

# THE TWILIGHT ZONE OF INDIAN AGRICULTURE: BIRTHING AND EXECUTION OF INTEGRATED AGRICULTURE

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*This paper chalks out the trajectory of the Public Private Partnership for Integrated Agriculture Development (PPIAD), a policy platform which was conceived by global conglomerates and specific Southern government representatives and NGOs. In our view, PPPIAD decisively paved the way for corporate led policy making within the farm economy. We outline certain specific budgetary processes and directional changes within the agricultural research management system which created the necessary vacuum for emergence of a new leadership from the maturing forces of corporate globalization. Vast parts of the farm economy are yet untouched by PPPIAD, but the potential of the policy platform is enormous, given the fact that the target population of participants is small and marginal farmers. With over 80% of farm holdings being small and marginal, it would be interesting to observe how this policy spreads new kinds of production models, which are led by aggregators at one end, and an army of small and marginal farmers at the other end. Within this new model, the government's role is that of a distant bystander, as a lot of room is made available to the corporate entity to design and execute the projects, while the recruited small and marginal farmers have little room to manoeuvre. We end the paper with some optimistic speculations regarding the possibility of emergence of genuine FPO managed supply chains.*

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## INTRODUCTION

In this article we present some foundational aspects of a policy which is unraveling within the agriculture sector over the last five years and will likely unravel for quite some time into the foreseeable future. The organizational structure within Indian agriculture is still dominated by the family farm, but major changes are emerging under this new policy direction. Indian agriculture is entering into a new business core as multi-brand foreign retailers get a green signal to retail food. In June 2016, the government opened 100% Foreign Direct Investment (FDI) in domestically produced and manufactured food products. While the Narendra Modi campaign of 2014 staunchly supported medium and small domestic retailers against multi-brand foreign retailers, their stance steadily changed once the new Prime Minister took office. The new NDA government warmed up to all sorts of FDI and pretty much deepened the tracks chalked out by Manmohan Singh led UPA government. In July 2017, the Department of Industrial Policy and Promotion approved the e-retail giant Amazon to invest and retail food, along with giving approvals to BigBasket and Grofers Inc.

Our focus in this article is on the Public Private Partnership for Integrated Agricultural Development (PPPIAD), its birthing, framing and execution. We believe that PPPIAD is the essential game changer which paved the way for a corporate (both foreign and domestic) driven policy regime within agriculture. The nod to foreign retailers to enter food production and manufacturing is a natural corollary of the process which began with the PPPIAD. How do we make sense of these policy emergences and how do they connect with the farm economy; we move ahead with some of these motivating questions.

Our analysis is based on a limited amount of field work in Sonapat, Haryana; most of our inferences are based on reports and documents produced by the State, parastatal agencies, web pages of corporations and international development consortia—material which is primary data for our research, as we are engaging in a) discourse analysis around this particular policy, b) the agency and execution of PPPIAD c) expectations and speculations (of PPPIAD) for the larger farm economy and the food retail sector.

PPPIAD was a policy carved out of the *New Vision for Agriculture*—a framework and a new architecture of sorts—-which was conceived and consolidated by the World Economic Forum in collaboration with seventeen global agribusiness, finance and multi-brand retail companies in 2009. We argue that the emergence of PPPIAD (under

the Rashtriya Krishi Vikas Yojana, 2012) and its swift execution (2013 onwards) is indicative of a major structural shift in how the State and producers (farmers) relate to one another. For the larger agricultural economy within the country, at the last mile leading up to the farm, the public sector has had a visible presence through its various Krishi Vigyan Kendras (KVKs) and allied institutions (which are vertically linked to Central/State agricultural universities) at the input end and Agricultural Produce Marketing Committees (APMC) at the selling end, which until some time back oversaw the mandis (produce markets). With the working of the PPPIAD, we explain how State's functions are being reworked in such a way that the saddle and reins have shifted decisively under the control of not just the disaggregated and mostly family run private companies but the well organized and corporatized private entities, both global as well as domestic.<sup>3</sup>

With the agricultural sector opening up to contract farming (early 1990s) and subsequent encouragement of Public Private Partnerships (PPPs) since early 2000s, many institutional changes have taken place in the last two decades, some gradual (declining involvement and importance of KVKs) and others surer footed like wide ranging reforms in the APMC Acts within the States (which essentially entail that farm produce sales need not be mediated at the mandis set up under the Act). A variety of private arrangements are now permitted via reforms in the APMC Act, including allowing existing mandis to be managed and operated by agents other than members of the APMC. With the PPPIAD policy platform, a much deeper level of penetration is being sought by the corporatized private sector—both within the input (production) end and the output (marketing) end of the farm economy; a manifestation of this is the recent entry of the retail giant Amazon in the food retail economy.

The PPPIAD platform is giving rise to an entirely new support infrastructure to “manage” the sector and more significantly, “manage” the multitude of smallholder farmers. Privatized extension, disbursement of subsidies on inputs, selling insurance and managing finance, linking of final produce to intermediate and final buyers, are among the key activities a project initiator/aggregator under designated PPPIAD projects now routinely undertakes in geographies where these projects have been initiated. What distinguishes a project designated under PPPIAD from a regular contract farming project is the scale and

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<sup>3</sup>In this article, our references to private sector/capital in the context of PPPIAD will always be made towards the corporatized entities, not small and medium scale entrepreneurs or family owned companies and closely held partnerships.

scope of the operation. We will draw this distinction in later sections.

In a short span of a little over five years, the *New Vision for Agriculture* has spawned projects across Asia (Grow Asia), Africa (Grow Africa), Mexico (VIDA<sup>4</sup>) and India (PPPIAD) which have attracted over ten billion dollars worth of private sector capital (and nearly two billion dollars worth of capital already expended) and “benefitted” over nine million farmers across Asia, Africa and Latin America. Grow Asia which has currently 450,000 smallholder farmers within its fold across Vietnam, Indonesia and Myanmar, is targeting to reach 10 million smallholder farmers by 2020.

And while Maharashtra is the only State in the Indian Union where major PPPIAD projects have been implemented, we speculate that we might be on the cusp of a major organizational breakthrough within the sector. If this purported “new green revolution” has a comparable measure of success as the original “green revolution”, the organizational landscape within agriculture will be permanently altered and among other changes, tightly linked value chains will likely replace the loosely structured agrarian and allied markets. But most significantly, at the farthest end of the supply chain will be smallholder farmers and closer to the final consumer will be large retailers, operating either via supermarkets or by aggregating the large assembly of fruit and vegetable vendors (who dot bigger and smaller *mandis* across the county) under their banners. The managers of the supply chain, i.e., the aggregators (who aggregate smallholder farmers into formal/informal producer groups) will be large domestic and global conglomerates, who will likely appropriate the efficiency gains generated with the integration of the agricultural supply chain. The government’s recent approval to Amazon is expected to usher in that supply chain integration. An Amazon executive confirmed it: “Currently, Amazon provides a marketplace for sellers to sell their products. Once this approval comes through, it will allow Amazon to control the supply chain end-to-end and will allow Amazon to invest in every part of the supply chain.” If the agriculture sector does move decisively in that direction, we can expect to see developments similar to the ones experienced within Latin America since the nineties (Reardon and Berdegue 2002, Baud and Durand 2011)—rapid rise of supermarkets across the country and large scale financialization of the

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<sup>4</sup>VIDA is the English Acronym for NUEVA VISIÓN PARA EL DESARROLLO AGROALIMENTARIO DE MÉXICO

<sup>5</sup> Maharashtra is the first State to initiate the PPPIAD. Smaller projects have been initiated in Gujarat, Madhya Pradesh and Rajasthan too.

agri-food system, and as appropriation of value moves downstream in the agriculture supply chain in the direction of food retailers, the intensification of the squeeze on the smallholder farm.

The PPPIAD projects (in maize and soybean cultivation) running in Maharashtra<sup>5</sup> have grown to cover 500,000 farmers, engage with 60 organizations and have a target to reach 2.5 million farmers by 2020. In fact, PPPIAD and similar policy platforms across Asia, Africa and Latin America are paving the way for bringing thousands upon millions of farmers not just within the folds of global seed, fertilizer and chemical companies, but also within the folds of major multi-brand retailers/supermarkets, insurance and finance conglomerates. What is perhaps most significant about these initiatives is the fact that at their kernel, they are targeting the smallholder farmer.

