is that the vast majority of the agricultural biotechnology traits marketed by the merging firms are not designed to increase yield. Rather, nearly all of the traits (insect resistance & herbicide tolerance marketed by these merging firms require farmers to spray more chemicals, or increasingly, through

stacked traits), involve greater risk and higher costs per unit of output. Further, it is also becoming difficult for the farmers to access non-genetically modified seeds for their crops. In India, cotton is already an example. Ninety percent of the farmers have been locked in to GM cotton, and they have difficulty in accessing non-genetically modified cotton. Even when there is widespread scientific consensus that large scale monocultures and chemical farming are a major contributor to climate change, environmental toxins, soil erosion, and biodiversity loss.

THE ROLE OF PEASANTS AND RURAL LABOUR IN AGRI-FOOD VALUE CHAIN WILL DIMINISH

The megamergers would have a major effect on prices of seeds and agricultural inputs, extent and nature of import dependence, foreign exchange outflows to related parties and result into establishment of monopolies in seed production, which will be detrimental to the ability of farmers to function as independent seed producers. The new combinations will damage the ability to produce seeds of locally adopted varieties. The damages to agricultural biodiversity and eco-system support services of agricultural production, harm to health of soil and water systems will increase. The proposed combination would have the effect of reduced choices for farmers as well as consumers. Their political power vis-à-vis government and public-sector R&D can be expected to rise further. Health of consumers, farmers and rural labour, jobs of workers can only get adversely affected. Farmers who do not have their own seeds saved will become more dependent on the companies. The cost of cultivation is likely to shoot up. All these developments will lead to indebtedness and farmers' suicides.

The role of peasants and rural labour in agri-food value chain will diminish. This will make the petty producers as a whole to exit the agri-food sector in large numbers in India. The questions of technological choice, economic fairness, environmental sustainability, public health, national autonomy, food security and political power are at stake. The worse effects of further consolidation of the sector can be checked to a significant extent through timely action in India. All the essential patents on plant genomics and agricultural biotechnology will have to be compulsorily acquired to facilitate access to technology on terms that are easy, fair and reasonable. India's public and private sector will have to be directed to use the tools and knowledge of plant genomics to develop the plant varieties that are stress tolerant to withstand the deteriorating conditions of soil and water health and impending effects of climate change. The government will have to direct publicly funded

R&D institutions to develop agro-ecological approaches to improve the eco-system services and promote intercropping and integrated farming.

RESISTANCE THROUGH THE DEVELOPMENT OF ALTERNATIVES

Finally, an alternate agricultural development strategy capable of focusing on the improvement of primary productivity is the need of the hour to take care of the worst effects on the peasantry and rural labour. Improvement of secondary productivity must be undertaken in a manner that does not raise the economic, environmental and health costs of farming. Eventually the peasantry and rural labour and the people as a whole including domestic producers of inputs should be prepared to boycott these companies. The government should be mobilized to invest in public sector to provide support for the development of technological alternatives. Domestic industry should be mobilized to challenge neoliberalism and transnational capital. The opportunity is provided by the megamergers. This consolidation is becoming an important concern of the domestic capital operating the sector of seed production in India. The recent break-up of national seed industry association is creating a pharmaceutical industry like situation.

EVENTUALLY THE PEASANTRY AND RURAL LABOUR AND THE PEOPLE AS A WHOLE INCLUDING DOMESTIC PRODUCERS OF INPUTS SHOULD BE PREPARED TO BOYCOTT THESE COMPANIES.

Classical framing(s) of the agrarian questionare known for considering the agenda of formation of worker-peasant alliance as consisting of 1) breaking of land concentration, 2) establishment of alternative path of peasant capitalism allowing a broad-based capitalist development and of a more democratic polity, and 3) formation of collective property on the basis of egalitarian land ownership in the countryside that can enable the proletariat to advance beyond the bourgeois democratic revolution towards peoples' democracy and socialism. With the entry of corporate capital and the globalized finance

penetrating in a big way into agriculture, the transitional demands considered by the Left and Democratic forces up to now consist of 1) resisting withdrawal of the state from the role of supporting the peasantry and petty producers, 2) struggle against primitive accumulation of capital leading to the dispossession of peasantry, 3) struggle for ensuring that land acquisition takes place in conformity with social rationality, 4) struggle against corporate and contract farming practices, 5) preventing peasantry from making a shift to socially irrational technological and organizational changes, and 6) promoting the implementation of rural employment guarantee, forming trade unions and workers' collectives to gain decent wages, uniting people against the privatization of education and health and so on.

Lastly, through this paper it is now our suggestion that the way forward should ultimately include the challenge of building of worker peasant alliance in production in itself for the benefit of ecological agriculture wherein agro-ecological approaches allow the people to develop a self-reliant environment friendly and socially just agro-industrial system. This can be done only via the step of building of new social carriers of production and innovation in rural areas. The peasant and workers organizations will have to get started with the task of multiplying their efforts to organize petty producers and workers to come together to organize themselves for cooperation in production. Workers and petty producers will have to provide entrepreneurial leadership to these efforts. It would be necessary to develop an alternate system of agro-industrial production to counter transnational capital on the ground. This will involve the development of an alternate agro-ecological technology platform to undertake agriculture and rural industries in an integrated manner.

CORPORATISATION OF THE LIVESTOCK SECTOR: THROUGH THE LENS OF MILK AND MEAT

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Animals significantly contribute to India's gross domestic product (GDP). In 2016-17, of the total agricultural production value (gross value added or GVA) of Rs. 24,84,005 crore, the gross value added by the livestock sector at current prices was Rs. 6,39,912 crore, or 25.7 percent of the total contribution from agriculture, forestry and fisheries.[1] Milk and milk products account for two-thirds of the total value of livestock products. In 2018, India was first in the world for milk production, third in the world for beef exports, and third for egg production. A total of 176 million tonnes of milk in 2017-18, was produced by 92.5 million buffaloes reared by 39 million families, and 122 million cows across 66 million families.[2] Whilst globally cows are the main source of milk, in India the main source is the buffalo. The country accounts for 67.5 percent of the world's buffalo milk. And 51.9 percent of India's milk comes from buffaloes, followed by 44.3 percent from cows and the rest from goats.[3]

As per government data of 2015, 163.4 million tonnes of meat (beef, carabeef and mutton), was produced by farmers, including 33 million households rearing goats and 4.55 million rearing sheep. Of the total meat, 48 percent is carabeef from buffaloes, 42 percent from sheep and goat, and 10 percent from cattle. In addition, 4.5 million tonnes of chicken meat and 100 billion eggs are produced annually by 729 million poultry, of which 80 percent are industrial poultry and 20 percent backyard poultry. From a population of 10.3 million pigs, 0.38 million tonnes of pork is produced. Thirty million pastoralists across India form a part of the livestock rearing families, and rear 50 million livestock—cattle, buffaloes, sheep, goat, ducks, chicken and pigs.

This paper will explore the corporatization of the livestock sector in India through the lens of milk and meat, and examine its impacts on the lives and livelihoods of producers and consumers, particularly the small and marginal producers who traditionally have comprised the largest proportion of farmers in India and who own close to 70 percent of India's livestock. It is important to flag here that whilst livestock is more equitably distributed than land, it is also true that when livestock assets are analysed across landholding categories, between 40–50 percent of all small, marginal and landless households continue to lack any livestock assets. [4]Apart from being a source of livelihood, food, energy for agriculture and fiber, livestock are banks on hooves' for communities and a critical component of ecosystem diversity, food cultures, and health.

1 Share of Agriculture & Livestock Sector in GDP. National Dairy Development Board. https://www.nddb.coop/information/stats/GDPcontrib

2 Government of India, 2012.19th Livestock Census Data.

3 Food Sovereignty Alliance, 2017.

4 Ramdas, SR. 2015.Death of Small-Farmer Dairies amidst India's Dairy Boom. Economic and Political Weekly. Vol L No 19. pp 21-23.

THE MILK CRISIS

Domestic milk markets have been in crises since early 2015—plunging milk prices being paid to farmers coupled with sky-rocketing input costs is driving small and marginal producers into debt and out of dairying as a livelihood. To set the context, and understand the crises, here are a couple of important facts to keep in mind as we embark on interrogating the milk trail. Let us first get a quick glimpse of the value chain of milk, from the producers to when milk finally reaches theconsumers.

Indian farmers or producers are not one homogenous category: there are small farmers who own 1-2 animals, some of whom are landless agriculture workers, or cultivate crops on lands which are less than a hectare. There are middle farmers with 10-50 animals and large farmers with anything from 50-400 animals. Today there are even 'farmers' owning farms with over 1000 heads of cattle. All farmers need inputs for their animals to produce milk: fodder, feed, water, health care, and crucially labour. Even official government data reveals that women provide 75 percent of the labour force in livestock production, and employment of women in dairying in states like Punjab and Haryana, where animals are stall-fed, is as high as 90 percent.[5]

Milk is sold through the so-called 'unorganised' or 'informal' market chains, and the 'formal' or 'organized' routes. What is referred to as the 'informal' or 'un-organized' route is in fact a highly organized mode of marketing liquid milk, where a milkman from the village or a neighbouring village purchases milk from the producer, and directly sells the milk to local homes, tea shops, hotels, sweetshops, where milk is either directly used as liquid milk or processed into value-added products such yoghurt, sweets, ghee, khoya, butter, paneer and so on. The distance between producer and consumer is never more than 30-40 kms and consumers purchase either liquid milk, or the value added products.

The so called 'formal' or 'organized' route is where milk from farmers is procured by cooperatives or milk aggregators. The milk is chilled at the village or district level in bulk milk chilling units, and then transported via refrigerated vans or milk tankers to dairy processing and packaging plants, which are either cooperatives or private. The processed milk or milk products are then marketed and distributed via the latter's own retail outlets, other retail outlets, or supermarkets. In 2014, Rabobank estimated that of the total milk produced in India, 45 percent is for self-consumption and the balance (55 percent) is sold as loose unpackaged milk and processed products.[6] Of the milk sold, 75 percent is via 'informal' markets and 25 percent through 'formal' markets. Of all the milk procured in the so-called 'formal' markets, private dairy processors procure over 50 percent.

Another element to keep in mind is that not all milk we drink or consume is necessarily fresh liquid milk. This is particularly true of the milk, which is processed, packaged, and distributed via dairy processors and aggregators. The milk in the packet could very well be recombined milk, which is put together by mixing skimmed milk powder (SMP), butter fat, and water.

5 Government of India, 2012.Report of the Working Group on Animal Husbandry and Dairying.12th Five Year Plan 2012-2017, Government of India, Planning Commission, New Delhi.

6 Rabobank International, 2014. Milking the chain: enhancing the upstream linkages in Indian dairy, Rabobank Industry Note No. 432- April 2014, Rabobank International, Utrecht. http://tinyurl.com/h8je7xk.

When milk reaches the dairy processing plant, it can be separated into its constituent parts: cream, which can be processed further into butter fat, and then milk powder. The milk powder without fat is known as skimmed milk powder. The constituents—SMP, butter fat, and water—can be recombined to form milk. Depending on the desired fat content, recombined milk can be skimmed milk (with zerofat), or 1 percent fat milk, or 3.5 percent fat milk. Neither cows nor buffaloes have such low fat percentage. The average fat content in cow's milk is 4-5 percent and in buffalo's milk it varies from 6-7 percent. Milk can be transported over long distances and time periods with ease and with minimal spoilage not as liquid milk, but in the form of SMP. In India traditionally during the lean months of summer, when there has historically been a shortage of liquid milk production, dairy processors have compensated the shortage through recombining SMP with butter fat and water, and selling this.

Much of the milk story, which unfolds from here on, ironically has to do with SMP.[7] Since December 2014, there has been a massive slump in milk prices paid by dairy processors to farmers and producers. Prices as low as Rs. 16-17 per litre of cow's milk were paid to farmers in 2015. Between 2015 and 2019, there has been hardly any improvement in milk prices paid to farmers, with prices of cow and buffalo milk hovering between Rs. 20-26 per litre. The slump in milk procurement prices has impacted farmers across India, as also globally. If there were farmers in Orissa pouring milk on the streets in protest against low prices, there were similarly farmers in Brussels and the UK pouring milk on the streets. Today a litre of bottled water is priced at Rs. 30 per litre, and here farmers are paid far less than that for a litre of milk. Studies supported the testimonies of farmers who stated categorically that the amount earned through dairying just did not cover their input costs of a litre of milk: be it feed, water, labour, fodder or health care! Studies revealed how the milk to feed-price ratio was just not favourable.[8]

The previous time such a domestic crash in milk prices had occurred was in 1999-2000, when India reduced its SMP import duties to zero, resulting in massive imports of subsidized SMP from EU into India, depressing local milk procurement prices. The reason this happened was that dairy processors found it easier to buy cheaper SMP and recombine this into liquid milk, thereby being in a position to reduce the price of milk paid to farmers. Subsequently due to protests by dairy cooperatives and farmers across India, the government increased its import duties on SMP and butter fat, to stem the massive inflows.

However in 2015, an analysis of SMP import data revealed absolutely no significant imports of SMP into India since September 2014. There were also no reductions in import duties on SMP, which stood at 68.75 percent, and butter fat at 48 percent.

On the other hand what revealed itself was a massive slump of SMP exports from India to the global markets from mid-2014 onwards. Whilst in 2013-2014, India exported nearly 1.3 lakh tonnes of SMP powder, in 2014-2015, India barely exported 30,000 tonnes. This could be traced to the fact that up to mid-2014, global

7 The Food Sovereignty Alliance was alerted to this crises in early January 2015, by its members who are small dairy farmer collectives. The alliance, decided to enquire into the crises to understand its roots, from which we hoped to strategise a response. A very detailed investigation and analysis of the crises can be accessed in our publication of 2017, titled 'The Milk Crisis in India: The story behind the numbers.

8 Global Dairy Crisis: Reality or Myth? Chandan Kumar Raiet. al. https://www.researchgate.net/publication/327249129

SMP prices were higher than Indian SMP prices, and as long as this was the case, Indian SMP was picked up in the global market as the cheaper product. However various factors contributed to a slump in global SMP prices, where soon this was much lower than Indian SMP prices.[9] Indian SMP was not cost effective in the global market, as buyers preferred the cheaper SMP in the market; which was in this case now from EU, Australia, USA and so on.

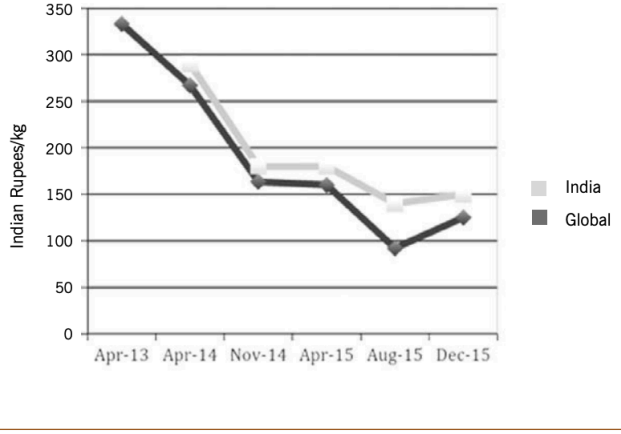

Figure 5. Skimmed milk powder prices, globally and in India, 2013-2015

Source: Global data from Global Dairy Trade and Indian data from Kulkarni, 2014 and Sally, 2015.

Since 2005-06 onwards, India has been gradually entering the export market with its products such as SMP, which it has primarily exported to neighbouring countries such as Pakistan, Bangladesh, Nepal, Afghanistan and so on. The slump in SMP exports triggered by the global slump in SMP prices resulted in a huge pile up of SMP stocks in India. Dairies, both private and cooperative, announced their intention to dispose their SMP stockpiles domestically, within the country. This triggered at the consumer end a bonanza of 'cheaply priced packaged milk', but also resulted in the massive decline in procurement prices paid by dairy processors to farmers, as dairy processors from cooperatives such as Amul and Nandini and private players such as Hatsun and Parag, started to dispose their cheap recombined milk in different parts of the country. This was a replay of the 1999-2000 situation, except this time it was 'national SMP' being dumped, having the identical depressing effect on the producers.[10]

Whilst aggressive capturing of domestic markets was a strategy used, some states like Karnataka also introduced SMP as part of mid-day meals. Despite this, as of March 2018, at an all-India level there was a stockpile of 3 lakh tonnes of SMP, with Amul alone holding 1.10 lakh tonnes of SMP.[11] And so, the next step by dairy processors such as Amul, was to lobby with the state and central government for export subsidies. In June 2018, Gujarat State announced a Rs. 300 crore export subsidy to Amul for SMP export,[12] and by October 2018 the Central Government announced an increase in export subsidy for milk and milk products from 10 percent to 20 percent.[13] Maharashtra Government followed suit. By March 2019, Crisil India announced that domestic SMP

9 See Food Sovereignty Alliance, 2017 The Milk crises in India: The Story behind the numbers. pg 41-42 for a detailed discussion.

10 See Food Sovereignty Alliance, 2017 The Milk crises in India: The Story behind the numbers. pg 41-42 for a detailed discussion.

11 Twin tailwinds to enhance profitability of dairies next fiscal. 27 March 2019. Crisil.https://www.crisil.com/en/home/newsroom/press-releases/2019/03/twin-tailwinds-to-enhance-profitability-of-dairies-next-fiscal.html

12 Gujarat to offer Rs 300-cr subsidy on milk powder exports. 27 June 2018. Business Standard.https://www.business-standard.com/article/pti-stories/gujarat-to-offer-rs-300-cr-subsidy-on-milk-powder-exports-118062701180_1.html

13 Govt to increase duty incentives for exports of milk products. 21 September 2018. Times of India. https://timesofindia.indiatimes.com/business/india-business/govt-to-increase-duty-incentives-for-exports-of-milk-products/articleshow/65899679.cms

stocks had begun to reduce due to an increase in exports as a result of domestic export subsidies and an increase in global SMP prices after a 4 yearperiod. The rise in global SMP prices made Indian SMP affordable in the global market, and thereby boosted exports once again.[14] Media reports seem to indicate an upbeat mood amongst dairies who foreseen increase in SMP prices coupled with shrinking milk supplies due to a drought situation, as providing a boost to their business.

THE RISE IN GLOBAL SMP PRICES MADE INDIAN SMP AFFORDABLE IN THE GLOBAL MARKET, AND THEREBY BOOSTED EXPORTS ONCE AGAIN.

What is important to note however is that global milk prices are as volatile as oil. Historical prices indicate that every 4-5 years there have been slumps and peaks.[15] The question is: who is affected and how by such slumps and peaks in prices? The answer is that with each slump, it's the small farmers and producers who are maximally impacted. Once again, there is clear evidence of this globally.[16] With each slump, a huge number of small producers, unable to cope with the falling procurement prices and rising costs of production, are forced to sell their animals and exit dairying as a source of additional livelihood. When they desire to repurchase animals, it becomes too costly for them. The bigger enterprises do not get impacted; they end up becoming bigger, expanding their production base, and consolidating their positions. Similar is the case at the marketing end, where the big players end up dominating the market, and expanding their base of marketing, pushing out the smaller players. Gradually the markets start getting monopolized by fewer and fewer large players—both at production and marketing.[17]

The most recent slump, which began some five years ago, has now eased. But thousands of small farmers have packed up during the course of these past five years, and big players have expanded during the same period. Surplus SMP has been exhausted, and excess supplies have dwindled or dried up—which basically means several small farmers left production. With each such cycle, the structural changes become more pronounced.

Official government data continues to present the rosy picture of how small and marginal farmers anchor milk production in the country. However the United States Department of Agriculture,[18] Yes

14 Milk set to get costlier; Rs 1-2 per litre hike on anvil as production slows down. 28 March 2019. Financial Express. https://www.financialexpress.com/market/commodities/milk-set-to-get-costlier-rs-1-2-per-litre-hike-on-anvil-as-production-slows-down/1529325/

15 Milk Powder Prices Overview. https://www.clal.it/en/?section=grafici_polveri

16 Mcbride, William D and James Macdonald (2007): "Low Costs Drive Production to Large Dairy Farms," Research Gate, https://www.research- gate.net/publication/228818141_Low_costs_drive_production_to_large_dairy_farms.

17 Clay, N., Garnett, T. &Lorimer, J. Ambio (2019). https://doi.org/10.1007/s13280-019-01177-y

18 Landes, Maurice, Jerry Cessna, Lindsay Kuberka and Keithly Jones (2017): "India's Dairy Sector: Structure, Performance, and Prospects," USDA, March.

Bank,[19] and Rabobank,[20] all concur that a gradual structural shift in milk production from small and marginal farmers to medium and large farmers is underway. According to Yes Bank, out of 76 million farms involved in milk production in India, nearly 40 percent of total milk production occurs through medium and large farms (some large farms even have more than 1,000 animals), and only 60 percent of production continues to be contributed by small and marginal farmers (owning one to two animals). Up until the 1990's, nearly 80-90 percent of production was by small and marginal farmers. Rabobank projects how farmer-owned dairy farms with 50–300 animals will become key to milk supply in the coming years, with a further decline in the share of milk procured from small and marginal farmers. Even in Amul, 5 percent-10 percent of farmer members are commercial large-scale dairy farmers, with projections indicating that many more are heading in that direction.[21]

In short, the dairy boom in demand of milk and milk products, is occurring through the marginalizing of the small and marginal farmers and landless (0-5 acres). They are being gradually deprived of their means of production, with the production base and consequent resources of land, water, and feed, shifting to the medium, medium-large and large farmers.

At the processing, distribution and marketing end, there are mergers, acquisitions, and joint ventures emerging between domestic and international players. So whilst a handful of cooperatives continue, they actually function as would any other private player, and infact today a 'cooperative' brand like Amul, is the leading dairy player in India growing at a very fast rate, and dominating the dairy scene nationally. None of these big players suffered a dent on their profits during these past 5 years, and their strategy was simply to pass on the losses to the producers—if not 'their members', then others outside of 'their membership fold'. Domestic-International tie-ups like Le Groupe Lactalis buying up Thirumala Milk Products and now Prabhat Dairy,[22] the joint venture between US Schreiber Foods and Dynamix Dairy[23], Danone's re-entry into India with Epigamia[24], and the recent joint venture between New Zealand's Fonterra and Future Food[25] are just a taste of more to come.[26]

Such acquisitions, mergers and joint ventures, also dominating global dairying, seem to be the in-built logic driving capitalist commodity, and markets. Furthermore, merely being a 'cooperative of farmers', does not inherently imply you are a formation which stands on the side of the small producer. This is evidenced by the fact that five of the 20 top dairy players in the world are cooperatives—but these are cooperatives of the

19 Hemme, Torsten, AmitSaha and PrashantTripathi (2015): "Dairy Farming in India: A Global Com- parison," IFCN Dairy Research Network, Ger- many Food and Agribusiness Strategic Advisory and Research Group (FASAR), YES BANK.

20 Rabobank (2016): "The Prospects for Medium- scale Dairy Farming in India," April, https:// research.rabobank.com/far/en/sectors/dairy/ india-medium-scale-dairy-farming.html.

21 Das, Sohini (2015): "Amul's Not So Marginal Farmers," Business Standard, 23 October, https://www. business-standard.com/article/companies/am- ul-s-not-so-marginal-farmers-115102300023_1. html, accessed on 4 August 2018.

22 Lactalis to buy Prabhat Dairy's milk business in third India acquisition. 27 January 2019. VCCircle. https://www.vccircle.com/lactalis-to-buy-prabhat-dairy-s-milk-business-in-third-india-acquisition/

23 See http://www.schreiberdynamixdairy.com

24 Danone back in India with Epigamia investment. 16 January 2019. Times of India. https://timesofindia.indiatimes.com/business/india-business/danone-back-in-india-with-epigamia-investment/articleshow/67549442.cms

25 Fonterra tries again in India, launches 'Dreamery' yoghurt and milks. 27 June 2019. Stuff.com. https://www.stuff.co.nz/business/farming/113778177/fonterra-launches-product-line-in-joint-venture-with-indian-consumer-giant-future-group

26 French dairy group Lactalis eyes buys in North. 14 March 2019. Hindu Business Line. https://www.thehindubusinessline.com/economy/agri-business/french-dairy-group-lactalis-eyes-buys-in-north/article27129363.ece

big players and large farmers.[27] India's dairy growth story is no different: our cooperatives too are rapidly becoming cooperatives of the middle to middle-large farmers. To 'count' in this commodity market, you have to become bigger and bigger, and swallow all other small fish. This is the driving force behind India's dairy boom story, where monopolizing markets and producer bases becomes the inherent in-built driver to sustain profits at all costs.

Sixty years ago the dairy business in the global North was similar to what we continue to see in parts of India today—diversity and multiplicity at all steps of the chain from production to consumption, and a predominance of small and local producers. In the global North, this has completely been replaced by a handful of large players dominating the entire value chain where producers and consumers maybe in completely different parts of the globe.[28] Diversity of production and marketing outlets are replaced by supposed diversity of brands and packaged products.

All of this has not just happened inevitably like some Darwinian biological evolutionary phenomena. It has been driven with intent and purpose by political decisions taken by those who have governed us. In India, we can trace it back to the 1960s-70s, when policies began to preference the breeding and rearing of dairy animals over multi-purpose draught-dairy with beef as a by-product. Sidelining animal traction became core to farming with the coming of green-revolution technologies, deepening economic reforms. Simultaneously, many small marginal and landless producers who depended on grazing their animals on common property resources began to suffer as their access to common grazing lands was threatened with policies that favoured the privatization of common grazing resources. In the erstwhile State of Andhra Pradesh for instance, permanent pastures and grazing lands declined from 1.17 million hectares to 0.56million hectares by the 2000s—a massive 78 percent decline. The first sidelining of the 'terrible middleman', began with the institutionalisation of dairy cooperatives in the 1970s via a program popularly termed as 'Operation Flood', referring to a program to create a flood of milk. This was financed by the World Bank and the Government of India. Across India, the three tier cooperative system was created, with primary village cooperatives at the base, which aggregated into district dairy unions, which then aggregated into state dairy federations. At the apex national level was the National Dairy Development Board (NDDB) which aimed to enable common agreements amongst the different state federations. This system of organized cooperative dairying continued in this way up to the 1990s. There was strong criticism as the process of

27 Rabobank 2019. Global Dairy Top 20.And Rabobank 2018. Global Dairy Top 20
28 Clay, N., Garnett, T. &Lorimer, J. Ambio (2019). https://doi.org/10.1007/s13280-019-01177-y

Operation Flood deprived milk to producers. Milk producers found it too expensive to consume their own milk, once milk became a commodity. By the mid-1990s, the organized dairy sector controlled 25 percent of the marketing avenues of milk, and was dominated by cooperatives.

Once India committed itself to the path of economic restructuring and liberalized its economy towards complete capitalist growth in the 1990s, dairy was identified as a strong growth engine, and the sector was liberalized. Laws that prevented the entry of private dairies into procurement and markets were amended, new laws to facilitate expansion of private players were legislated, and profit over welfare was now the new mantra. There were severe cutbacks in public financing of the cooperative structures. The amended laws coupled with shrinking public finances resulted in the collapse of the three tier cooperative structures, and it was left to each State to decide the route it would take. Cooperatives were essentially informed that they would have to profit by whatever means, or perish. They essentially had to function as 'private players' who would need to compete with private dairy processors, in what they were told was creating a 'level playing field', where producers would benefit from a wide choice of marketing avenues. From the 2000s onwards exports, expansion, mergers, acquisitions, and now the most recent export subsidies have been pro-actively encouraged. Additionally, the 100 percent FDI in the food processing sector has facilitated the entry of international players into domestic dairy processing. At the producers end, policies and public financing have actually enabled the emergence of the large specialized dairy farmers, euphemistically termed entrepreneurs. States have also pro-actively financed the formation of farmer producer organisations, which can then be vertically integrated into dairy aggregators and processers. Since 2014, the violent saffronisation of animal production is seen to be meeting the interests of big business and global climate policies on livestock.

In all of this, as we have seen, the level playing field which was ostensibly going to give power to small producers to negotiate their markets, and eliminate the dreadful 'exploiter middleman', has actually resulted in the gradual elimination of the small farmers and their 'informal' peoples markets or local markets, which has been replaced by the 'organised' dairy sector. Organised dairies have expanded their market base from 25 percent in the early 1990s to controlling 50 percent of the marketable surplus of milk today, pro-actively facilitated

by 25 years of market liberalization policies.[29] It is clearly the intent of the organized sector to control the full portfolio, for which the informal will need to be wiped out! And along with it, the small producer too.