With the PPPIAD policy platform emerging as a significant form of engagement between the State and farmers, at least in certain restricted geographies (within Maharashtra, Gujarat and Karnataka) the traditional relation between the State and farmers is being radically rewired; the aggregator/corporate entity is now intermediating between the smallholder farmers and the State. This fusing/consuming of the State sector's function into the corporatized private sector's realm is the key difference which we need to keep an eye out for. This fusion/consumption of the State's function (within the agriculture sector) has not occurred overnight with the framing of the PPPIAD; but there has been a marked acceleration since the liberalization process got underway in the early nineties. In our view, the execution of PPPIAD is an important climactic moment in this "liberalized" agriculture policy making regime which scholars and observers need to reckon with.

## **RATIONALE AND ROADMAP**

In the course of the article, we lay out the path which facilitated the birthing and adoption of the PPPIAD framework, and offer explanations and partial hypotheses for the likely path of broad developments within the sector. Seventeen global companies that "championed"<sup>6</sup> the *New Vision for Agriculture (NVA)* include a spectrum of global conglomerates, many of which simultaneously deal in physical and financial agricultural commodity markets, among other classes and categories of businesses. We discuss the role of large multi-regional and multi-national agribusinesses, finance corporations and

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<sup>6</sup> Terminology employed in the World Economic Forum (2012) document.

NGOs, alongside explaining the emergence of the entirely new entity of businesses called the “aggregators”.

We focus attention on aggregators as the essential entities which are meant to turn the dismal story of the low yield small family farm into a grand success, and make *lakhpatis* out of penurious farmers. We argue that aggregators need to be understood and acknowledged as new entities in the agribusiness and finance space, essentially because their scale of operation is statutorily much bigger and functionally they have far greater flexibility in designing the projects they run. We offer explanations for how aggregators are in a unique position to benefit from the policy framework of PPPIAD and how smallholder farmers’ quest for higher returns will at best generate low but stable returns.

The subsequent material is divided up into three sections. We begin section III by getting a perspective on the changing role of critical public sector entities within agriculture since Indian economy embarked on the triple policy of liberalization, globalization and privatization in the early 1990s. This referencing back is essential to understand the policy continuity, especially as it concerns the gradual change from public sector driven approaches to models which seek leadership of the corporatized private capital/sector. Corporatized private capital/sector’s leadership has been sought not just in influencing the functioning of the Agriculture Research Management System (ARMS) but for bringing newer approaches to the production systems as well.

In this subsection, we see how at the level of discourse, the *New Vision* birthed the PPPIAD and similar policy platforms across East Asia, Africa and Latin America. In fact, we see how the *New Vision* anchored itself in a certain discourse and used it to offer a radically different solution pathway which was articulated in the subsequent policy formulation across its different sites of action (from Asia to Latin America).

We argue that PPPIAD is also by far the most systematic attempt by the corporatized private sector to “manage” the production system within agriculture. As we flesh out the various elements of the PPPIAD, it will become evident why even the contract farming or corporate farming approaches do not go quite as far as the PPPIAD. Finally in section III, we present a table that touches upon key business details of seventeen companies/corporations that were instrumental in the *New Vision*’s articulation. In a snapshot, this table helps us to see the organized nature of the initiatives that birthed the PPPIAD. The table for section III is appended to the end of the article.

The fourth section glosses over the Federation of Indian Chambers of Commerce and Industries' (FICCI) evaluation reports of PPPIAD projects running for Maize and Soybean in Maharashtra. The maize evaluation report looks at maize growing projects led by three aggregators—United Phosphorus Limited, Monsanto Corporation and PHI Seeds Private Limited (also called Pioneer). The soybean evaluation report looks at the soybean cultivation led by the Archer Daniels Midland Company. The aim here is to understand how the new production models are implemented in practice and how the reported outlays are shared among various categories of expenses. While the FICCI reports are mostly overly congratulatory in tone, they do leave out some gaps and spaces through which we are able to build a more accurate picture of the new production system and the potentialities that lie within it. We do concede that a detailed field work based study would be the ideal tool to understand how the models are running in practice.

In both sections III and IV, we refer to publicly available documents produced by WEF, Government of Maharashtra, and FICCI. We also draw on our field work from farming sites and visits to the KVK in Sonapat District of Haryana during the last two quarters of 2016. These visits and conversations helped us to understand the process of thinning of the State's support and extension infrastructure for the farming community, since its initial inception during the Green Revolution era (rough span of early sixties to mid eighties). In the final section (V) we collate documentary findings to understand how PPPIAD uniquely advantages aggregators to benefit from the market linking process and integrating the supply chain. We also discuss conditions (with fewer odds in their favour) wherein farmer producer companies (FPCs) may still retain some bargaining strength over aggregators in a space where the State has emerged as a distant bystander.

## PREPARATIONS FOR CONSUMING THE STATE'S FUNCTIONS

### *Historical Context*

#### The Public Private Partnership for Integrated Agriculture Development

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<sup>7</sup> Farmers buy fertilizers and farm chemicals from the open market; the fertilizer and chemical producers receive the subsidy on the behalf of the farmers. The major fallout of this system is the escalation in production costs, as companies make good their losses (even at times owing to inefficiency) via assured support from the government.

(PPPIAD) platform needs to be understood within its own brief historical context. Very broadly, the Green Revolution models of State involvement into the production systems had the following elements: technology and knowledge management by the Indian Council for Agriculture Research (via its universities and research institutions), the availability of high yielding variety of seeds, subsidized fertilizer and farm chemicals<sup>7</sup> (via State, Cooperatives and private producers), the marketing infrastructure managed by the APMC Act (in a majority of States), the Commission on Agricultural Costs and Prices (to affix minimum support prices for a select group of food grains and cereals) and the warehousing support (Food Corporation of India (FCI)) given to food grains producers via the procurement process. Other critical policy guides/agents in the sector have been international entities. Food and Agricultural Organization (FAO), International Food Policy Research Institute (IFPRI), United States Department of Agriculture (USDA), International Crop Research Institute or Semi Arid Tropics (ICRISAT) were some of the key knowledge partners to the sector, while the Rockefeller Foundation and Ford Foundation were critical early funders that pushed for the adoption of Green Revolution Technologies through an approach that concentrated the resources (i.e. State funding) to specific geographies and instead of a countrywide program. This focused approach and critical State sponsored infrastructure was critical to the Green Revolution areas. Green revolution technologies were mostly tested in the States of Punjab, Haryana and Western Uttar Pradesh in the North, and in parts of Andhra Pradesh and Tamil Nadu in the South. The early gains from the Green Revolution technologies began to fade in the South in absence of assured irrigation. By and large, the main beneficiaries of the technologies were located in the Northern States.

The reason we hark back to the Green Revolution production and support models is that they set the upper bound for State's involvement in farm affairs. And this involvement had its philosophical underpinnings in a welfarist approach to policy making. This is vastly different from the transactional and instrumental approach to policy making, which is the hallmark of the liberalization era. While there isn't enough space to get into details about the philosophical underpinnings of the liberalization era, it suffices to say that most funding consortia that support agricultural policy making in India and in the larger Global South are arranged by the World Bank—an institution which has arm twisted many governments within the Global South to dismantle state run education, health and welfare programs in the name of inefficiency, while keeping a keen eye on the real reward—dismantling/divesting/



digesting the public sector to enable market access for corporate and global players.

In a majority of States, where irrigation systems were rain dependent and Green Revolution technologies did not enter, only a skeletal level of State support existed for the farm sector. In fact, up until the nineties, a vast majority of States (Madhya Pradesh, Rajasthan, to some extent Andhra Pradesh, Maharashtra and Gujarat) had a struggling agricultural sector (Mathur, Das and Sircar, 2006). In fact, some of these dawdling States (especially Maharashtra and Gujarat) are the ones taking a lead now and experimenting with newer production arrangements under PPPIAD.

Since in order to understand how functions of the State are being consumed/subsumed into the activities of the private sector and how the private and large corporations are carving out specific functions for the “Public” sector, we need to understand processes that work reflexively to create an environment more conducive to this consumption/ take-over. We will touch upon two such processes here: one in the field of agricultural extension (underfunding extension services) and second in the directional shifts within the ICAR (aligning public goals to private motive). These two processes are not exhaustive but they should be seen as indicators and enablers to the process of consumption of State’s functions into the corporatized private sector’s realm.

### *Underfunding Extension Services*

In this section we see how underfunding extension services becomes an important pathway in weakening the reach and efficacy of the public sector institutions like KVKs. We now get into specific details of this underfunding by drawing on our conversations with an Extension Education Expert at the KVK in Sonapat and through conversations we had with a set of farmers in the fields serviced by the KVK.