BEEF: THE ESSENTIAL BY-PRODUCT OF DAIRYING

Once the dairy animal of a producer, regardless of the size of their operation, has crossed its 4th or 5th lactation, or has become unproductive, or the producer can no longer afford to rear the animal for reasons ranging from poor returns in the market, to drought, disease or shortage of labour, the animal will be sold. It is rare for another farmer to procure such an animal, and under 'normal' situations, this animal will be bought by a trader and end up for slaughter in states where slaughter is legal. Or the animal will be transported out from states where slaughter is illegal to states where slaughter is legal. A resale value of nearly 1/3rd of the original cost price of the animal exists because of the post-slaughter values of beef, skin and offal. The NDDB itself has estimated that nearly 40 percent of income from a dairying enterprise is from the resale value of unproductive and male animals.[30]

However, these are not 'normal' times. These are times of an extremely virulent fascist majority, with religious persuasion informing the politics of those in power. This dominant politics has emboldened and nurtured vigilantism amongst citizens in the name of protecting the cow; who, with complete impunity, threaten and physically eliminate citizens, the majority of whom are Muslims and Dalits, involved in the trade, transportation, and slaughter of animals.

The reality is that India is overwhelmingly a country of meat eaters, with 80-98 percent meat consumption in southern and eastern parts of India, and the north and the western

THE REALITY IS THAT INDIA IS OVERWHELMINGLY A COUNTRY OF MEAT EATERS, WITH 80-98% MEAT CONSUMPTION IN SOUTHERN AND EASTERN PARTS OF INDIA, AND THE NORTH AND THE WESTERN PARTS OF COUNTRY BEING PREDOMINANTLY VEGETARIAN.

29 More than 50 percent of India's milk business handled by the unorganised sector, says Economic Survey. 04 July 2019. Economic Times. https://economictimes.indiatimes.com/news/economy/agriculture/more-than-50-of-indias-milk-business-handled-by-the-unorganised-sector-says-economic-survey/articleshow/70070774.cms

30 See Dairy Knowledge Portal. http://www.dairyknowledge.in/content/10-crossbred-cow-farm

parts of country being predominantly vegetarian.[31] Of the meat consumed in the country, 36 percent comes from poultry, 28 percent from cattle and buffaloes (6 percent and 22 percent), 27 percent from sheep and goat (8 percent and 19 percent) and 9 percent from pig.[32]

Returning to the large bovines, the income earned from selling the unproductive dairy animal is then reinvested in purchasing a younger dairy animal, thus sustaining the cycle of production. An animal, once it reaches the market for slaughter is either slaughtered for domestic consumption in municipal abattoirs, or reaches private slaughterhouses designed completely to cater to export of meat.[33]

State	Bovine Slaughter Laws
Kerala, WB, Meghalaya, Mizoram, Nagaland, Arunachal Pradesh, Sikkim, Assam- (8 states) Manipur:1939 decree- prosecution for cow slaughter	• No ban on slaughter of cows / or fit- for slaughter certificate • No ban on calves and male cattle • No bans on buffalo slaughter
AP, Telangana, Karnataka, Orissa, TN (since 1976),UP, Goa, Pondicherry, MP, Bihar (10 states)	• Ban on cow and calf below 9 months slaughter • No ban on other cattle with fit for slaughter certificate, which are deemed not productive • No ban on buffalo slaughter/ deemed non-productive
J&K, Uttarakhand, Himachal Pradesh, Haryana, Punjab, Chhattisgarh, Jharkhand, Maharashtra (since 2015), Gujarat, Rajasthan, Delhi, Chandigarh, (12 states)	• Total ban on slaughter of cows • No buffalo slaughter ban in Gujarat, Maharashtra, Haryana, Punjab, Rajasthan, Delhi

Source: Department of Animal Husbandry and Dairying[42]

The meat here is exported to the Middle East, and South East Asia. Slaughter falls under the purview of the State List, as explained in the table below: Source: Department of Animal Husbandry and Dairying[34]

31 Vegetarian India A Myth? Survey Shows Over 70 percent Indians Eat Non-Veg, Telangana Tops List. 14 June 2016. Huffington Post. https://www.huffingtonpost.in/2016/06/14/how-india-eats_n_10434374.html

32 Government of India, Department of Animal Husbandry and Dairying.National Action Plan on Goats. 2017

33 Khan, Mohsin,AbuzarNomani and Mohd Salman. 2016. Impact of Beef Ban on Economy and Meat Processing Industry of India: A Complete Value Chain Analysis. Management Studies and Economic Systems (MSES), 2 (4), 325-334, Spring 2016

34 Gist of State Legislations on Cow Slaughter. Department of Animal Husbandry and Dairying. http://dahd.nic.in/hi/related-links/annex-ii-8-gist-state-legislations-cow-slaughter

There is a direct relationship between slaughter bans and stray cattle, where stray cattle populations are highest in states with slaughter bans, and lowest in states with no bans.[35] This is logical, as farmers turn out their cattle onto the streets to fend for themselves since there are no avenues for sale or transportation. This has increased massively in the past few years, with the amendment of slaughter laws in different states, coupled with the vigilantism, making it near impossible to engage in inter-state transportation of cattle. In 2017, the central government attempted to stop all sale of animals intended for slaughter within the space of local animal markets via the Prevention of Cruelty to Animals Act. This severely disrupted even hitherto unaffected buffalo trade, but was subsequently withdrawn under legal challenge. All of this directly impacts the over 22 million workers involved in India's beef trade, a majority of whom are Dalits and Muslims.[36] Beef and leather exports continue to generate large revenues for the country and have also been negative impacted. Ironically 'Hindu' industrialists, who are never the ones whose lives are under threat, own many of the beef export companies.[37] Important to note here however is that India's beef markets (except operations of the export slaughter houses), continue to predominantly be operated by the 'informal' and unorganized citizens of this country, and attempts to disrupt this trade may also be a sinister mechanism for the wealth in this trade to be captured by the organized industry.

POULTRY AND OTHER MEAT SECTORS

The poultry sector on the other hand is primarily controlled by the organized industry. Contract farming began in India in 1995 and during the last 10 years several broiler enterprises vertically integrated and the Integrator Model today comprises 60-70 percent of all poultry operations.[38] The integrators own various units along the chain of production, including hatcheries, feed mills, slaughter facilities, sales outlets, veterinary, medicines, and brands of processed chicken. The contract farming models exist between one integrator and multiple small farmers, often in the ratio of 1:20,000 contracted farmers. Currently, 36.7 percent of

35 Ramdas, Sagari. 2017. https://thewire.in/politics/modi-government-cow-slaughter-stray-cattle

36 Modi Government's Stance on Slaughter Proves It Doesn't Really Care About Cows. 26 September 2017. The Wire.
https://thewire.in/politics/modi-government-cow-slaughter-stray-cattle

37 Who is making millions in India out of beef export? Muslims? Think Again. 10 April 2017. Sabrang India.
https://sabrangindia.in/article/who-making-millions-india-out-beef-export-muslims-think-again

38 Sashidhar and Suvedi, 2015. MEAS Evaluation Report. Feed the Future. IGNOU University, India. Michigan University, USA.

broiler production in India is under contract farming, with 78 percent concentrated in Southern India.[39] The balance are non-contract broiler farmers. The top integrators include Venkateshwara Hatcheries, Suguna Poultry, Charoen Pokphand-India, Pioneer Poultry, Godrej Tyson and so on. Venkateshwara Hatcheries controls 60 percent of the broiler business and 80 percent of the layer market in India.

Of deep concern, is the fact that genetics of this industry is globally monopolized by just three large multi-national corporations (MNC).The genetics of every so-called 'Indian' poultry can be traced back to one of these three MNCs: Erich Wesjohann (Germany), Grimaud (France), and Cobb-Vantress (USA) in alliance with Hendrix Genetics (Netherlands). These three MNCs control the global broiler genetics. The global layer breeding is controlled by 2 companies: Hendrix Genetics controls 50 percent of the world's egg production and Erich Wesjohann Group controlls the other 50 percent. Suguna Poultry and CP-India, both derive their layer and broiler grandparent lines from Eric Wesjohann. Similarly, Venkateshwara Hatcheries derive their broiler stock from Cobb-Vantress, and original layer stock from Hendrix Genetics. Godrej Tyson Foods also derive their stock from Cobb Vantress.[40]

The entire system of narrow genetics because of which producers across vastly different agro-ecological situations from Brazil to China to India are expected to rear identical genetic birds leaves the producer at the bottom end of the chain most vulnerable, both climatically and from the market. Studies reveal that the entire contracts are weighed in favour of the integrators.[41] Furthermore, the downstream effects of massive expansion of industrial poultry production has resulted in massive expansion of commercial maize monoculture cultivation, entirely utilized as poultry/ animal feed—which replace food crops.

The final unconquered frontier of the unorganized are the meat markets of sheep and goat. About 66 million sheep and 135 million goats are reared by 37.5 million families, with 80 percent of it being in six states of the country. In 2015-16, India produced 482.53 thousand tonnes of sheep meat and 942.91 thousand tonnes of goat meat. The consumption demand in urban areas has been growing at the rate of 2.5 percent per capita per annum. Of the total production, 6.4 percent is exported, with 80 percent of the exports going to West Asia (Saudi Arabia, UAE, and

39 ibid 38

40 Susanne Gura (2007): Livestock Genetics Companies. Concentration and proprietary strategies of an emerging power in the global food economy. League for Pastoral Peoples and Endogenous Livestock Development, Ober-Ramstadt, Germany

41 Ibid 38

Egypt). Projections for 2020 indicate that meat demand will rise to 12.72 million tonnes from the current 3.8 million tonnes. To meet this demand, India will need 248 million goats.[42] It is this Rs. 37, 717 crore (@ Rs. 400 per kg) domestic market (2015-2016) and the Rs.837.7 crore export market that is being eyed by the organized industry, which see opportunities all along the value chain: from production, breeding, financing bank loans for large small ruminant farms, logistics, procurement (traders contracted into large chains, for instance, Metro Cash & Carry in Karnataka, Andhra Pradesh and other parts of the country), processing, cold storage and retail.[43] Already the largest pressure on the existing small ruminant producers who own the means of production or the animal is the massive and rapidly shrinking public grazing lands and the amendment of land laws which has facilitated the consolidation of land in the hands of the wealthy.[44] Already we see the emergence of so-called 'entrepreneur or progressive' farmers, many of whom are wealthy IT professionals and business people investing their money into land, and then goat farms.[45] Current policies too are pro-actively facilitating the capture of the means of production by the wealthy and the organized, primarily via interventions in land, capital and regulations.[46]

CONCLUSION

This rapid growth of meat and milk markets and the production response in India—manifesting in expansion and intensification of dairy and now meat production, processing and marketing, accompanied by a vivid structural shift in production ownership from the small to the big producers—is driven by the unhealthy over-consumption demand or greed of the wealthy rich and middle classes of India. The all-India per capita milk availability of 375 grams per day in 2017-18 far exceeds the recommendations of 285 grams per day (Islam et al 2016). However this figure hides the reality of skewed consumption of milk and milk products. According to NSSO data on household consumption of various goods and services carried out in 2011-12, persons in the richest 5 percent of India's population consume 14.5 times more meat, eggs and chicken, and 23.8 times more milk than a person in the bottom most 5 percent of the population.[47] It is evident

42 Government of India, Department of Animal Husbandry and Dairying. 2017. National Action Plan for Sheep; National Action Plan for Goats.

43 Food for thought. Volume 24 - Issue 13: Jun. 30-Jul. 13, 2007. Frontline.https://frontline.thehindu.com/static/html/fl2413/stories/20070713004102200.htm

44 Ramdas, Sagari R. 2014. 'Adivasis, Pastoralists and Forest Governance: Challenges and Opportunities' in Lele, S. and Menon, A (2014) Democratizing Forest Governance in India. Oxford University Press. New Delhi.

45 Kumar, Shalender.2007. Commercial Goat Farming in India: An Emerging Agri-Business Opportunity. Agricultural Economics Research Review. Volume 20.

46 Government of India, 2017. National Action Plan for Sheep; National Action Plan for Goats. Department of Animal Husbandry and Fisheries.

47 Government of India, 2014. National Sample Survey Report No 558. Household Consumption of Various Goods and Services in India 2011-2012.NSS 69thRound.National Sample

that the industrialising and privatizing of production through economies of scale has simply failed to address the protein nutritional requirements of the poor, the questions of equity and aspects of ecological integrity.

The increase in domestic consumption and exports is driving intensification of production which is also pushing rearers to replace resilient multipurpose breeds with only-meat purpose, fast-growing breeds. This is pushing them to adopt practices such as concentrate feeding for instance, to ensure fast turnover. Once again the unsustainable demand of a greedy wealthy class in India and excessive export demands is pushing producers towards unsustainable production practices. The industrialisation of production, facilitatedby policies, is now entering this final domain—which was oncea highly sustainable system where ecologically sustainable production and consumption was the norm.

The situation is grim and promises to only get worse, unless small and marginal producers begin to organize to create a countervailing force towards re-localising and decentralizing the processes of production, consumption and distribution, and thereby surgically bypass the corporate hegemony. Policies in India, rather than nurturing the small and marginal producers, are actively partnering and facilitating corporate hegemony, thereby driving the system into deeper and deeper social, economic, ecological, politicaland nutritional chaos.

Survey Office.Ministry of Statistics and Programme Implementation.

THE VALUE OF LAND

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The modern commodification of land in India can be traced to the introduction of property titles and land markets by the British East India Company, formalized through the Permanent Settlement of Bengal 1793. Following the precedent of the 'gentlemen farmers' in the English countryside, the Settlement fixed land titles and revenue for Zamindars in perpetuity. The underlying assumption was that security of tenure and fixed revenue would encourage landlords to make 'improvements' on the land, augmenting greater commercial production for sale in markets, and assured revenues for the colonial state. The same ideological orientation towards efficiency and greater revenue through secure titles underpinned subsequent more egalitarian land settlements such as the Ryotwari which favoured the actual tillers of land over any landlords. These market-led agrarian reforms inaugurated capitalist agriculture in the subcontinent in the late eighteenth century.[1]

The doctrine of eminent domain was similarly introduced by the colonial state for 'public purpose,' or to enable infrastructure development and facilitate the circuits of the capitalist markets in India in the nineteenth century. The Bengal Regulation I of 1824, Bengal Canals Act 1864, Bengal Irrigation Act 1876,Bombay Building Act 1839 XXVIII, Bombay Irrigation Act 1879, and other similar laws and regulations were used for land acquisition for developmental projects led by the colonial state invested in capitalist markets and greater revenues from the colony. These legislations ultimately culminated in the Land Acquisition Act 1894.