Extension Education is one of the chief functions of the KVKs. Key aspects of extension education involve 1) Frontline demonstration of technology at the farmer’s fields—this technology has already been tested at the agricultural university, so in functional dialect its referred to as “proven technology” 2) On-farm testing—to test whether the new technology suits the micro climatic/micro farming conditions of the place. Feedback from these tests is sent to agricultural scientists who incorporate the findings in their product development. When we asked

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<sup>8</sup> Home visits

the expert why the farmers no longer feel that extension work is adding much value to their production system, the officer initially balked and said that is not the case and that they have very regular interaction with farmer groups, though there are no farm visits to assist the farmers if they have a crop/soil health related issue. Farmers were welcome to bring a sample of soil or plant and discuss their specific concerns with the scientist at the KVK; after a little more probing the officer shared with us reasons why the Extension Service had weakened over time. One of the key reasons that emerged was the absence of adequate staff. In his words: “Earlier the government extension work was done *Ghar-ghar ja kar*<sup>8</sup>. There was a Training and Visit system (TVS) under which one Agriculture Development Officer (ADO) was to oversee the extension work in around 800 farm families. A few contact farmers were trained with appropriate skills and were meant to assist the ADO; they would go to the farmers’ fields to let them know about the latest technologies. TVS is still happening, but there is a problem of manpower. Agriculture Development Officer now has on an average about 12-14 villages. He has to accommodate the visits (scheduled throughout the year) within his 4 days-a-week working schedule (ADOs have a meeting with the Officials of the Agriculture Department every Friday). Moreover, the diesel allocation is capped at INR50,000 a year for the entire gamut of activities undertaken at the KVK, which further limits the number of visits into the field.”

As mentioned earlier, the ADO/Agent shares information about “proven technologies”. Farmers now have access to many more private sources of information, and they rarely wait for KVK staff to “introduce them” to “new” technologies, which are at least a year old; typically private companies begin marketing the new technologies even before their formal approval has been cleared by the Central/State Agricultural University. Since there are no regulatory checks (the era of License and Babu Raj<sup>9</sup> gave way to a regulatory vacuum), this administrative oversight advantages the private companies over the KVK staff who work with dated information, which is of little use to the farmer.

The consequence is that the extension agent is no longer the trusted aide and guide he once was at the height of the green revolution; now he is more like an infrequent visitor, sharing information with farmers which is already in the public domain. This was confirmed by farmers in the proximity of the KVK. When we asked them whether they depended on the advice of the scientists at the KVK, one of them joked and said,

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<sup>9</sup> License and Babu Raj refers to the pre-liberalization era where regulatory

“they can’t treat their own crops, what can they do for us”. It was also interesting for us that younger and older farmers had different ways of describing their experiences with the KVK. The older farmers who had farmed through the green revolution era had a greater appreciation for the extension work of the KVK staff. The younger farmers of the post liberalization era had not seen much efficacy in the way KVKs worked. One of them told us that the extension employees conducts field demonstrations of expensive, unviable technologies for which big private companies want to create a market. So over time there has been loss of credibility of public extensive service and the same processes (low budgetary allocations for ADOs, administrative oversight of key regulatory aspects) have reinforced overtime a notion that public sector is deficient and should make way for privatized solutions en-masse.

Interestingly, while the KVKs are still functioning, they are prime candidates to face the budgetary axe if more large scale privatized extension services come to be provided to small holder farmers under platforms like the PPPIAD.

In the next subsection, we deal with the directional shift within ICAR which reflect the second critical aspect of the changes in the State involvement in farm affairs. With this, we would have a fuller understanding of the brief historical context of PPPIAD.

### ***Aligning Public Goals to Private Motive: ICAR’s Directional Shift***

Within the ICAR, over the last two decades since liberalization, there has been a sustained push to tie research within value chains development. The value chain terminology is a variant of supply chain management discourse.<sup>10</sup> This ensures that marketability would be in-built criteria for any project to be funded and supported. While earlier scientists knew that all knowledge would be put out in the public domain, in the present scenario, they are increasingly pre-occupied with “intellectual property management”. The following is an extract from intellectual property management guidelines prepared by the ICAR, which indicates this shift— “Protecting or patenting research output in agriculture was not customary in India and other developing countries prior to the establishment of WTO in 1995. Scarcely any of the

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<sup>10</sup>Ennobling terms like “post-harvest loss management” and “improving soil health and sustainability” are catch phrases used by conglomerates and special interest groups to mobilize policy for supply chain integration on the one hand and promote the use of bio-safety suspect GM crops, which are to be considered “safe” because of low fertilizer use.

ICAR technologies were patented or commercialized. The prevailing ethos was to place technologies in the public domain for access by all. The TRIPS Agreement has led to the evolution of IPR regimes in WTO member countries. The Indian IPR laws are also made TRIPS compliant. ICAR recognizes that TRIPS compatible IPR laws in India and in other member countries are important for management of agricultural research results. Once protected, these IPR enabled ICAR technologies, by way of licensing, could be transferred to end users through private, cooperative, non-governmental and public channels. Licensing could be for commercial use or for research or both. Application of incentives and benefit sharing with scientists/innovators and human resource development in ICAR would improve the overall research environment and provide impetus for greater creativity and knowledge generation.”

Technologies developed by ICAR institutions are now routinely showcased via agriculture fairs and summits, and private collaborators are actively sought to market link the innovations. In their own words, in a conference summary document on Public Private Partnerships in 2006, an ICAR expert explains how “mutual” benefits accrue: “Private benefits from the R&D are usually company gains that stem from cost reduction and improved quality and increased quantity of sales’ products. They also relate to strategic goals such as market penetration, improved competitiveness and exploration of new markets or market power. Public benefits include a wide array of positive social, environmental and economic effects. The expert further remarks, “while the public-funded organizations have significant research results and the ability to absorb uncertainties of payoffs, the private sector seems to have an edge in factoring clients into design of technologies and diffusion processes.”

This remark underlies the increasing anxiety and urgency among the public sector research professionals to offer their work for private appropriation and help the private sector quench their thirst for bigger and newer markets. This eagerness among public sector professionals towards fulfilling private sector goals, and that too within the ARMS is an instance of how public sector’s role has been re-configured in the liberalization era; alignment of functions/projects with value chains/supply chains is what ensures continued funding for a project or laboratory, typically through multilateral research consortia originating in the World Bank and its allied institutions. We revisit some of these “expectations” and “imaginings” during the course of the article, when we delve deeper into the WEF’s New Vision for Agriculture.

In the macro discourse therefore, we argue that State entities have become agents and the large privates the principal. This very interesting reversal of roles has taken many years in the making, but post liberalization, this reversal was actively sought and pursued by the policy elite, and especially the full tenured bureaucrats and scientists at the ICAR and allied institutions.

While scholars engaging with the political economy tradition have long accused the State of being an agent of large private capital, this charge is far harder to defend now in the times of an active embrace of liberalizing policies by the State. Now even at the level of the discourse, there is explicit admission that openness towards large privates is not limited to giving them market access alone. It is much more. The large players would help the governments in shaping the agenda for action. The PPPIAD roadmap prepared by Government of India, collaboratively with the FICCI is testament to that new tradition.

We argue that multiple reflexive processes have worked to thin out the space for public sector action within the agricultural economy and this space has now been securely filled up by the organized corporatized private sector. Now we move to understand the policy framework under the PPPIAD, which was constructed in collaboration with FICCI, the prime corporate pressure group in India, to offer a new vision and direction for the agriculture sector as a whole. It is useful to note that the organized corporatized private sector is qualitatively very different from closely held partnerships or proprietorships which were the early gainers of liberalization. The sway of corporate over policy making is now well accepted; from being consultants and analysts, they have emerged as stakeholders and partners. In the following subsection, we will look into the *New Vision* document to corroborate our assertions.

### ***WEF's New Vision for Agriculture (2010)***

We begin this subsection by simultaneously examining two documents— one produced jointly by the World Economic Forum (WEF) and McKinsey & Company (2010) titled “Realizing a New Vision for Agriculture”, and second the PPPIAD framework document (2012) produced jointly by the Government of India (GOI) in collaboration with Federation of Indian Chambers of Commerce and Industries (FICCI). This reading will help us to see how PPPIAD was carved out of the *new vision for agriculture* and how policy making space is now populated by global companies, local corporates and NGOs, without much role for the local governments, except for in providing timely

financial incentives and moving legislations. While we engage in this exercise, it would be useful to locate critical shifts within the policy discourse, as PPP becomes the guiding principle of the relationship between the Government and at least the large privates (categorized as the aggregators) within the sector.

*“If we are serious about ending extreme hunger and poverty around the world, we must be serious about transforming agriculture.”*

**William H. Gates**

Co-Chair, Bill & Melinda Gates Foundation (As quoted in *Realizing the New Vision for Agriculture*)

World Economic Forum’s New Vision for Agriculture shares much with the usual vision documents emanating from the Global North for the Global South. It is useful to recognize that agriculture has been the sight of globalized policy making much before the World Bank and IMF came up with the recipe of structural adjustment and macroeconomic stabilization for the Global South. In fact, the kernel of these globalized agricultural policies can be located around the time of the Bretton Woods Conference in 1945. The question of hunger and poverty has endured since the mid-forties and has been the “guiding” motif of most of these global capital initiatives.

Up until the moment of the *New Vision*, smallholder agriculture has never been attractive to corporatized businesses. The smallholder farmer never had the “risk taking” appetite, the faintest of which requires collateralizable assets (which the smallholders never quite had). Even at its height, the reach of Green Revolution was mostly confined to limited pockets because the average size of the land holding across the country would not make adoption of new technologies (which needed high volume of fertilizer, pesticides and assured irrigation for the high yielding seed varieties to deliver) viable. This has been a long and enduring problem within most of the Global South where the majority of agricultural holders are small.

It is worth speculating as to what would be new in a New Vision for Agriculture. How does the New Vision bring anything new to the table? The New Vision document after deliberating for many page lengths on what ails the existing production models, including contract farming, builds on the idea that major transformations are needed if we are to feed the world, and especially the world’s hungry billion. The

document begins with the customary jingle “agriculture provides much more than food”, “world must produce more with less” and “agriculture can better fulfill the world’s most basic social needs”, “the time to act is now”. After expending a few hundred words on these slogans, the authors wrote: “Realizing agriculture’s full potential requires *fundamentally shifting the way the system operates*”.

That the New Vision is a mono-crop vision comes next: “*Examples of robust collaboration concentrate on a particular crop or geographic region such as value chain interventions, infrastructure corridors, breadbaskets and national sector transformation*”. In a section titled “Rethinking Agriculture” the authors create a comparative chart between what they call “Yesterday’s approaches” and what is needed “tomorrow”. Among the most relevant category of comparisons here is the one on: 1) productivity growth “*the acceptance of low smallholder productivity*” in the past and the need for “*Smallholder improvements critical to address global hunger and poverty*” in the future and 2) scope improvement—*while yesterday’s approach had a “focus on farm-level output and yield”, tomorrow requires “efficiency in whole value chain for access and food security”*. Additionally, the comparative chart mentions that, while “yesterday’s” policies were driven by priority on calories and increasing cereal production, “tomorrow” has to be driven by crop diversity, nutritional content and food affordability. Nothing in the New Vision document invokes crop diversity after its perfunctory placement in the comparative chart. In fact, the mono-crop or minimum diversity idea is a key mover for the whole Vision. The authors of the *New Vision* however have dutifully embraced the vocabulary of their critics and included words which convey a genuine sense of concern for the people and their ecologies.

In spelling out its expectations from the governments, the *New Vision* states: “the policy environment must provide incentives for players to invest in agriculture while protecting the welfare of citizens and the environment. This entails increasing market access while ensuring sufficient public goods (such as research, education and gender equity).” The above phrase, “must provide incentives for players” is decidedly a semantic shift from the pre-liberalization era; it is hard to imagine that such acts of openly pressurizing sovereign States to incentivize and protect capital’s interests would be easily heeded. “Increasing market access” is another important part of the liberalization narrative, where the phrase is meant to imply that governments should make room for privates (both domestic and global) by moving out of segments where sufficient private profit opportunities reside. In large parts of the country, which have not been touched by the PPPIAD, the

main truck between government and farmers is through the public extension service (run from Krishi Vigyan Kendras) and the subsidies they receive in fertilizers, chemicals and farm implements (which are purchased through the market). But as explained earlier, due to the lack of sufficient manpower being invested in the public extension service, the number of visits to a farm are inconsequentially small, due to which the farmers have come to rely on private agents (for advice on plant and soil health) in any case. Thus, the feebly functioning public extension service is largely at the mercy of government funding and could be scrapped without much resistance, at which point the field will be wide open to private players. Therefore, while the market for private extension is very limited at the moment, it may be fairly robust in the near future.

At the core of the New Vision however, is the special role it sees for businesses. In fact, in a section titled “Moving Forward Together” in the document there’s a remark in bold face that “the companies leading this initiative commit to realizing the new vision for agriculture.” “But we cannot do it alone. Success will require the innovative strength of industry, the leadership of government, the community mobilization of civil society and the entrepreneurship of farmers.” The *New Vision* documents end with a soul searching plea written in blue boldface: “What will you do?” The “you” in the last sentence presumably refers to governments. The seventeen companies that drew up the New Vision in collaboration of McKinsey and Company, offered several regional (South and East Asian countries, select African and Latin American) governments with a policy roadmap to carve out specific policies to enable this corporate driven approach to managing agriculture for smallholder farmers.

What makes the New Vision document interesting from an analytical point of view is the way the case for large domestic and global private players to *manage* smallholder agriculture is constructed. This management function is not explicitly spelt out; in fact, the whole document builds a certain narrative about the dire consequences facing the world if “fundamental” changes within agriculture and food production are not carried out. In about two short paragraphs (out of a twenty six page document), which are reproduced below, the *New Vision* spells out, the envisaged role for the private companies and conglomerates:

*“Achieving the New Vision requires the private sector to be engaged as an active partner. This includes, but is not limited to, traditional*



*competencies such as technological expertise, financing and sourcing. It also extends to more proactive roles like private extension, smallholder aggregation (e.g. nucleus farms, warehouses), nutrition education and multi-stakeholder coordination. In stepping up to lead the transformative process, companies can harness the power of markets to deliver enduring impact."*

The key words for our purpose here are "private extension", "smallholder aggregation" and "multi-stakeholder coordination". The FICCI evaluation of the Maize and Soybean projects running in Maharashtra, spell out some details of how "private extension" and "smallholder aggregation" works. It will also be useful to compare this with the policy text of PPPIAD—how the government's policy text carries these terms and concepts verbatim. Let us now turn to the policy statement of PPPIAD. In the policy text/statement we should look out for what "smallholder aggregation" really entails. In our view, smallholder aggregation is the real new innovative idea on the table, which unfortunately is fraught with a lot of risk for the smallholder farmers. For the corporations and companies, it is a great innovation, if the governments are willing to lend structural and policy support to it.

### *Seventeen Corporate Stakeholders of the New Vision*

Details of the seventeen global companies that were instrumental in carving the *New Vision* are in the appendix. These details are meant to indicate the scale and business strength of these entities. Evidently their strength and scale enabled them to exert pressure on Southern governments to come up with a suitable policy environment to "manage" smallholder farmers, without themselves getting into the complicated territory of managing their land titles or engage in direct farming operations. What makes the reading of the corporate bias of these companies useful is the fact that all these conglomerates are into multiple lines of businesses which are often controlling big swathes of the physical and financial commodity markets in which they operate. We also mention the projects they are running within the South to connect with small and marginal farmers.

### *Unbundling the PPPIAD Policy Statement*

The following is an itemized break-up of the main features of the PPPIAD as proposed under RKVY in 2012:

- Corporates to propose integrated agricultural development projects across the spectrum of agriculture and allied sectors,

taking responsibility for delivering all the interventions through a single window. Each project to target at least 5000 farmers spread over the project life.

- Complete flexibility in design, but ensuring an integrated value chain approach, covering all aspects from production to marketing. Projects can span 3-5 years.
- Average investment per farmer during project must be quantified, though an average of Rs. 1,00,000 per farmer will be a desirable benchmark. Government support will be restricted to 50% of the overall investment proposed per farmer, with a ceiling of Rs. 50,000 per farmer through the project cycle. The remaining investment will be arranged by the corporate through institutional financing and its own and farmer contributions. All subsidies will be directly routed to farmers or reimbursed to project leaders after verification of asset distribution to farmers.
- Key interventions which must feature in each project are: a) mobilizing farmers into producer groups and registering them in an appropriate legal form or creating informal groups as may be appropriate to the area and project (joint stock or producer companies, cooperatives, self-help group federations etc.); b) technology infusion; c) value addition; d) marketing solutions; e) project management.
- Financial assistance will be provided by State Governments directly to corporates through the RKVY window after the project has been approved by SLSC, subject to a ceiling of Rs. 50,000 per farmer or 50% of the proposed investment per farmer, whichever is lower. Subsidy to farmer for availing drip/sprinkler irrigation/mechanization/grading/shade nets etc., could be considered separately as it is a *large* investment. Therefore, subsidy availed by farmers for drip / sprinkler / mechanization / grading / shade nets, etc., under NMMI would not be considered as a part of this Rs. 50,000 ceiling.
- Projects can also be proposed by corporates to State Governments through Small Farmers' Agri-business Consortium (SFAC). This institution has been designated as a National Level Agency for this purpose by Department of Agriculture and Cooperation, Govt. of India. SFAC will act as a facilitator to link the project promoter to the concerned State Government. The role of SFAC will be to examine the proposal from a technical viewpoint and

thereafter propose it for funding to the concerned State. SFAC will be restricted to being a support agency to facilitate the process of technical appraisal, coordination and facilitation; it will not be involved in implementation directly or handling funds.