The right to property and the doctrine of eminent domain have often been in tension with each other in the early post-independence period. While land revenue was no longer levied by the post-independence Indian state, the underlying principle of efficient agrarian production for the (capitalist) market also animated redistributive land reforms. The salience of private property in the immediate period following independence was retained through Article 19(1)(f) of the Indian Constitution that guaranteed the right to property as a fundamental right. The right to property was ultimately removed from the list of fundamental rights to facilitate redistributive land reforms, even as the latter lost out to political expediency caused by political resistance of the big landlords towards the 1970s.[2] With the overall

1 For more detailed discussion of colonial land policy, see Guha (1981), also Gidwani (2008).

2 As the Supreme Court struck down redistributive land reforms in favour of landlords based on the right to property, the Parliament sought to protect redistributive land reform laws from judicial challenge by bringing them under the IXth Schedule of the Constitution (although blanket protection

failure of land reforms, the lack of protection for the right to property resulted instead in facilitating land acquisition for state-led development projects for infrastructure and industrial development. The doctrine of eminent domain was elevated to a constitutional doctrine that empowered the state to acquire land from adivasi and small farmers who did not pose a significant political threat to the ruling establishment. By one estimate, close to 60,000 people have been dispossessed of their land and resources by the state in the post-independence period under the land acquisition framework until the early 2000s (Fernandes 2008). Whether land reforms or acquisition, the colonial legacy of redistribution of land for capitalist development by the state facilitating private actors has never been a moot point.

WITH THE OVERALL FAILURE OF LAND REFORMS, THE LACK OF PROTECTION FOR THE RIGHT TO PROPERTY RESULTED INSTEAD IN FACILITATING LAND ACQUISITION FOR STATE-LED DEVELOPMENT PROJECTS FOR INFRASTRUCTURE AND INDUSTRIAL DEVELOPMENT.

With the intensification of capitalist development in the post-liberalization period, the politics of land redistribution, by the state or by so-called voluntary market forces, has become more contentious. Infrastructure projects developed by private developers since especially the mid-2000s, that include 'lucrative' real estate development projects, have raised the price of land and property, bringing the commodification of land in capitalist markets full circle from the eighteenth century. The state continues to play a decisive role in directing investment into infrastructure development in urban areas, investment corridors, or special economic zones at the behest of private capital. In other words, despite the avowals of a reduced role of the state in deference to market forces that defines economic liberalization historically, state dirigisme aids market imperatives in the post-liberalization period; a contradiction as old as capitalism itself.

The political economy of land however is no longer tethered only to agrarian produce, but is increasingly determined by 'the rentier economy' of property and real estate prices. The chain of actors in this rentier economy include not just international and national developers and financiers and the national state, but regional and local state actors, financiers, developers, brokers, and especially big land owners able to enjoy rentier

from judicial challenge was later considered untenable, especially after the Keshavanand Bharti vs the State of Kerala judgment in 1973). The insertion of Articles 31A-C through the First Amendment and the 25th Amendment to the Constitution saved certain laws related to acquisition from challenge under Articles 14 (equality before law) and 19 (fundamental rights). The 44th Constitutional Amendment Act removed the right to property from the list of fundamental rights in 1978, and inserted Article 300A to ensure that a person could not to be deprived of property save by authority of law (see Sampat Forthcoming, 2013; Wahi et.al. 2017).

gains from land transfers. Small and marginal farmers typically benefit little from infrastructure investments, additionally losing a precious source of agrarian livelihood to projects. They are often coercively dispossessed through the state's power of eminent domain exercised through land acquisition laws, or sell 'voluntarily' for distress needs at lower rates to local land brokers or the state.

Resistance to dispossession has grown, and the state has had to proactively factor in compensation, rehabilitation, and resettlement of the dispossessed through the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act 2013. While bringing in rehabilitation and resettlement within the purview of a land acquisition law for the first time, the 2013 law however expands the scope of eminent domain to infrastructure projects developed by private actors. It enables forcible acquisition of land for public private partnerships and private infrastructure projects for which 80 percent land has been acquired by the developer. The insertion of social impact assessments and a consent clause for acquisitions involving the private sector has left private developers disgruntled, in addition to higher compensation rates to the tune of twice and four times market rates for land in urban and rural areas respectively. While all of this has made acquisition for private actors 'difficult,' state-led projects are exempt from social impact and consent clauses. However, the intense protests against forcible land acquisition across the country (the most recent against the Mumbai- Ahmedabad bullet train project spanning 192 villages in Gujarat and 120 villages in Maharashtra), has compelled state governments to shift gears to land consolidation through other mechanisms such as land pooling. Ostensibly on voluntary bases, land pooling typically seeks to incorporate landowners into the terms of a project and gaining their acquiescence by allotting to them a share of the developed land. This has been attempted in urban development projects such as Dholera smart city in Gujarat or Amaravati capital region in Andhra Pradesh. Rentier gains are thus incorporated into the compensation packages for land losers. Large landowners with the social and economic capital to gain from developed land markets stand a better chance at profiting from rentiering, compared to non- or semi-literate small, marginal and landless peasants.[3] At the same time, land pooling is typically part of, or modelled on town and country planning laws with little or no procedure to establish the voluntary nature of land consolidation. In Dholera, for instance, local residents have refused to part with land since the inception of the project, and continually thwart attempts at land pooling from state actors, along with challenging the legality of the pooling process in the Gujarat High Court. The latter has in fact issued an interim order for maintaining status quo on land consolidation proceedings until the legal matter is resolved (Sampat 2018).

With staunch resistance against land acquisition and land pooling across multiple infrastructure project sites in the country; capitalist investments face an impasse over land in India. While this may be seen as a tenuous victory of social movements that are forcing a rethink on development and economic growth strategies adopted by the national and state governments, there is however a deeper impasse at stake. This deeper, historical impasse over land and economic development

3 See also Levien (2018) for a discussion of differentiated rentier classes in the Mahindra World City Jaipur area.

along capitalist lines circles back to the initiation of modern land markets in India that legitimized private property in perpetuity to facilitate economic growth. In the time of climate change, with growing food and employment as well as overall economic insecurity, it may well be time to confront this historical impasse with non-capitalist reorganization(s). An apposite response may reconfigure private property and re-envision collective egalitarian land rights, attentive to social and economic, caste, community and gender inequalities.

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CORPORATE COMPLICITY: ISRAELI INTERVENTIONS IN INDIAN AGRICULTURE

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Over the last decade, Israel's presence in India's agriculture sector has increased exponentially. Especially in south India 'Israeli technology' has been bandied about as the panacea[1] for the entrenched agrarian crisis even though neither its salient features nor its benefits are clearly evidenced. Yet Israeli agencies and agribusiness corporations are expanding in India through projects and government tie-ups, and the most important purpose they serve is to help greenwash[2] Israel's colonisation of Palestinian lands and its violations of Palestinian human rights.

In this paper, we will look at both Israel's colonisation of Palestinian lands, and the ways in which Israeli corporations have expanded in the Indian agriculture sector. The interventions in Indian agriculture play out by creating the myth of Israel 'seeing' India from its agrarian crisis—a notion both patently wrong and racist. Crucially, such myths serves Israel's PR machinery by providing a cover up for its war crimes, occupation, and apartheid against Palestinians—a veneer for the everyday injustices meted out to Palestinian farmers.

1 'Karnataka: Here's how this Indo-Israel collaboration is helping farmers in Kolar District', India Today, February 05, 2019 https://www.indiatoday.in/india/video/karnataka-here-s-how-this-indo-israel-collaboration-is-helping-farmers-in-kolar-district-1449075-2019-02-05

2 'Israeli Greenwashing', Canadians for Justice and Peace in the Middle East, August, 2018 https://www.cjpme.org/fs_210

DISMANTLING PALESTINIAN AGRICULTURE

Land is at the heart of Israel's seven decades long occupation and colonialism against the Palestinian people, and consequently agriculture is a recurrent theme and a constantly evolving paradigm of control, displacement, and violence. Israel was established by large scale ethnic cleansing of indigenous Palestinian Arabs; making 800,000 people refugees and destroying hundreds of villages and towns. One of the most ruthless lies still peddled by Israel is that it made 'the desert bloom'. Historically, Palestine was an agriculturally rich and diverse place.

"Palestinians have cultivated the land for centuries. Palestinian agriculture was sustainable and the "fertility of Palestine was unsurpassed". By 1930, all areas "which could be cultivated by Palestinians, were already farmed by them". The areas of Gaza, Jaffa, Hebron, Nablus, Galilee, and others were all "intensively cultivated" and became reputed for different crops such as watermelons, tobacco, wheat, citrus, grapes, olives, and cotton. Palestine was blooming long before the founding of Israel."

Israeli Greenwashing, Canadians for Justice and Peace in the Middle East, August 2018

The journey from kibbutzim (collective community based on agriculture) to illegal settlements represents the progressive colonization of Palestinian lands and destruction of its rich agriculture, carried out along with ethnic cleansing and occupation. The much hailed 'socialism' of the kibbutz system[3], since its inception, was part of the militant zionist movement and has eventually taken the form of agrobusiness corporations in many instances, as is the case[4] of Netafim—the Israeli agrobusiness company with large operations in India. Netafim[5] is among the corporations that provide services to illegal Israeli settlements in the occupied West Bank and directly profit[6] from Israel's settler colonialism.

Sixty per cent of land in the occupied West Bank is designated[7] as Area C, i.e. a military zone under direct control of Israel. This includes[8] over 60 percent of Palestinian agricultural land and resource rich parts. Ninety per cent of the water sources in West Bank, including the Jordan river, are controlled by Israel, thereby enforcing a water apartheid. Many Palestinian farmers have to buy water from Israel's water agency, Mekorot, to irrigate their fields, and their own wells and water storage systems are routinely destroyed by the Israeli military. The heavy restrictions on movement, checkpoints and barriers deny farmers the right to cultivate their own lands. Palestinian farmers are also met with violence by Israeli forces and fanatic settlers, who also often destroy olive trees and burn crops.

"Even where access is granted, farmers are often prevented from taking tractors, machinery and other tools onto their land. There are reports of Palestinian farmers being prevented from accessing their land to extinguish fires destroying their crops, including when Israeli settlers have set the fires deliberately. Checkpoints and entry restrictions prevent workers from accessing the farmland at which they work, prevent agricultural produce from reaching local markets, increase transport costs, and often cause produce to rot while stuck in transit."

Farming Injustice, Palestinian farming and civil society organisations, February 2013

The situation in Gaza is even worse, given Israel's illegal blockade and absolute restriction on movement of people and goods. Once an agriculturally rich region, 80 percent of the people in Gaza are now dependent on food aid[9], and agricultural production has been destroyed by not allowing essential goods to enter or the produce to leave. Gaza's fishermen can only access upto 20 nautical miles off the coast, where too they are attacked by Israeli navy which maintains the blockade. Along the northern and eastern periphery of Gaza, Israel has imposed a no-go "buffer zone". Between 30-40 percent of Gaza's farm lands which lie in this buffer zone are now largely abandoned. Those who still try to access their farms in these areas face huge risks including death and injury.

3 Seraj Assi, 'Why Kibbutzism Isn't Socialism', Jacobin, October 8, 2016 https://www.jacobinmag.com/2016/10/kibbutz-labor-zionism-bernie-sanders-ben-gurion

4 Hatzerim: https://www.hatzerim.org.il/cgi-webaxy/item?426

5 Netafim: https://www.netafim.com/en/Netafim-irrigation-company_about-us/#top

6 'Netafim', Who Profits: The Israeli Occupation Industry https://whoprofits.org/company/netafim/

7 Abdul Rahman, 'West Bank: Illegal Settlements and Separation Walls are the Occupiers' Logic of Peace', Newsclick.in, August 10, 2019 https://www.newsclick.in/Palestine-Israel-West-Bank-Settlements-Occupation-Separation-Walls

8 'Farming Injustice: International trade with Israeli agricultural companies and the destruction of Palestinian farming', Palestinian Farming and Civil Society Organisations, February, 2013 https://bdsmovement.net/files/2013/02/Farming-Injustice-Briefing-Feb2013-web.pdf

9 ibid

A recent report by Forensic Architecture[10], in collaboration with Gaza and Israel based organizations, has revealed that since 2014 Israel has been aerial spraying herbicides in the buffer zone. These crop-killing herbicides have not only destroyed the formerly arable land along the border fence, but carried by wind, they have also destroyed crops and agricultural land hundreds of metres into the rest of the besieged Palestinian territory. The first-hand video testimonies show that before each round of spraying, Israeli military confirms the westerly direction of the wind to ensure that the drift is towards Gaza. The report calls this herbicidal warfare and notes that "this practice weaponises herbicide spraying as a belligerent act, designed to 'enable optimal and continuous security operations'[11]".

INTERMEDIARIES LIKE SMALL TRADERS IN THE AGRICULTURAL SUPPLY CHAIN WILL QUICKLY BE ELIMINATED AS DIGITAL PLATFORMS TAKE OVER, PUTTING EVEN MORE LIVELIHOODS AT RISK.

GREENWASHING COLONISATION

While Israel destroys Palestinian agriculture and livelihood of farmers, practices apartheid and colonizes Palestinian lands through its agrobusiness, it sells itself and its agrobusiness industry in the global south as providing solutions for sustainable agriculture. Just like in the defense sector, India is a key ally of Israel in the agriculture sector. And just like with defense, the Indian government is harming its own farmers and their quest for sustainable agriculture in order to provide a huge market and the legitimacy that comes with it to Israel. Successive governments at the centre and in various states have promoted neoliberal, pro-market agriculture policies for two and a half decades, ever since Indian economy was reformed for liberalization, privatization and globalization. Even as these policies[12] have led to indebtedness, loss of livelihoods, and dispossession linked to farmer suicides (in the words [13] of P.Sainath, "predatory commercialisation of the countryside") the state has systematically withdrawn from the agriculture sector and opened up space for multinational agribusiness corporations. It is within this scheme that Israeli state agencies and agribusiness is being given ever-expanding space and legitimacy.