- An independent monitoring agency (like NABARD or other suitably qualified consultancy firm with no conflict of interest with the particular project it is to monitor) will be appointed by the State government to closely track the performance of the project and report to all relevant stakeholders in the State and the Central government.

The first two items are indicative of the functional autonomy given to the aggregator/corporate entity and scale (at least 5,000 farmers) of the projects under PPPIAD. It is evident from the FICCI evaluation report on the Maize Project that corporates get help from State governments to recruit participating farmers, even though the proposed mobilization of farmers are meant to be undertaken by the aggregator/corporate. "While on one hand Government officials streamlines the project by identifying the project area and short listing the beneficiary farmers. UPL officials on the other hand focus on ground level implementation of the project." Curiously, the aggregator has the flexibility to work with an informal group of farmers as well. They are not bound to work with farmers under Farmer Producer Companies or Organizations alone; with this flexibility the aggregators have an opportunity to exert their monopolistic as well as monopsonistic power, over the disorganized groups or individual farmers, since aggregators are sellers of critical inputs and buyers of the produce.

Additionally there is an ambiguity in the policy text about the way financial assistance would be made available to the farmers. In item three, the text reads that all subsidies will be routed directly to farmers, while the next item reads that financial assistance will be provided by State governments directly to the corporates. Evidently this ambiguity can allow for a variety of interpretations and implementation modalities, which more likely benefit the capital rich aggregators. Corporates are proposed to make direct investments (via institutional financing or their own funds) on a per farmer basis. These expenses include expenses on seeds, fertilizer, soil testing and improvement investment. Notice that expenses on seeds and fertilizer cannot be treated as investments in an economic sense as seeds are consumable. So in an accounting sense, we can treat them as working capital expenses for which the farmer will come to depend on the corporate. Moreover, financial assistance from

the government will also be channelled to the farmer via the corporate; yet another means by which the corporates' position is strengthened compared to the farmer. Through this resource control (both financial and physical) the aggregator is in an indomitable position. Even mainstream economists with a game theoretic frame will call foul as the playing field between the farmers and the aggregator/corporate heavily advantages the aggregator at the expense of the farmer.

It is useful to append the postscript to the PPPIAD policy text, which uses the same discursive strategy that the *New Vision* employed to secure its case for smallholder aggregation and supply chain integration. In many oratorical moments, politicians and bureaucrats praise and compare the smallholder aggregation and value chain integration under PPPIAD to AMUL's initiatives. The policy postscript below also finds this misplaced comparison.

*“Agriculture GDP is heavily weighted in favour of high value produce (horticulture, animal husbandry, dairy, poultry and fish products); as much as 75% of agricultural GDP value today is contributed by these products. Recent evidence suggests that this segment is increasingly favoured by small and marginal producers as it is labour intensive, offers quicker returns and can engage a higher proportion of women (especially dairy activities). Thus, there appears to be immense potential to leverage high returns from non-cereal sub sectors, especially for small producers. This fits well with the XII Plan's vision for “faster and more inclusive growth” and creative and collaborative effort can result in this vision being translated into reality.*

However, several hurdles need to be overcome to reach these highly desirable goals. For one, 83% of land holdings in the country are now marginal or small and unless there is an urgent intervention in aggregating producers through farmer's institutions, we are unlikely to achieve scale in production and leverage it to the advantage of all stakeholders, especially primary producers. The fragmented agricultural marketing value chain and the large number of intermediaries are major constraints, leading to wastage, low returns to producers and volatility in availability and prices at the consumer end. Estimates of the wastage of perishable such as fruits and vegetables range from 18-40% but they are undeniably too high and penalize both producers and consumers. The example of AMUL in milk demonstrates the benefits of value chain integration in agricultural produce. Yet, an efficient supply chain for cereals, perishables and other high value agricultural produce is unlikely to materialize unless there is parallel investment in

aggregating farmers and farm produce at the bottom end, and strong and direct linkages are created between producers and market players, both for retailing raw produce and processed food.”

### *Contract farming versus Integrated Agriculture*

Since the late nineties, a variety of private sector initiated arrangements have been permitted in production and marketing. Key among production arrangements are contract and corporate farming. While contract farming typically involves pre-contracting among farmers and private buyers a certain quality of produce for an assured price, corporate farming involves ownership of production assets by the company or corporate entity. There is a rich literature which deals with the functioning of contract farming within India; a production arrangement which has spread across many farms in the country (Pramod Kumar 2006, Vijay Paul Sharma 2008, Sukhpal Singh (PAU) 2004, S. Erappa 2006, Nivedita Sharma 2016) The scope for corporate farming however is much more limited, as land ownership (by far the most critical production asset) is fraught with many complications including the complexities involved in verifying or generating new titles (Benjamin and Raman, 2011). In this subsection we will draw some distinctions between contract farming and the farming practices emerging under PPPIAD. As we will see, the distinction is substantive and not nominal. The literature from contract farming points to the finding that the practice has been successful mostly for large farmers (Glover and Kusterer 1990, as mentioned in Kumar 2006). In his article Pramod Kumar (2006) distinguishes between direct and indirect contract farming, where the latter practice involves intermediation by some State agencies. Kumar argues that farmers stand to gain more on average if they engage in direct contracts “irrespective of farm size”. A closer look at the article reveals that the number of data points used to arrive at this inference is tiny. There is little evidence to support that companies willingly work with small and marginal farmers. In fact, under the PPPIAD framework, the target is to create enough enablement for corporates so that they would eagerly engage with small and marginal farmers. Interestingly Nivedita Sharma’s (2016) article argued that contract farming should be promoted for small farmers and that policy should incentivize this process: “Small farmers’ participation can be improved through better institutional mechanisms, including group contracts and incentives for contracting agencies to work with small farmers”. We argue that PPPIAD is precisely the policy platform that addresses this policy “deficit” and generously incentivizes contracting agencies (in this case the large corporates/aggregators). Rajawat and

Subramaniam (2015) on the other hand, argue for a smaller farmer driven approach to aggregation rather than one which incentivizes contracting agencies.

It is our contention that contract farming should be seen as a transitory state within Indian agriculture. Since the bulk of farm holdings are small and marginal (over 80%) and contracting companies, up until PPPIAD have mostly engaged with medium and large farmers, the scale of contract farming is automatically fairly limited. In fact, as PPPIAD enabled projects spread and begin to aggregate small and marginal farmers, the dynamics of contract farming will also change. What will likely replace the old models of contract farming or a vacuum of models for the small and marginal farmers is “integrated agriculture”, a term we construct from the underlying semantics of the PPPIAD policy text which has a variety of phrases to describe this new phenomenon: integrating the value chain, aggregating smallholders, aggregating producers through farmers institutions, managing post harvest operations etcetera. Integrated Agriculture will be aggregator driven and will connect upstream with capital rich corporates, who will later be downstream buyers in the supermarkets, hypermarkets and e-markets operating through warehousing. The new tax regime with the Goods and Services Tax will also enable corporates to move perishable inventory with far greater ease across multiple State borders, and help them to consolidate and emerge as regional specialists, if not sole monopolists.

## **MOVING TOWARDS INTEGRATED AGRICULTURE: MAIZE AND SOYBEAN PROJECTS IN MAHARASHTRA AND GUJARAT**

We provide an excerpt from the text of Maize Evaluation Projects, to get a drift of arguments the FICCI produced report has made. Recall that the last item of the policy text we appended in section III.2.3 stated that *an independent monitoring agency (like NABARD or other suitably qualified consultancy firm with no conflict of interest with the particular project it is to monitor) will be appointed by the State Government to closely track the performance of the project and report to all relevant stakeholders in the State and Central government*. Note that FICCI which has graciously acknowledged support of PPPIAD in coming up with the evaluation report does not meet the criterion of an “independent monitoring agency”. FICCI was instrumental in carving the PPPIAD, collaborating with the government from the word go; how then can they be given

the job of evaluating projects that are set up by companies that are their own associate members. The excerpt from the Executive Summary section of the evaluation report follows:

*FICCI undertook the evaluation of Maize project implemented by United Phosphorus Limited, Monsanto India Ltd and Pioneer (PHI Seeds Ltd) in the year 2013, Kharif season. The objectives of the study were to assess the outcomes in terms of increase in productivity of maize, improvement of farm incomes; document the processes of linkage of farmers with input and output markets; and to identify the processes that enable a successful partnership between the Government, private industry and farmers.*

*The project on maize, implemented by three companies in different districts aimed at improving the standard of living of maize growing farmers by enabling/empowering them to be self-reliant through supply of high yielding planting materials, providing agronomic support, assisting in adopting advanced agricultural practices, providing market linkages, and sharing experiences of research and development in maize cultivation.*

*Direct connect with the farmers, well-planned training programmes and field demonstrations have played a key role in engaging the farmers and informing them about the modern methods of farming of maize.*

*The project has enhanced the productivity of maize with the application of right kind of inputs such as seeds, fertilizers and knowledge about appropriate farming practices such as increasing the plant population by maintaining plant spacing efficiency. Regular advice on extension services by project partners have contributed to the adoption of best practices resulting in enhanced maize productivity to 24-30 qtl/acre. Innovative extension models such as UNIMART of United Phosphorus Ltd, MEAS(Mobile Farm Advisory Services) of Monsanto India Ltd and hot line technical guidance by PHI Seeds Ltd has been appreciated and embraced by the farmers at large.*

It is hard to overlook that the language of the evaluation report reads more like a promoter's red herring prospectus. "Having realized the fact that new technologies for sustainably increasing the crop yields are essential, PPPIAD project takes a holistic approach to provide end to end solutions to the maize growing farmers in Maharashtra. The PPPIAD project on improving the productivity of maize in Maharashtra

looks at major reasons for low productivity in maize - such as poor soil fertility, use of low level of inputs like manures, fertilizers and crop protection chemicals, high labour cost and crop loss due to diseases, lack of resistant varieties and post-harvest losses.”

A closer look at the cost structure reveals some interesting facts. We take a couple of examples from the data reported by the FICCI evaluation team. “The total project cost which involves contribution from all the mentioned stakeholders is INR 1,882 lakhs. Out of total project cost, the maximum expenditure is made on providing subsidized agro inputs to the maize growing farmers, followed by expenditure on agri extension activities”. It is useful to ask what the term “subsidized agri inputs” contains. There is only one category of expenses under this. For instance, United Phosphorus Limited, for a total project size of 852.8 lakhs, agri inputs cost about 740 lakhs, which is spent exclusively on seeds (which are a hybrid variety PAC 740 marketed by Advanta, an associate of UPL). The report claims that the company is offering the seeds at a subsidized price, a claim which is laughable:

*“The contribution of UPL in providing hybrid seeds: The cost of hybrid seed PAC 740 per kg is Rs.185/Kg, which is sold at the subsidized price of Rs. 120/Kg to Government of Maharashtra under PPPIAD project. Thus, Rs. 65/Kg is the company contribution in this joint project”. Rs. 65/Kg reduction in price (which is set by the company itself, and not administered by the government) is the incentive the company is offering to get monopoly rights over this captive market for seeds. How can it justifiably be called a “subsidized price”? If this is how company contribution is calculated, it is facetious. In fact, the project secured a market worth INR 740 lakhs for UPL. This same arithmetic is applied to calculating company contribution by Monsanto and PHI Seeds (the latter is a subsidiary of Dupont).*

It is not evident from the report whether the expenses on Extension Services are borne entirely by the corporate or are they partly borne by the government. Notice that even if companies provide “free” Extension to farmers, it is an expense which is a worthy business investment. The company is dealing with a captive population of farmers and until the time the company’s project is revoked by the government, the farmers will remain attached perforce. From the company’s point of view therefore, this captive market for inputs is highly desirable and if they can get farmers to further participate in crop finance schemes to fund

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<sup>11</sup>More research is required to find out how the PPPIAD farmers are financing their working capital for cultivation.



their working capital, greater earnings could be had from the credit cycle.<sup>11</sup>

The FICCI evaluation reports for the Archer Daniel Midland's (ADM) project on soybean cultivation in Latur district of Maharashtra is far more extensive compared to the Maize projects run by UPL, Monsanto and PHI seeds. ADM's association with Latur goes back well before the PPPIAD project's initiation (about fifteen years in total). The PPPIAD project has gone about raising the adoption rates of the high yielding DS 228 and MAUS 71 variety of seed among the small and marginal farmers, apart from training farmers to engage in seed production<sup>12</sup>. ADM is primarily a grain trading company and the evaluation report gives detailed information about the opportunities in the growing soybean market. Unlike the seed companies that initiated the Maize projects (they match potential buyers to the farmers through procurement meetings), ADM is a major procurer of the produce from the farmers directly. ADM also connects farmers to warehouses which issue negotiable receipts to farmers who can sell their produce either on the spot or in the forward market. One of the major project objectives is training farmers to connect with the commodities exchange.

Interestingly, ADM's Soybean project is anchored in a different business model where the earnings are driven through movements in commodity markets. According to the evaluation report, the prices the ADM procurement centre's buy at are an average of the prices in the nearest mandis, prices in other markets and prices on the spot and forward commodity exchanges. At the time of procurement, rigorous quality testing is done and the realized price for the farmer depends on quality and condition of the lot he/she brings forth. The MSP for soybean has more than doubled over the last seven years to ten years and the global demand is also fairly steady. From a strategic point of view, ADMs model is far more securely placed. Unlike the seed companies, the ADM extension service has far greater interest in post harvest management since ADM's physical stocks holdings globally move commodity prices. With such specialized information on soybean commodity markets, farmers cannot hope to "beat the market/exchange" in comparison to the price the ADM procurers offer them but they do have a chance of hedging their earnings, against adverse price movements.

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<sup>12</sup> The seeds used by the PPPIAD farmers are not self produced, through the training offered by ADM extension agents. The seeds used were produced by the State Government and Agriculture Universities.

Therefore, while the ADM model is focused on post harvest management of inventory and determining the most optimal price in a volatile market, the Monsanto/UPL/PHI Seeds models are more traditional as they are looking to find captive markets for their high yielding variety of seeds. However, what is common between the two models is the minimal level of State involvement. All the intermediation between the State and the farmers are now via the company/corporate entity. Whether the farmers are organized via an FPO or informal groups, their ability to move vertically or laterally is severely restricted. What has replaced the ravenous middleman is the highly organized and sophisticated corporation, before which the farmer has infinitesimally small bargaining power. If and when business giants like Amazon move into production and marketing (the full integration of the supply chain), we can expect to see how companies with much greater monopsonistic power will lock in the prices for sellers, and earn handsomely from the consumer end.

## CONCLUSION

Our article looks into the emergence of newer production paradigms within Indian agriculture, guided by specific policy changes. Policies don't arise in a vacuum. The headwinds of liberalization of the nineties altered much of the policy environment within India and vast regions of the Global South. While agriculture sector had had its twisted tryst with modernity much earlier on with the embarking of Green Revolution, much of that process was guided by the benign hand of the Central Government. Overtime that grip weakened and the public investments into the farming sector came to be viewed as a drain on the public finances. This was the dawn of the era of liberalization, globalization and privatization. While the claims that big farmers benefitted from the bulk of subsidies were partly true, it is also true that farming was viable for small and marginal farmers only in the presence of these subsidies. Large parts of the country outside the Green Revolution periphery had a very limited amount of policy support. While some among them picked up steam through involvement of activist State governments (like Madhya Pradesh (the State which is the prime supplier of wheat in the country) Andhra Pradesh and Karnataka and Tamil Nadu to some extent), large part of the agricultural economy was moving on its own limited steam.