10 'Herbicidal Warfare in Gaza', Forensic Architecture, July 19, 2019 https://forensic-architecture.org/investigation/herbicidal-warfare-in-gaza

11 Michael Schaeffer Omer-Man, 'IDF admits spraying herbicides inside the Gaza Strip', +972 Magazine, August 23, 2019 https://972mag.com/idf-admits-spraying-herbicides-inside-the-gaza-strip/115290/

12 Vijoo Krishnan, 'A Quarter Century of Neo-Liberal Economic Policies: Unending Distress and Peasant Resistance: Neo-Liberal Economic Policies and Retreat of State From Agriculture', Newsclick.in, November 04, 201 https://www.newsclick.in/quarter-century-neo-liberal-economic-policies-unending-distress-and-peasant-resistance

13 'Agrarian Crisis is corporate hijack of Indian agriculture: Sainath', The Hindu, May 26, 2019 https://www.thehindu.com/news/national/karnataka/agrarian-crisis-is-corporate-hijack-of-indian-agriculture-sainath/article27250480.ece

As we will see in this section, Israel's growing influence in Indian agriculture is harmful not only as a tool to cover-up or 'greenwash' its near-obliteration of Palestinian agriculture, but also because it is exploitative, unsustainable, and exacerbates the ongoing agrarian crisis in India, hurting millions of farmers here.

By recanting the original lie of 'making the desert bloom', Israel claimed to provide solutions for irrigation in arid regions, mainly in southern India. Israeli agrobusiness' first major entry point was the Kuppam project in Chittoor district, Andhra Pradesh in the late 90s. The Andhra Government brought in Israeli companies, including the drip irrigation company Netafim, for a five-year project in Kuppam district. It was expected to showcase the 'Kuppam model' of efficiency and productiveness, developed within the framework of Israeli agro technology: drip irrigation, use of chemical inputs, contract, and market-oriented farming. It was implemented without involving established technical bodies of the state government. The project was mired in issues of corporate farming, land grab, unsustainability, lack of technology, ecological damage, all of which was exposed[14] in a study by Deccan Development Society. Yet, the so-called Israeli model continued getting promotion from state governments, benefiting from the rampant state support to neoliberal agribusiness.

Along these lines, Netafim has an ongoing project[15] in North Karnataka's Bagalkot district covering 24000 hectares, acquired from farmers. After five years, the project is supposed to be handed over to the government. There haven't been any independent studies of this project, even as there have been issues of indebtedness and futility surrounding Netafim's products in the region. Like Kuppam, this project too involves taking in land from farmers, implementing packages covering all aspects from sowing to harvesting, and is being hailed as the panacea for solving North Karnataka's farm crisis induced by lack of water.

Netafim is also involved in the Better Life Farming alliance[16], running in U.P. and Jharkhand. This is a long-term partnership of Bayer, Netafim, IFC (International Finance Corporation) and Swiss Re Corporate Solutions. The project claims to be involved in various aspects of farming from training to resources to access to market. The past record of the entities involved in the project raises serious suspicion about the control and access of inputs as well as the products. Bayer has recently acquired Monsanto, which has a long history of disputes and lawsuits; from inducing indebtedness[17] leading to farmer suicides, to biopiracy[18] through its anti-farmer patenting regime, to producing poisonous herbicides including Agent Orange[19] used by the United States in the Vietnam war. Bayer has not just acquired Monsanto's name, but also its decades of anti-people and anti-environment activities.[20]

14 Andhra Pradesh Coalition in Defence of Diversity, 'Contract farming: Burden on exchequer', Deccan Development Society, July 2002 http://indiatogether.org/agriculture/dds/contractfarming.htm

15 V Rishi Kumar, 'Karnataka gets Asia's largest drip irrigation project with Israeli tech', The Hindu BusinessLine, January 30, 2018 https://www.thehindubusinessline.com/economy/agri-business/karnataka-gets-asias-largest-drip-irrigation-project-with-israeli-tech/article22592938.ece

16 Better Life Farming Alliance: https://www.betterlifefarming.com/home

17 Vandana Shiva, 'The Seeds Of Suicide: How Monsanto Destroys Farming', Asian Age and Global Research, April 5, 2013 https://www.globalresearch.ca/the-seeds-of-suicide-how-monsanto-destroys-farming/5329947

18 Rosie Spinks, 'How India squared up to Monsanto's 'biopiracy'', Ecologist, October 12, 2011 https://theecologist.org/2011/oct/12/how-india-squared-monsantos-biopiracy

19 Samuel Osborne, 'Vietnam demands Monsanto pays compensation for Agent Orange victims', Independent, August 26, 2018 https://www.independent.co.uk/news/world/asia/vietnam-agent-orange-monsanto-victims-compensation-a8508271.html

20 'Bayer faces skyrocketing US lawsuits over glyphosate', Deutsche Welle, July 30, 2019 https://www.dw.com/en/bayer-faces-skyrocketing-us-lawsuits-over-glyphosate/a-49797934

Similarly, International Finance Corporation, which is a lending body for the World Bank, has repeated instances of financing land grab[21], and in February 2019 the US Supreme Court overturned its claim of legal immunity by virtue of it being an international body. In fact, the lawsuit[22] was filed by a fishermen community from Gujarat whose livelihoods and environment were impacted by the Tata Mundra coal-fired power plant financed by IFC.

Netafim and Israeli agriculture agencies receive significant endorsement from state agencies in India in the form of Memorandums of Understanding, government projects, and subsidy schemes. A key example of this are the Centres of Excellence. This partnership[23] between Horticulture ministries (state and central) and Israel's MASHAV is part of the Indo Israeli Agriculture Program of 2009, which in turn emerged from an MoU signed by Indian and Israeli ministers of Agriculture in 2006. MASHAV is Israel's Agency for International Development Cooperation, and is part of Israel's diplomatic mission to increase its presence and control[24] in the global south. Built on land acquired often from agriculture universities, and with costs borne[25] by the National Horticulture Ministry and State Horticulture Ministries, these centres claim to provide training and resources to farmers. While concrete benefits of these centres are yet to be seen, it is surely accruing PR benefits to Israel as testified in this video[26] and similar news reports.

Across states in South India, Netafim is enlisted in the state's subsidy scheme. In Telangana, the company took a 1000 agriculture officers[27] on a paid trip to Israel in 2017. These same officers are expected to impartially suggest to farmers which company to choose from within

21 'IFC investments implicated in land grabs in Africa', Farmlandgrab.org, July 5, 2017 https://www.farmlandgrab.org/post/view/27259
22 'Historic Supreme Court Win: World Bank Group Is Not Above The Law', EarthRights International, February 27, 2019 https://earthrights.org/media/historic-supreme-court-win-world-bank-group-is-not-above-the-law/
23 'Indo-Israel Agricultural Project (IIAP): A Growing Partnership', Israel in India https://embassies.gov.il/delhi/Relations/Indo-Israel-AP/Pages/default.aspx
24 'Defending Palestinian Food Sovereignty Against Occupation and Expulsion', Palestinian Grassroots Anti-Apartheid Wall Campaign https://www.stopthewall.org/downloads/pdf/FoodFull.pdf
25 'The Indo-Israeli Agriculture Project', MASHAV: Israel's Agency for International Development Co-operation https://embassies.gov.il/delhi/Departments/Documents/Israel percent20- percent20India percent20Agriculture percent20Cooperation percent20(MASHAV percent20Brochure).pdf
26 'Karnataka: Here's how this Indo-Israel collaboration is helping farmers in Kolar District', India Today, February 05, 2019 https://www.indiatoday.in/india/video/karnataka-here-s-how-this-indo-israel-collaboration-is-helping-farmers-in-kolar-district-1449075-2019-02-05
27 Krishna Prasad, '1,000 Telangana officers' Israel junket to cost Rs 25 crore', The Times of India, November 16, 2017 https://timesofindia.indiatimes.com/city/hyderabad/1000-telangana-babus-israel-junket-to-cost-rs-25-crore/articleshow/61666434.cms

the subsidy scheme. This is one among several official trips[28] by bureaucrats and politicians to Israel, which serve to further publicize Israel and its agribusiness in India. In Karnataka, the state government has allocated[29] Rs. 300 crore in the previous financial year and Rs. 140 crore in this financial year's budget under 'Israeli technology/model', the specifics of which are unclear.

All of these enlistments and support from state governments legitimize and help cover up the settler colonial project of Israel's state agencies and agribusiness corporations. For this reason alone, they need to be challenged. Further, Israel is implementing the same corporate model of agriculture in India which has been at the centre of the agrarian distress. It is necessary to investigate these tie-ups and question their utility beyond being a PR exercise for Israel, and urge state governments to reallocate these funds to sustainable agriculture projects that reflect the demands and needs expressed by farmers' movements.

28 Anil Urs, 'Karnataka Ministers in Israel to prepare ground for partnerships in agriculture', The Hindu BusinessLine, September 07, 2018
https://www.thehindubusinessline.com/news/karnataka-ministers-in-israel-to-prepare-ground-for-partnerships-in-agriculture/article24894232.ece

29 FurquanMoharkan, 'Karnataka Budget 2019: Here are the key takeaways', Deccan Herald, February 09, 2019
https://www.deccanherald.com/city/top-bengaluru-stories/Karnataka-Budget-2019-Here-are-the-key-takeaways-717353.html

ON HOW CORPORATIONS, IFIS AND LARGE FUNDERS UNDERMINE PROGRESSIVE FARMING AGENDAS

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1 Independent researcher

Agriculture has been a key focus area of International Financial Institutions (IFI) and large foundations for decades. In so engaging, they have played a key role in shaping the agenda, and the kind of action and change required in many areas of agriculture. Historically there have been many IFIs and foundations who have played major roles in making massive changes in farming possible. The classic example is that of the Rockefeller and Ford foundations who systematically worked to ensure the spread of Green Revolution.In this, they were ably supported by World Bank through its various programmes and agencies. Alongside, a variety of bilateral agencies and financial institutions have worked to promote this agenda. USAID, in particular, has been aggressive in taking forward the American State's agenda of spreading GMOs (genetically modified organism) everywhere, including in India. Of late, natural farming has also been a target of investment of such financial institutions.

'STRATEGIC GIVING' TO ' THEORY OF CHANGE'

With increase in global capital, global philanthropies and foundations typically network with each other in training the focus of their 'Strategic Giving'. As the term suggests, the idea is to influence far beyond what the money invested can generate. This typically requires the capacity to influence various layers and levels of a country's farming programme. With their interconnectedness, and their well-supported relationships-both personal and professional — with major decisions makers in giving and recipient bodies, the motivation for such giving (or investment) is always about escalating to meta-scales.

USAID, IN PARTICULAR, HAS BEEN AGGRESSIVE IN TAKING FORWARD THE AMERICAN STATE'S AGENDA OF SPREADING GMOS (GENETICALLY MODIFIED ORGANISM) EVERYWHERE, INCLUDING IN INDIA.

The giving generally supports a 'Systems Change' approach, with a focus on minimising input costs. As a result, such institutions are always scanning for models which are scalable. In selecting models for scalability, an 'Inputs and Outcomes 'based approach, like on a conveyor belt, which is largely drawn from the world of industry, business and commerce, is employed. In addition, there is always a palpable urgency

in the need to understand how the interventions' prospects make an impact, and how this can be quickly translated to enumerating and establishing of having touched an 'x' number of lives in a 'y' number of ways and how a 'z' number of lives have changed to the better.

Typically, such models are practiced by large, urban based, well-networked and institutionalized nonprofits. They also tend to have large geographical presence. These organizations,typically born out of a definite goal,are established by well-connected people—both within and outside the government—and have noticeably sufficient financial support. Their hierarchical structures and working patterns follow very strong corporate styles of governance. And the willingness of the leadership of these institutions to work seamlessly with IFIs and international foundation agendas are considered best settings to invest for the International Financial Institutions and foundations.

The whole process of flow of finance and ideas in this community is largely frictionless; large organisations are very diplomatic in their approach. As success of investment is a key goal projects that have short-gestation cycles, and where deliverables are quantifiable and reportable, are preferred. In the process, there is a constant search for what is considered to be a 'Proven Effective Model' or a 'Prototype' that looks promising, and comes with least risk. This process forms the blue print for what is called the 'Theory of Change'.

WHO GETS FUNDING?

Non-profit sectors working in the context of agriculture are a diverse lot. Many have emerged out of a necessity to work with farming communities, or in response to a struggle of the local community. They work in a challenging context and with limited resources, often multitasking, but with great diligence and perseverance.

In their initial years they rely on different sources of funding, pro-bono services, volunteer efforts and more. Such organisations are often the ones which are making a significant impact in the very challenging landscapes, such as those affected by natural disasters, droughts and floods, mining, displacement, pollution, land acquisition issues and more. Such organisations operating with small budgets and with small populations in remote areas often make a large impact. However, they

fail to catch the interest and attention of the big foundations. Or, to state more appropriately, big foundations do not reach out to them as they appear to not fit into the idea of 'strategic giving'.

WHO SETS THE AGENDAS?

Philanthropies and foundations mean well when they set their priorities and develop their guidelines to fund. But many a time these priorities and guidelines are quite removed from ground realities. Larger, more robust, recipient organisations have the comfort of collaborating, and are willing to incorporate most of the agendas of potential funders. In that way, they play as agencies to spread the approach which may not be appropriate locally, yet is practised widely. Smaller organisations are likely to be principled in their approach, and unyielding, due to the embeddedness of their work in local communities and the consequent commitments and strategies that are borne from a ground up understanding of what is needed. But with their limited resources their capacity to influence widely is also limited, and this is often because large funders tend not to support them. Thus, smaller organisations with strategic clarity lose out on prospective support.

Consequently, only those components, which can deliver to preferred and pre-determined demands get support. Funds extended are typically for 3-5 years, on non-flexible terms, and the intervention is honed through an intricate and well-woven 'Results or Logical Framework' process, with provisions to capture numbers and in that way demonstrate impact in "Yield and Income' terms. The social and environmental consequences are typically not in focus. There is also little support for innovation, particularly to agricultural interventions that are critical to constantly work with a dynamic ecological landscape, and to minimise adverse impacts.

CONDITIONALITIES, OFTEN UNSTATED

Often such funding comes with a condition: recipient organisations are expected to be able to raise matching funds, or even ensure other funds are lined up prospectively, to guarantee continuity of programmes. Moreover, programmes that have been funded in the past by other funders, and without a break, are typically those that continue to get support. This promises a guarantee to park capital in investments, with least risk.