The early 2000s saw the gradual maturation of the globalization processes. The 2009 World Economic Forum meetings among specific governments, and seventeen corporations and prominent global NGOs

produced a new road map to invest and engage with the agricultural economy within select regions of the South. The PPPIAD was a policy carved out of this same fabric. For the first time, in 2012, the RKVY opened the doors wide open for corporations to invest and engage with the farm economy. The aggregator driven projects require an assembly of at least 5000 farmers before the project can sail through. State government of Maharashtra offered support beyond their statutory duties to assist UPL, Monsanto and PHI Seeds in recruiting small and marginal farmers for their projects. What is worrying is if public offices get mobilized in fulfilling purpose of private corporations, governments will likely turn a blind eye to protecting their own citizens against corporate excesses. This peculiar consumption of the State's functions by the corporations within the emergent and emerging agricultural economy can possibly have only a few counters.

S. Ryan Isakson, 2014 discusses the perils facing small farmers in an agricultural market dominated by large corporates. Financialization, is a natural by-product of processes that emanate within the credit cycle for capital deficient smallholder farmers. Even though large buyers within agricultural markets may insist that all smallholders need not sell to them, the smallholder farmer's options are fairly limited. While the old agricultural economy had a battery of artihyas/middlemen at the APMC set up mandis who managed the finances of the small farmers, the new farm economy is getting linked to the organized banking sector and the commodities exchanges with their own attendant promises and risks (at least within the PPPIAD project regions).

In the article, we have also drawn attention to aggregators within agriculture. In our view, aggregators help to solve an essential capital conundrum—they make profits possible in smallholder agriculture. While for the Green Revolution hybrid technologies, profitability required scale—the big or medium land holders were the prime beneficiaries. In fact, the spread of the green revolution technologies were limited across the country primarily because smallholders could not adopt the package of inputs (hybrid seeds, adequate fertilizer and assured irrigation) and turn a profit. However, the organizational innovations via the PPPIAD are creating new opportunities for profit from smallholding farms, which the aggregators will likely harvest. In the current scenario, the aggregators work simultaneously with many groups of small farmers or farmer producer organizations (FPOs) and streamline investments (both public and private) in such a way that farm produce is linked to the market through proprietary channels worked out by them.

Our contention is that the fragmentation of land and dominance of landholdings by small and marginal farms is the popular way to construct the problem of rural distress. Such references are replete in the literature. In our view, this construction itself is a problem and viable solutions can emerge if even existing instruments are genuinely explored, instead of pushing them under the rug. De Schutter (2011), has argued that small and medium farmers can gain from contracting too, if they aggregate their produce and collectively bargain for better terms. Rajawat and Subramaniam, (2015) explore the viability of such aggregations by small and medium farmers. They sharp shoot at a key challenge facing the Farmer Producer Organizations (FPOs) in India. Instead of talking about incentivizing agents to contract with small and marginal farmers, Rajawat and Subramaniam, (2015) offer a solution which would empower FPOs and potentially move us towards more farmer managed supply chains. They argue that while new legal provisions unburden the FPOs from the overly burdensome legal framework that cooperatives faced, the requirement that producers qualify as shareholders constrains these FPOs from raising adequate capital, especially when the FPOs are constituted by small and marginal farmers. "While FPOs with limited capital can (still) undertake input supplies, extension services, aggregation of produce etc., they still find it difficult to venture into sophisticated areas such as warehousing and processing, branding, packaging and agricultural marketing."

The control of corporations on policy making is stronger than ever in the past. Even seasoned bureaucrats don't hesitate to admit in public forums that the government increasingly relies on corporates to plan and make policies. Given this intensification in power of the corporations and their sway over policy making, we believe that alternatives are slowly but surely emerging. Farmer mobilizations to get better terms of trade have intensified in the past few years. Newer alliances are being sought among aggrieved groups, both on and off the farm and we hope it will result in politics that produces a better negotiated outcome among the various groups.

We end on a positive note, hoping that the emergent politics will put the necessary policy correctives in place to protect the interest of small and marginal farmers, so the possibility of genuinely FPO driven supply chains emerges within India. Looking at the global trends, the likelihood of this event is slim but we must remain optimistic.

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# APPENDIX:

## BIOS OF 17 GLOBAL CONGLOMERATES THAT CRAFTED THE NEW VISION FOR AGRICULTURE

### 1 Archer Daniels Midland

**Principle Lines of Business:** Processing of oilseeds into edible oils, animal feeds and feed ingredients, grain trade, provide cargo and warehousing facilities, ethanol production, investment in commodity markets, fund management services, investment services, brokerage, investment and clearing services to ADM partners

**Major Subsidiaries:** ADM Investor Services, Archer Financial Services, Balarie Capital Management

**Presence in India:** Since 2009 in the States of Madhya Pradesh, Rajasthan, Maharashtra, Karnataka, Bihar, and Andhra Pradesh. Partnering with the Maharashtra Government for PPPIAD

**Other Significant Details:** Owns over 265 processing plants in 75 countries of operation, Along with Bunge, Cargill & Louis Dreyfus, controls 90% global grain trade, world's 3<sup>rd</sup> largest processor of oilseeds, corn, wheat & cocoa, accounts for 1/5<sup>th</sup> of ethanol supply in USA.

### 2 BASF

**Principle Lines of Business:** Chemicals, including agricultural, cosmetics, homecare, plastics, oil and gas. Partnering with Monsanto in the field of GM Crops. Logistic services for chemicals (in Germany) Real Estate Services (Germany), Consultancy, IT services, supply chain management Production of Catalytic Convertors Recently acquired Rolic AG: producer of LCD/OLEDs

**Major Subsidiaries:** BASF Schweiz, formerly Ciba (Swiss Chemical Production company), Engelhard Corporation, Wintershall Holding AG

**Presence in India:** Entered as R A Cole in 1943. Changed to Indoplast in 1963 and to BASF India in 1967. Samruddhi Farmer training project since 2007 for increasing farm productivity and farm incomes. Agriculture Research Station: Special focus on Indian agro-climatic conditions. Located in LoniKand, Pune.

**Other Significant Details:** Biggest Chemical producer in the world. Biggest supplier of ingredients for cosmetic and homecare industries. One of the biggest players in palm oil supply chain management. Collaboration with Solidaridad in Indonesia to increase palm oil production by small farmers

### 3 Bunge

**Principle Lines of Business:** Producer, processor and exporter of refined and Vanaspati oils. Major player in global grain trade. Production of fertilizers. Manufacturer of Biofuels. Asset management companies (for investing in land and certain productive assets; in Latin America mainly)

**Major Subsidiaries:** Bunge Global Markets, Bunge Limited Finance Corporation

**Presence in India:** Bunge India Private Limited: Founded in 1937. No direct agro-production in India. Just oil refineries and processing plants. Acquired Dalda (Banaspati oil) from Unilever in 2003. Focus area of function: North India; processing unit at Rajpura, Punjab. Plant in Bundi, Rajasthan involved in direct buying of Soybean from SanriddhiMahila Crop Producers Company. Plant closed in 2015. 2009: involved in a transfer pricing related case and asked to pay extra taxes

**Other Significant Details:** Found in 1818 in Netherlands; shifted base to USA in 1999. With ADM and Cargill, produces >60% soy in Brazil; provides seeds fertilizers, agrochemicals, storage and transportation facilities. Largest grain trader and fertilizer manufacturer in South America. World's largest producer of soybean oil. Allegations of engaging in transfer pricing in Argentina and Uruguay. Charged for violating Commodity Exchange Act by US Commodity Futures Trading Corporation in 2009. Major Member of FEDIOL, EU's oil and protein meal industry representative.

### 4 Cargill

**Principle Lines of Business:** Refined oils, Food ingredients for food manufacturers and food service providers. Produce, process, store, trade and market agricultural commodities. Animal feed and therapeutic care products, Risk management and financial services, Freight solutions, energy commodities and metal products, Chocolate products: *Peters*, Aquaculture



**Major Subsidiaries:** AgHorizons, Black River Asset Management, CarVal Investors, EWOS (Norwegian fish-food company), Shareholder in Memphis Meats (producer of lab-generated meat)

**Presence in India:** Started in 1987. Sells Leonardo, Gemini and Sweekar brands of edible oils. Has acquired (bought) 5 oil brands, while building only 1, with a goal to broaden their branded consumer base

**Other Significant Details:** One of the 4 biggest grain traders in the world. The largest private company in the USA; one of the largest meat packers in the country. Supplier of processed food products to global brands like Kraft, Nestle, General Mills and Unilever. Accused of destroying Brazilian rainforests in the wake of their expanding soy (and other commodities') production, by Greenpeace in 2003

## 5 Coca-Cola

**Principle Lines of Business:** Aerated drinks, Water, Beverages, Energy Drinks

**Major Subsidiaries:** More than 100 different subsidiaries with 100% stake in most of them.

**Presence in India:** Presence in India: 1956-1977; 1993-present. Project Unnati, 2011: along with Jain Irrigation. To train farmers in Ultra High Density Farming, to increase mango productivity in the country. Aim to extend it into a "Grove to Glass" program.