Such conditions become a huge barrier for most organisations working in challenging landscapes, and responding to emergent and diverse needs of the local communities, yet create huge impacts which are locally meaningful. Such organizations typically fall through the crack, and thus fail to get funding support, as they don't measure up in the 'High Value Scalability Index'. In a policy of 'Strategic Giving' where the emphasis, unadmittedly, is on 'one size fits all', small, innovative and locally embedded organizations fall off the funding maps.

Another aspect is that interventions supported are typically those that can be organized through the para-statal 'Farmer Interest Groups' and 'Self Help Groups'. Support for democratically representative and organically evolved farmers' initiatives is rare. Farmer initiatives, even if present (although very few), are often relegated to a category of not having 'required bandwidth'.

As funding is increasingly profit driven, or driven with focus on tangible benefits, many

wise chronicles are ignored and disregarded. New narratives are generated to forestage newer technocratic institutions as efficient, thus sidestepping, or even dumbing down creative, empowering, and democratic collaborations. Following rigorous "due diligence' to organizations for their financial stability, strong governance and leadership, competence to handle large sums of money, past work with farmers (in terms of geography, numbers, and interventions), and an analysis of who has funded them in the past—in the end only a few can qualify for funding. But, often times, a chosen few get 'force fitted' too!

WHAT GETS FUNDING?

Standard interventions that get supported are often those that can be assessed through a baseline survey—enumeration of farmers, land holding patterns, historical analysis of what has been grown, inventorisation of produce and average yield per year, computation of average income, assessment of farm equipments-assets, etc. Other typical interventions are training of farmers on 'Sustainable Agriculture' practices—such techniques as preparation of Jeevamrit, mulching, horticulture methods such as building trellises, using SRM method, etc. The idea is to build technical skills useful to 'scaling out operations'. 'Skill building' focuses on adopting new techniques, new farm equipment, and reduction of labour input to reduce drudgery. It is normal to project these as 'women friendly' interventions too.

Development of demonstration plots is another major activity, and this involves showing farmers how to dig, sow, and water their crops. It also includes focus on use of various ex situ inputs at varied intervals and on being in step with new methods constantly emerging on the farming terrain. Often it is referred to as an 'integrated approach', and includes introduction of chemical pesticides, fertilizers, and hybrid varieties.Sponsoring field exposures to successful models in the village or in centres form an important component of such financial support.

EMERGENCE OF FPOS

Setting up of Farmer Producer Organizations(FPO) to access credit, farming interventions and finance, and to engage with markets, is yet another intervention that is increasingly supported by large funding. SHGs, FIGs come together and form an FPO, in the sense of shareholders, organizing themselves in a body corporate form with an executive committee headed by a CEO, is the typical approach recommended, and is a situation with great fertility of receiving support. Organizing training about storage and marketing of produce to take advantage of and protect as well in speculative market conditions, training on various business tactics, and raising awareness on forward and backward linkages form the core of such investing in capacity building. This also includes strategic buying of various inputs at wholesale price, and their release to members at competitive rates. (Usually this involves strategic purchase of fertilizers, pesticides, and occasionally seeds.) Some FPOs (Farmer Producer Organisation) also act as intermediaries between farmers and the market in the sale of their agriculture produce. In this way, FPO creation is being incentivized. That a variety of factors such as caste, class, and religion can determine eligibility to become members of the FPOs is acknowledged internally, but is rarely, if ever, problematized, and in any case is never explicitly acknowledged as a reality of FPO creation anywhere.

PROMOTING VALUE ADDITION OF FMCG MARKETS

There is an increasing emphasis on catering to the Fast Moving Consumer Goods (FMCG) market. Processing of mushrooms, pickle making, vermicelli production, etc. are key areas of capacity building. Livelihood support, such as rearing of goats and chicken, is particularly targeted at very poor farmers, as this involves least capital investment, is labour intensive, and is considered as occupations that need not have any prior experience. There is also emerging emphasis on increasing meat production through stall feeding, as a method of industrialising farming and livestock rearing. Mechanisation of farming and post-harvest processing, and marketing is also of increasing focus in funding circles.

Establishing linkages with tech companies to devolve farm end technologies (such as solar drier, noodle making machine, etc) are some of the other commonly noticed components of farm focused funding programmes.This appears to have had a substantive influence on State run interventions as well, which in any case are constantly integrated into farm related interventions. Building linkages with government-initiated programs such as ATMA, establishing contacts with Krishi Vigyan Kendras,and integrating farms with agricultural universities' farming and horticultural innovations are some of the typical interventions that form the priority of access to information and technical knowledge in farm and field level practices of larger funders.This is increasingly integrated with building capacity of NGO staff, with regular training programs in strengthening of 'Management Information Systems', which forms a core part of the programme related support. It appears that all of this is oriented towards assuredly finding a place in FMCG markets, that international finance is acutely interested in, and is massively investing into as well.

'SAFETY NET'

There are few interventions that focus on women's land ownership and on getting recognition for women farmers. Strong patriarchal systems and also certain tribal customary laws make this a challenging task. In many instances, men have been very reluctant to allow women family members to partake in discussions involving land ownership.There are on ground instances when they have even chased away the foot soldiers of programmes who help raise awareness.

Land is a very sensitive subject. While women's access to and ownership of land is important it comes packaged with a host of other factors. Illiteracy, poverty, joint family systems, social order, lack of women's safety nets, the challenges of old age (especially for senior women who are single and widowed), and lack of compassionate community participation are concerns that are rarely addressed when such large funding interventions design their programmes.The enumerative approach of assessing transformation fails to capture many of these nuanced realities of rural living.

WHY MONITORING, EVALUATION AND IMPACT?

The overall effect of the programmes invested in is measured largely from a cost-benefit ratio analysis, typical of market interventions.A very small part of budgetary support goes towards covering administrative costs such as salaries, honorariums for resource persons, travel costs, and other incidentals. In some rare instances expensive staff training programs do get a nod. Every intervention is calculated at a 'per farmer cost' irrespective of the geography, topography, soil type, and political landscape. Programmes across complex, not inter-dependent, and non-correlative geographies and cultures get compared, thusly for efficiency of delivery, all boiled down based on 'per farmer cost' approach. This, in itself, is a huge detriment to empowering farmers and farming.

WHILE WOMEN'S ACCESS TO AND OWNERSHIP OF LAND IS IMPORTANT IT COMES PACKAGED WITH A HOST OF OTHER FACTORS. ILLITERACY, POVERTY, JOINT FAMILY SYSTEMS, SOCIAL ORDER, LACK OF WOMEN'S SAFETY NETS, THE CHALLENGES OF OLD AGE

As large funders get into financing farming interventions, they are developing a variety of complex monitoring systems. This involves systematic processes of evaluating the success of funding interventions, throughout the period of funding. It involves gathering information about the progress of the project on a 6-monthly or annual basis. This is a time to understand the challenges faced by farmers, or the intervening NGO, and to make strategic changes as necessary. But, it is very rare that field level challenges are considered and original interventions are redesigned to accommodate local dynamic situations. Some typical challenges are failure of rain at the time of transplanting, or floods at the time of harvest. Alternate mechanisms to measure 'performance' or to factor in these force majore events rarely exist in monitoring and evaluation procedures. The lack of delivery as per originally designed expectations eventually remain as unachieved milestones in the excel sheet that is typically used for monitoring.

Evaluations are important for funders to review final outcomes of the projects, and to decide the accountability of the NGOs. The question is if Excel Sheet based indices provide the most effective methodology of such evaluations of performance and financial viability. Of late, there are farming specific algorithms being developed to assess inputs and outputs of investment and train machine learning technologies to generate assessment reports. Such interventions comprehensively miss the importance of assessing impact calculated at very particular levels (individually even), in collaboration with farmers and local communities, in a locally appropriate language and by employing culturally sensitive methods. Terminologies are quite often employed on field by assessing staff, resulting in a jargonization, and thus mystification, of farming interventions. This is quite apart from what has been used before in Government programmes and schemes: an accessible framework of evaluation of investment viability and impacts based on field level conversations and often guided by representative bodies such as Panchayats.

A disconcerting aspect of such monitoring and evaluation is that they can displace prevailing traditional resilience of farming systems in dealing with nature's vagaries, as they aren't considered as practices to be acknowledged and sustained. Funders' evaluation of beneficiaries' performance is quite agnostic to farmers' crisis and the turbulence in which they exist now. Evaluations are largely honed with internal decision making purpose of giving institutions, is a formality that must be completed periodically, and this has now evolved into a big industry in itself. Based on such evaluations, including by third party evaluators, programmes get renewed, or are closed, based on the evaluators perceptions of performance. Many a time recipients aren't aware that their programme will be evaluated at the end of 3 or 5 years, and that too by an external evaluator, and this serves as a great handicap for recipient organisations and farmers in articulating best what they know and experience.

WHAT ACTUALLY NEEDS FUNDING?

When travelling across the length and breadth of the country a common chorus one hears among farming communities is the lack of water. Securing water for farming is the need of the hour. There is no one better than the farmer to know the local landscape and how to

intervene to secure water. Simple water harvesting and water retaining techniques through plugging of gullies and ravines, constructing loose boulder structures, building small check dams and rain water harvesting at the household level is fundamental to building such security. Planning village level water security in collaboration with local panchayats is critical to survival of farming in most cases. But these interventions are not quite in focus of late, especially amongst large funding agencies. Buoyed by the need to show 'return on investment', water secure farming interventions get leveraged. Where help is needed most, particularly water starved areas, large funders are increasingly infrequently engaged.

In the early 2000s there were many initiatives to support development of Indigenous seed banks. Many organisations helped farmers save their rare seeds, nurtured seed banks and promoted exchange of seeds to guarantee self-sustenance of farming on sovereign terms. The grand beauty of farmers choosing the best crops based on the vagaries of the monsoon, and ensuring cross fertilization to get the best out of the effort, and of saving seeds to advance self-reliant agriculture appears to have become a thing of the past. Over the last two decades much of this effort has been culled systematically due to the promotion of interventions that guarantee ex situ inputs based on an emphasis on productivity, not resilience. As a result, there is extensive loss of agro-biodiversity and farmers who were independent are today completely at the mercy of the state or companies for inputs and credit. Many large funding agencies also fancy partnering with big seed companies who in turn have managed to access large tracts of land and other infrastructure to set up seed factories. The outcomes of these interventions can be imagined.

It is widely known, and felt by farmers, that much of the farming land across the country is in distress as an outcome of growing crops that were newly introduced or even imposed. This has deprived farming families of food security at the household, and increased debt and burden. There is enough evidence of the need to shift from water intensive crops such as rice and sugarcane to cultivation of seasonal and low water demand and climate resilient crops. Typically, these were the traditionally grown crops such as millets or drought resistant grains and vegetables. But very little support is channelled to such endemic farming, especially to assist highly stressed farmer households to shift out of the vicious cycles of poverty.

Local traditional handmade production livelihoods (such as basket weaving, livestock-based weaving, apiary, broom making, blacksmiths for agricultural implements, etc. are slowly disappearing due to lack of support, or increasing mechanization. Such subsidiary livelihoods helped farming communities sustain, particularly through lean periods. Many of these occupations were seasonal and brought in much needed incomes at the right times of the year when agriculture did not yield well. Several art forms thrived due to such ways of farming and living. Besides, these helped nurture creative interest in arts and of living in dignity, particularly amongst the rural youth. Today, these are highly neglected areas and are rarely supported.

In the area of non-timber forest produce, collection, processing, and marketing is an additional income generating engagement across many states. Although it has had its challenges, there certainly is potential for sustaining it, as it provides additional livelihood securities in farming and forest dependent communities. This is an area

that a large section of the funding world has often been very reticent to supporting.Rehabilitation of traditional knowledge associated with local biodiversity is the need of the hour. However, there is rarely any support for such initiatives. With rural youth driven away to cities, the traditional knowledge associated with local agro-biodiversity may die very soon, as only the last few elders in the villages are repositories of such knowledge, and there are none to learn from them. This is an area that needs massive support and urgently.

Research in, and advocacy of, farmer's concerns to forestage their perceptions and realities in higher decision-making bodies needs to be supported. Building Awareness of MNREGA [Mahatma Gandhi National Rural Employment Guarantee Act 2005], RTI[Right to Information Act 2005], FRA[Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006], LARR [Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013], Panchayati Raj Act, Hindu Succession Act, etc. is crucial to supporting farmers. Awareness of the Biodiversity Act, Protection of Plant Varieties and Farmers Right Act are key to recapturing the dignity of being part of the farming community. MNREGA has been a challenge across many states where farmers have not had the opportunity to utilise its provisions effectively. But a renewed thrust would help secure rain water and surface run-off for villages, by generating employment in building necessary structures to harvest water to secure against increasingly frequent monsoons failure. In many villages where finance has never reached projects meant for local communities, it would help to assist all farming communities in appreciating the power of the Right to Information Act to get things done. Building awareness of farmers' rights, struggles, and movements (past and current) across the country is a crucial step in helping farmers reclaim their lives, livelihoods and dignity. This is only an indicative list but there are many more areas that need urgent support at a massive scale.

WAY FORWARD

In many of the remote villages where there is little electricity, most farmers have little or no access to daily news, and have little idea of what is happening in the world. This gap is being exploited by vested interests. There is a critical need in acknowledging these gaps, and ensuring it is closed through farmer based networks of information flows which are transparent and accountable, and not victim to manipulations. Such networks need to be aware of communities at risk—such as those impacted by displacement, dislocation and marginalisation; communities vulnerable due to caste/class discriminations; farming communities in the fragile regions; and others who require the much needed support.

There is a crucial need for building such solidarity networks amongst farmers so they can rally together and raise their concerns themselves, and not through intermediaries, be they organisations or individuals. There may be no proven effective models, and at scale, to demonstrate the crucial importance of this intervention. But given the severity of the farming crisis, any help, however small, with no ulterior agenda, will go a long way in helping farmers drift through these challenging times and find firm ground to advance sustainable farming.

What is also gravely needed is focus on multi year adaptable support to build local farm

interventions that have the capabilities to adjust and survive the turbulent market-oriented systems that appear to be incentivised by the state and other interveners in farming. There is also a dire need to build capacities of farmers to raise funds, plan for the future, be open to flexibility, and to innovate, collaborate and build safety nets locally, and also develop skills of negotiating the best insurance terms—so that they can emerge once more empowered.

Given how revenue laws are being trained to designate farm lands as liquid assets, and with a huge and increasing gap in demand and supply of farm labour, farm lands will change hands even more over the next decade or so. To secure food, there is now a need to nurture young farmers and this needs to be done by promoting collaborative farming, keeping capital investment low, and encouraging innovative use of socio-ecological-technical-financial resources.

TO SECURE FOOD, THERE IS NOW A NEED TO NURTURE YOUNG FARMERS AND THIS NEEDS TO BE DONE BY PROMOTING COLLABORATIVE FARMING, KEEPING CAPITAL INVESTMENT LOW, AND ENCOURAGING INNOVATIVE USE OF SOCIO-ECOLOGICAL-TECHNICAL-FINANCIAL RESOURCES.

Young farmers, particularly those who have been labouring but are willing to organise and remain farmers instead of migrating, will need hand holding to bridge the gap between the traditional know how and what they can do. They need to be supported to continue farming by providing them funding,and often outside the traditional model of bank finance which has been highly exploitative and stress causing. A host of start-ups and incubators are working round the clock promoting a variety of novel ideas to re-purpose land, design new technology, generate new kinds of jobs, create portals that help for minimal fees to receive mentoring, in providing access to farm equipments and implements, in building skills of storage and packing, and also in marketing and business expansion of farm based enterprises.

Philanthropies and foundations could play a pivotal role in stepping into these challenging farming situations of today. They need to appreciate the crucial importance of integration of farming with local governance, as it is central to agriculture, and adapt to this need instead of creating alternate frameworks of farm interventions that may be non-resilient.

They must be particularly keen on not side stepping existing legal provisions, of not ignoring recommendations of various commissions (such as Farmers Commission), of not ignoring and/ or sidestepping old and small organisations that have a deep understanding of the farming realities, of not disregarding the critical importance of research and relying on critical research, and of not rushing to establish new organisations with new narratives (largely market influenced). Reliance on such quick solutions could be a recipe for disaster.

EFFECTIVE 'INTERVENTIONS' TO TACKLE AGRARIAN CRISIS IN INDIA

Dr. T.N. Prakash Kammardi[1]

1 Chairman, Karnataka Agriculture Prices Commission

Agrarian crisis has clear manifestations in migration to cities, abandoning cultivation, keeping land fallow, diversion of agricultural land for non-agricultural purposes and the rising numbers of farmer suicides. Through various 'interventions'—legal, government, co-operative, and community, the agrarian crisis can be tackled effectively. However, in order for interventions to be effective, certain contradictions and confusions inthe agricultural sector must be better understood.

For instance, the problem of plenty in several agricultural and horticultural commodities, baring oilseeds, gives rise to the doubt that the crisis has more to do with farmers rather than farming as an economic sector. More interestingly, rise in value of land disproportionate to the return from the land gives rise to a strange axiom that farmers are rich by asset but poor by income! It is also worth noting the irony of farm produce being costly to consumer while also being un-remunerative to the producer (farmers). Such contradictions are compounded by the question of whether agriculture should be regulated by the government or allowed to be determined by the market.

Until the 1990's, the government had a clear role in agricultural matters related to what to produce, how much, and at what price it was to be sold. Economic liberalisation carried out by the Indian Government in the 1990s gave way for market-led economic growth. Additionally, the Five-Year Plans, undertaken by the Planning Commission of India until it was dissolved in August 2014, attempted to effectively accomplish planned agriculture development with active patronage of the Indian State. The economic liberalisation coupled with the abandoning of the Five-Year Planning process has diluted the very spirit of government interventions in agriculture in India.The agrarian issues need to be assessed thoroughly in the backdrop of economic liberalisation followed by signing of international and bi-lateral trade agreement. As effective checks and balance against the neo-liberal policies and the onslaught of free market forces,this brief paper suggests 'interventions' for consideration:

Legal intervention to ensure MSP: In order to strengthen the spirit of Administered Pricing Mechanism, the government should not only announce Minimum Support Price (MSP) for farm produces but also undertake measures to guarantee the MSP to farmers. This has to be followed by a thorough procurement program and proper utilization through the Public Distribution System (PDS) and other welfare programs such as mid-day meal scheme, government hostels, anganwadis, and others programs related to Food Security Act, 2013. A legal approach is strongly advised to ensure both remunerative prices (through MSP) and a commitment

by the government forcompulsory procurement of farm produce.

Co-operative intervention in land management: Nearly 10 million hectares of agricultural land (approximately 10 percent of the total agricultural land) is kept fallow and uncultivated in the country for various reasons. It is still higher (approximately 16 percent) in a state such as Karnataka, which is additionally losing precious farm land for non-agricultural purposes at the rate of 1.50 acres annually. Apart from fallow agricultural lands and diversion of agricultural lands for non-agricultural purposes, India faces the problem of fragmentation of land holdings which renders land holdings to become sub-optimal and uneconomic. It is imperative to come out with an Optimum Land Use Policy and Comprehensive Production Programat the Central and State level and a Decentralized Crop PlanningProgramatthedistrict level in India. It is also necessary to encourage collective action through co-operatives, group marketing, Farmer Producer Organisations (FPO) and so on asto reach the next stage of Land Reform. Such actions will allow the farmer to negotiate better prices rather than accepting the low prices given in the market. The farm produce markets need to undergo radical alterations to address the interests of the farmers and ensure that farmers receive the larger share of what consumers pay for produce.

Community intervention in water resources development and seed conservation: Along with macro irrigation and mega projects, the government must give equal focus to minor irrigation, tank rehabilitation, watershed development and rain water harvesting projects. Micro irrigation (sprinkler and drip) along with precision farming needs special focus.Watershed as both agro-ecological as well as socio-economic unit must be starting point in this regard. A well accomplished watershed development program not only addresses the objective of economic efficiency but also social equity and environmental sustainability goals. Ground water should be declared as Common Property Resource to be owned by the entire community. This should be followed by rigorous laws to conserve as well as control the use of ground water resource.

Similarly, traditional seeds, landraces (repository of gene pool), and local crop varieties should be conserved and managed by the communities with active participation of rural women and tribal farmers.

Societal intervention to promote organic products and nutri-cereals: Awareness and consequent demand among citizens for organic products, millets and other healthy, nutritious food is fast emerging.

But this has to be mainstreamed so that all sections of the society have access to healthy food. Total Economic Valuation of direct and indirect benefits (to society) of these products, adequate pricing (by the consumers) to reflect fully the total social value is needed. To envisage a system of repatriation and Direct Benefit Transfer (DBT) to the farmers who supply these services, not only the support of the technocrats and the policy makersis needed but also appreciation and acknowledgement of the society as a whole is required.

State intervention to enhance farmers' income and welfare: The Government of India has raised the issue of doubling farmers' income in five years. However, unresolved issues in this regard are; what is the bench mark and base line income to double?Is it income from agriculture, allied sectors or whole farm income? Is it real income or nominal one? What blue print and road maps have we formulates to accomplish this goal?

To expand the contours of farmers' welfare a comprehensive welfare package including decent old age pension, unified insurance schemes, education loan, health care and so on are essential. State's intervention is a must to address the issues of adequacy, predictability and stability of farmers' income. A fully empowered National Commission on Farmers Income and Welfare in line with other commissions such as the Election Commission at the centre is the need of the hour today.

THERE ARE 156 MILLION MEN AND 88 MILLION WOMEN WORKING IN AGRICULTURE, AND AGRICULTURE HAS STARTED TO BECOME AN UNVIABLE SOURCE OF LIVELIHOOD FOR THE MAJORITY OF THESE WORKERS: SO WE ARE IN THE MIDST OF AN AGRICULTURAL CRISIS.

HOW TRADE AGREEMENTS ENABLE CORPORATE CONCENTRATION IN AGRICULTURE AND FOOD

Benny Kuruvilla[1]

1 Head of India office at Focus on the Global South

Liberalisation of agriculture rules is today amongst the most contentious issues in global trade policy. The World Trade Organisation (WTO) is at an impasse mainly on the issue of subsidies and tariff reductions in agriculture. Developed economies such as the European Union, United States and Japan are unwilling to reduce their subsidies and developing economies such as India and Indonesia continue to use tariffs to protect their small and marginal farmers from cheap imports. The inability of the WTO to resolve this north-south stalemate and further trade liberalisation led to the proliferation of bilateral and regional Free Trade Agreements (FTAs) from mid 2000s. But agriculture continues to be a sticking point at the bilateral and regional level as well, especially for countries such as India. Take the case of the mega FTA, the Regional Comprehensive Economic Partnership (RCEP) which has been under negotiation since 2013, in which Indian negotiators are hard-pressed to accede to demands from trading partners to eliminate or drastically slash agricultural tariffs.

BACKGROUND:

The inclusion of agriculture in trade policy architecture is less than three decades old. In the late 1980s and early 1990s when neoliberal and free market ideology had yet to grip politicians and bureaucrats in the developing world, they refused to buy into the idea that a transition from the General Agreement on Tariffs and Trade (GATT) into the WTO would bring benefits to the South. As the debate over the creation of the WTO raged during the Uruguay Round (1986-1994) there was a compelling argument that some developing country officials bought into. The logic of that argument went something like this; since countries such as Indonesia, India, Philippines are largely agrarian economies that produce cheap agricultural products, free market rules for agriculture in the WTO would give their farmers access into markets in the developed world and also access to foreign technology and investment. Eventually as the negotiations dragged on, officials agreed to a grand compromise; which was to allow for the inclusion of services, rules on intellectual property rights (IPR) and foreign investment where the United States and European Union were more competitive and advanced and therefore would gain. On the other hand, the newly created 'development friendly' Agreement on Agriculture (AOA) was expected to help farmers from the South access the hitherto protected domestic markets in the US and EU. But today, more than two decades down the line, it is clear that promise or expectation was a complete sham. Small and medium farmers from countries

in Africa, Asia and Latin America have not gained any substantial market access. Rather as developing countries reduced tariffs, imports from the developed world have increased. This has also happened because much of the subsidies for agriculture in the north have not been eliminated as they were classified as permissible subsidies under the AOAs so called 'green box'. Of course trade in agricultural commodities between developing countries also increased due to deregulation and the proliferation of south-south FTAs but the gainers have mostly been large export lobbies within these countries.

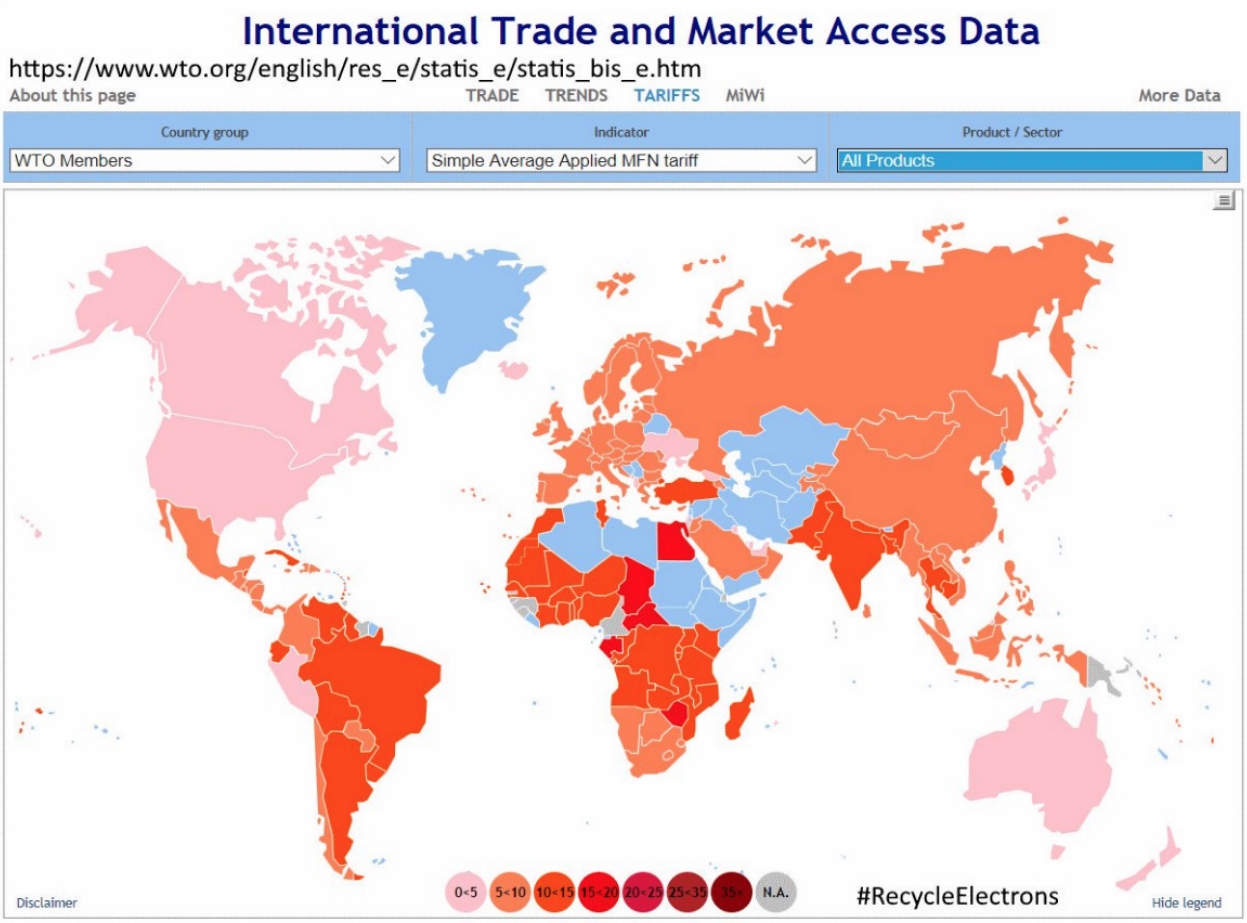
NEW GENERATION TRADE AGREEMENTS:

The history of economic development across and within countries shows that people have always traded and exchanged goods. The difference today is that the WTO and FTAs are not just about expanding trade through lowering tariffs and creating jobs by accessing export markets in other countries. Trade agreements, importantly, are a proxy for a legally binding deregulatory agenda that intrudes into domestic democratic processes. They now cover, and dilute, regulatory standards in health and safety, investment, banking and finance, intellectual property, e-commerce, labour and environmental standards and many other subjects. They reach well beyond national borders and seek deep integration among nations rather than shallow integration and are negotiated over years under influence from lobbies and special interests. Today trade agreements run into thousands of pages – the WTO itself encompasses some 60 trade agreements including annexes and country schedules. In the 1980s, a trade agreement between the USA and Israel was only 12 pages and a decade later, the 1994 North American Free Trade Agreement (NAFTA) exceeded 2000 pages.

So how exactly do trade agreements – the WTO and a supplementary network of FTAs – enable corporate concentration and control, especially in the area of agriculture products? Firstly, while it is likely that products from small and marginal farmers will reach international markets, the former do not engage directly in international trade. As research from Oxfam shows, major global agribusiness traders such as Archer Daniels Midland (ADM), Bunge, Cargill and Louis Dreyfus, collectively known as the ABCD traders collectively control as much as 90 percent of the global grain trade. They also share a significant presence in the global trade of a range of basic commodities such as oil seeds and palm oil and have their own transportation networks such as railways and ships.

The WTOs AOA and agriculture chapters of FTAs aim at reducing or eliminating import duties. As the WTO (2018) infographic shows, due to trade commitments on both these fronts and autonomous liberalisation, most countries today have low levels of applied duties. Reducing duties decreases the cost of imported goods, hurting local small-scale food producers who cannot compete with large agribusiness imports. Further, as the WTOs AOA allows subsidies for handling, storage, transportation, processing and upgrading – much of which is cornered by companies such as the ABCD, this helps them to sell at much lower prices than domestic producers. Due to this, the negotiating positions of EU and US often reflect the position that what is good for the ABCDs is good for world agriculture. This means elimination of any government control at ports of entry but at the same time

ensuring that there was no concomitant constraint either through the AOA or other trade agreement on the oligopolistic market power of the ABCD. In Asia it is firms such as the palm oil giant Darby in Malaysia and Charoen Pokphand (CP) Group from Thailand that are key drivers behind trade liberalisation moves of their respective government



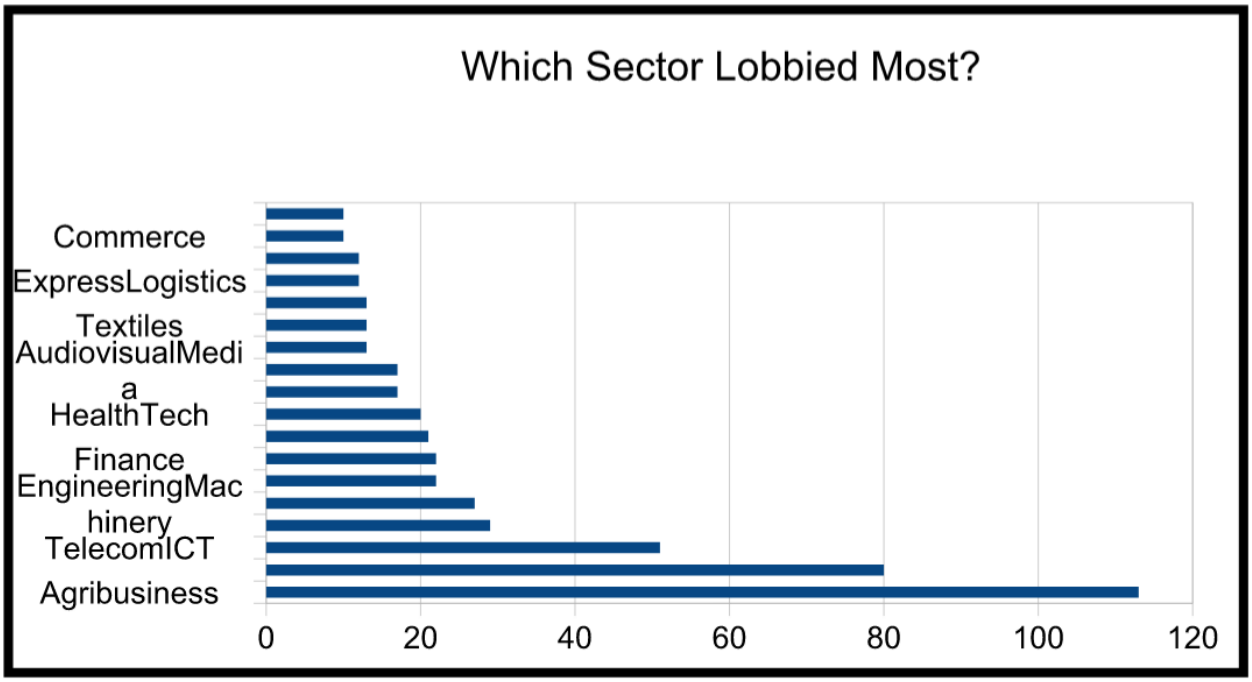
Source: WTO International Trade and Market Access Data (2018)

Trade agreements also continue to allow 'dumping' of products by agribusiness, especially in the case of the USA. Dumping happens when a company exports a product at a price lower than the price it normally charges in its domestic market. Prior to the last WTO Ministerial in Buenos Aires in 2017, research by the Institute for Agriculture and Trade Policy (IATP) showed that the USA was exporting major agricultural commodities at dumping level prices; corn at 12 percent below production costs, soybeans at 10 percent, cotton at 23 percent and wheat at 32 percent. At Buenos Aires, developing countries once again demanded an end to trade distorting domestic support to US corporations, especially to provide relief to West African cotton farmers. Attempts at a supposed

Special Safeguard Mechanism (SSM) to protect farmers from such import surges have also come to nought.

Another way in which transnational power is entrenched through trade agreements is by the harmonisation of standards in accordance with transnational supply chains, thereby forcing peasants to produce according to industrial agricultural standards. At the RCEP, one of the key demands from countries such as Japan is for countries such as India, Thailand and Philippines to adopt rules of the International Union for the Protection of New Plants (UPOV) which provides for patent like rights for plant breeders. Seed companies such as Bayer-Monsanto, ChemChina-Syngenta and Dow-Dupont are very active at the trade talks.

The 2014 table below from the Brussels based Corporate Europe Observatory (CEO) shows that agribusiness was one of the biggest lobby groups during the negotiations for the Transatlantic Trade and Investment Partnership (TTIP) between the US and EU.



Source: Corporate Europe Observatory (2014)
(https://corporateeurope.org/en/pressreleases/2014/07/agribusiness-biggest-lobbyist-eu-us-trade-deal-new-research-reveals)

It is not just the agriculture rules in the WTO and FTAs that entrench the power of agribusiness. The General Agreement on Trade in Services (GATS) and services chapters in FTAs also enables corporate control over agriculture. For example, the GATS mandate for the liberalisation of services can result in countries opening up retail services to foreign investment and competition. With retail now being merged into e-retail with online stores, this could have adverse implications for farmers in terms of big retail firms such Amazon and Walmart depressing both farm gate and retail prices for agricultural produce. There are also other commitments under GATS and services chapters such as financial services, where the entry of foreign banks can squeeze the profits of local banks and lead to the shutdown of rural branches and therefore credit, which is one of the lifelines for farmers. Rural credit is not a very attractive proposition for commercial private banking and therefore countries such as India set up a network of state owned rural banks, many of which are being scaled down now leading to a debt crisis among farmers in India. When Governments undertake binding commitments under trade agreements they lose the policy tools to support rural banking that will benefit small farmers.

One more way in which corporate power is entrenched in trade agreements is through investment rules. The investor-state dispute settlement (ISDS) mechanism included in most trade and investment agreements gives large foreign investors the right to challenge national laws and regulations related to agriculture and food, if such regulations represent an obstacle to their profits. ISDS is a one-way mechanism that allows only corporations to sue governments. Foreign investors can circumvent domestic court systems and claim financial compensation from host governments in secret business-friendly international tribunals, if they deem their investments (including their potential future profits) are adversely affected by the introduction of regulatory standards or policy changes in the host state. Some of the well known ISDS cases in agriculture include the 2009 Corn Products International (USA) vs. Mexico case in which US$58.4 million was awarded to the agribusiness producer of high fructose corn syrup (HFCS) – a derived sweetener linked to obesity. The foreign investor successfully challenged a government tax levied on beverages sweetened with HFCS by invoking investment rules under the 1994 North American Free Trade Agreement (NAFTA). In another similar case Cargill (USA) was awarded US$90.7 million in 2009 from Mexico when it successfully challenged the same government tax on HFCS by invoking NAFTA rules.

In conclusion, it should be underlined that trade agreements do not just benefit corporations. The latter have actively contributed to the creation of the global trade architecture comprised of the WTO, FTAs and investment agreements. Therefore any endeavour to undermine corporate concentration needs to also work against free trade and towards a more just and fair trade regime.

ANNEXURE

A symposium on: Corporate Concentration in Agriculture and Food, Organised by Focus on the Global South and Alternative Law Forum, Visthar, Bengaluru- 27-28 June 2019

AGENDA

DAY 1: 27 JUNE	
Panel 1 **10.30am – 1pm**	**Three decades of neo-liberalism in India and the corporatisation of agriculture** Moderator: **Shalmali Guttal** (Focus on the Global South) • *Withdrawal of the state, deepening neoliberalism and financialisation in Indian agriculture: winners and losers* - **Aparajita Bakshi** (National Law School of India University) • *Rise of corporate power in agriculture and response of farmers' movements* – **P Krishnaprasad** (All India Kisan Sabha) • *Corporate control over agriculture pricing* - **T N Prakash** (Karnataka Agricultural Price Commission)
Tea break: 1145-1200	
Panel 2 **2pm – 3.30pm**	**Corporatisation of seeds, biodiversity, livestock and land** Moderator: **Dinesh Abrol** (National Working Group on Patent Laws / Nation for Farmers) • *Corporatisation of the livestock sector*- **Sagari Ramdas** (Food Sovereignty Alliance) • *Privatisation of seeds and biodiversity* – **Kavitha Kuruganti** (Alliance for Sustainable and Holistic Agriculture) • *How changes in land laws have enabled corporate land grabs* – **Preeti Sampat** (Ambedkar University of Delhi)
Lunch: 1330-1430	
Panel 3 **3.45-5.15pm**	**Corporatisation of seeds, biodiversity, livestock and land (Contd)** Moderator: **Vidya Dinker** (Indian Social Action Forum) • *Data visualisation of Land Conflicts and loss of agriculture land and commons* - **Nihar Gokhale** (Land Conflict Watch) • *How International Financial Institutions and Foundations undermine progressive farming agendas for the benefit of big capital* – **Bhargavi Rao** (Researcher)

DAY 2. 28 JUNE	
Panel 4 10 – 11.30am	**How Corporations capture markets: Mega-mergers, Digitisation and Trade Agreements** Moderator: **S Kannaiyan** (South India Coordination Committee of Farmers Movements) • *Mega-mergers in agribusiness and the failure of the competition commission* – **Dinesh Abrol** (National Working Group on Patent Laws / Nation for Farmers) • *Rise of digital monopolies and implications for food and agriculture* – **Parminder Jeet Singh** (IT for Change) • *Corporate capture of trade agreements – WTO's Agreement on Agriculture, FTAs and BITs* – **Benny Kuruvilla** (Focus on the Global South)
Tea break: 1130-1145	
Panel 5 11.45 – 1.15pm	**Case studies of Corporate influence: in contract and natural farming and online markets** Moderator: **Vinay Sreenivasa** (Alternative Law Forum) • *Biopiracy: corporate exploitation of weak regulatory frameworks* – **Leo Saldhana** (Environment Support Group) • *Corporate complicity: Israeli interventions in Indian agriculture* – **Apoorva Gautam** (Palestinian Boycott, Divestment and Sanctions National Committee) • *Impacts of online portals on hawkers and small retailers: case study from Bengaluru* - **Shobha SV** (Alternative Law Forum)
Lunch: 1330-1430	
Panel 6 2.15 to 5pm	**Strategising on the way ahead: research and corporate accountability campaigns** Moderator: **Shalmali Guttal** (Focus on the Global South) • **Sellamuthu** (South India Coordination Committee for Farmers Movements) • **Chukki Nanjudaswamy** (KRRS) • **Krishnaprasad** (AIKS) • **Kavitha Kuruganti** (ASHA) • **Dinesh Abrol** (Nation for Farmers) and others

FOCUS ON THE GLOBAL SOUTH

Focus on the Global South is an Asia-based regional think tank that conducts research and policy analysis on the political economy of trade and development, democracy and people's alternatives. It works in national, regional and international coalitions with peoples' movements and civil society organisations and has offices in New Delhi, Manila, Phnom Penh and Bangkok

THE ROSA LUXEMBURG STIFTUNG (RLS)

The Rosa Luxemburg Stiftung (RLS) is a Germany-based foundation working in South Asia as in other parts of the world on the subjects of critical social analysis and civic education. It promotes a sovereign, socialist, secular and democratic social order, and aims to present alternative approaches to society and decision-makers. Research organisations, groups for self-emancipation and social activists are supported in their initiatives to develop models which have the potential to deliver greater social and economic justice.

ALTERNATIVE LAW FORUM (ALF)

ALF was started in March, 2000, by a collective of lawyers with the belief that there was a need for an alternative practice of law. It is committed to a practice of law which will respond to issues of social and economic injustice. ALF perceives itself simultaneously as a space that provides qualitative legal services to marginalized groups, as an autonomous research institution with a strong interdisciplinary approach working with practitioners from other fields, as a public legal resource using conventional and unconventional forms of creating access to information, as a centre for generating quality resources that will make interventions in legal education and training, and as finally a platform to enable collaborative and creative models of knowledge production.

Over the last three decades of neoliberal reforms, the process of liberalisation and deregulation have opened up the Indian market to the private sector, to foreign trade, and to foreign investment. As in other sectors, agriculture has also been impacted by this process. Agribusiness corporations have today become powerful actors in determining the costs of production, input prices, food preferences, food and commodity prices and public policy. Along with controlling supply and value chains, these corporations are also invested in knowledge and technology production to boost their finances

Given this context, it is imperative for farmer's movements and civil society to deepen their understanding about the various ways in which corporate power is being entrenched in the agriculture sector in India, in order to better formulate collective responses—in terms of research, campaigns and advocacy. This dossier is a selection of papers presented at a symposium in June 2019 in Bengaluru, India. Topics covered in the dossier include the corporatisation of livestock, implications of mega-mergers, land laws, role of Israeli agribusiness, the agenda of International Financial Institutions (IFIs) and the dangers posed by free trade agreements in the agriculture sector.