**Other Significant Details:** Project Nurture in Kenya and Uganda, in association with Bill & Melinda Gates Foundation and TechnoServe: to establish small farmer centric mango and passion fruit value chains and local clusters. Will promote its penetration in East Africa where the company markets its products based on local preferences.

## 6 DuPoint

**Principle Lines of Business:** Crop Protection products, Seed Production and Distribution

**Major Subsidiaries:** Pioneer

**Presence in India:** Set up in 1994, Observes Product Stewardship Day twice an year since 2013 to "create awareness amongst farmers and retailers regarding safe use of crop protection products.

**Other Significant Details:** Ranked 1<sup>st</sup> in the Access to Seeds Index released by Access to Seeds Foundation. Along with Monsanto and Syngenta, controls around 50% of the seed market

## 7 General Mills

**Principle Lines of Business:** Retail, Bakery and Food Services, Exports, Global Business Services, Supply Chain Management.

**Presence in India:** Present in India since 1996, Aims to work with small farmers, NGOs and industry in the developing countries, to achieve sustainable development. Includes sourcing its raw materials from small farmers.

**Other Significant Details:** Efforts to help small farmers in Brazil and Sierra Leone to develop bee-keeping businesses, Helps Africa, Uplifted educational program in Sierra Leone, Partners with Häagen-Dazs to make smallholder vanilla farming in Madagascar economically viable, Provides interest free loans to farmers in Mexico to buy drip irrigation equipment, Join My Village: in collaboration with CARE to empower African girls and women and fight poverty

## 8 Kraft Foods

**Principle Lines of Business:** Processed Food Products.

**Major Subsidiaries:** Mondelez (formerly Cadbury): Acquired in 2010. Primarily a chocolate manufacturer.

**Presence in India:** Started operations in 1994 as H.J. Heinz Company. Brands include: Glocon-D, Heinz Ketchup, Complian, Nycil, Sampriti Ghee, Tang, Oreo. Manufacturing facilities in Aligarh and Sitarganj. Kraft food's one of the top 10 priority markets. Cocoa Life Project: By its subsidiary Mondelez (formerly Cadbury) in Southern States to promote cultivation of cocoa as an intercrop with coconut, arecanut and palm oil. Mondelez also procures cocoa from all cocoa growing regions.

**Other Significant Details:** Operates in 170 countries. Merged with Heinz in 2015. Cocoa Partnership: Started by Cadbury, carried forward by Kraft in association with USAID for investing in cocoa farming in Ghana, India, South-East Asia and Dominican Republic.

## 9 Metro Foods

**Principle Lines of Business:** Process food Production and distribution. Agents for companies dealing in frozen and dry food; eg McCain, Goodrej Yummies, Del Monte etc. Involved in Supply Chain Management for their own products.

**Presence in India:** Started in 1993 in Kolkata, Primarily present in Eastern India, Own cold storages in Kolkata, Siliguri, Cuttuck and Assansol.

## 10 Monsanto

**Principle Lines of Business:** Production and sale of agricultural inputs (seeds, insecticides, pesticides, herbicides, and other chemicals).

**Major Subsidiaries:** Dekalb Brand, In late 2016, Monsanto had a merger with Bayer

**Presence in India:** Entered Indian market in 1988, after World Bank gave loans to India on a condition to privatize and de-regularize its seed market. Manufacturing facilities in Silvassa (herbicide plant), Shamirpet (maize conditioning plant) and Eluru (seed processing). Satellite Breeding center at Jalandhar and maize breeding station in Bangalore and Udaipur. Got permission to sell Bt cotton seeds in 2002, in collaboration with Mahyco. Accused of following unfair trade practices while sub-licensing Bt technology in the country. 4 cases pending decision in Competition Commission of India. In 2016, government placed an upper limit on pricing of Bt Cotton in the country, which was considered to be high. Smallholder Program (1999-2002): provided extension services (technical knowhow, GM Seeds, chemicals etc) to small farmers.

**Other Significant Details:** Water Efficient Maize for Africa (WEMA) Program: Collaboration with Bill and Melinda Gates Foundation to introduce MON810 maize (drought tolerant, and produces its own pesticide). Refused to run field trials in Tanzania and Mozambique, until they change their liability laws that made the seed providers liable for any damages caused by them in the future.

## 11 Nestle

**Principle Lines of Business:** Processed food production, marketing and sale.

**Presence in India:** First factory in Moga, Punjab in 1961. Nestle Agricultural Services: Started in Moga, Punjab. Works with around 11,000 milk farmers across Rajasthan, Haryana and Punjab. Has established contract farming for milk in the country.

**Other Significant Details:** Clinton Global Initiatives Commitments to Action: Nestle with Global Good (collaboration between Bill Gates and Intellectual Ventures) started this aggregate dairy farmers in East Africa. Working with Cocoa and Cereal farmers in Ghana. Involved in a campaign by 'Behind the Brands' to promote presence of women cocoa farmers in their supply chain.

## 12 PepsiCo

**Principle Lines of Business:** Processed food and beverages' production, marketing and distribution

**Presence in India:** Entered India in 1989. 8 brands that include Lays, Pepsi, Lipton Tea, Mountain Dew, to name a few. 62 plants across India. Partners with around 24,000 farmers, 45% of them being small and marginal. Contract Farming in Punjab (mainly for tomatoes and potatoes). Partnership with around 11,000 farmers across Punjab, Bihar, Karnataka, Uttar Pradesh, Gujarat, West Bengal and Maharashtra, for chip-grade potatoes. Partnered with SBI to provide loans to the farmers entering contract farming with the company. Collaboration with The Clinton Foundation in Maharashtra to procure cashews from small farmers.

**Other Significant Details:** Partnered with USAID, UN World Food Program under USA's Feed the Future initiative to integrate small chickpea farmers in Ethiopia in PepsiCo's

## 13 Newbelco

(In Oct, 2016, SABMiller has merged with Anheuser-Busch InBev and will trade under the new name Newbelco)(a) **SABMiller.**

**Principle Lines of Business:** Production and sale of Beer.

**Presence in India:** Started in 2000 as South African Breweries India Limited. Changed its name in 2002 to Water4.

**Crops program:** Funded by EU and Indian government for using recycles and treated wastewater for irrigation. Partnering with ICRISAT to propagate the same amongst small farmers. Entered

in contract farming with farmers in Haryana for malting barley. 400 farmers, about 2500 acres of land in mainly Gurugram, Jhajjar and Sirsa are linked to the programme.

**Other Significant Details:** Eagle Lager Beer introduced in Uganda to mobilize use of domestically sourced sorghum. Worked with farmers of Mozambique to produce world's first beer brewed from cassava. Working to commercially develop barley farming in Zambia to establish local supply chains in the countries (Barley, Sorghum, Cassava, Maize)(b) **Anheuser-Busch InBev**

**Principle Lines of Business:** Production and marketing of Beer (brands like Budweizer, Corona, Stella Artois)

**Presence in India:** Entered Indian market in 2007 under a joint venture with an Indian brewer RJ Corp. Split in 2016. Smart Barley Global Program: in association with biggest French grain cooperative Axereal to develop high yielding barley in Madhya Pradesh, Rajasthan and Haryana.

**Other Significant Details:** Presence in more than 150 countries with more than 500 beer brands. 7 of the top 10 beers rated by BrandZ owned by AB InBev. Smart Barley Program in 9 countries including China, Russia, USA. In January, 2017, reduced purchase contracts for Barley in Montana state, USA, by upto 60%

## 14 Syngenta

**Principle Lines of Business:** Seeds (including hybrids), Seed care products, Crop protection (insecticides, herbicides, fungicides, crop nutrients and Yield protection products.

**Major Subsidiaries:** Taken over by ChemChina for US \$43 billion.

**Presence in India:** Entered Indian market in 2000. Sold its Corlim based plant to Deccan Fine Chemicals in 2016. Plans to bring Hybrid Wheat in Indian market by 2020. Launched Syngenta Learning Centre for Farmers in Ahmednagar, Maharashtra. Plans to have 100 such centres across the country by 2019-21. Project Nirmiti: Extension and outreach for technology dissemination in Odisha.

**Other Significant Details:** Only company in the world to have Hybrid Barley. The Good Growth Plan: for smallholder farmers

in Africa, Asia and Latin America. GroMore™: Agricultural Technology and Knowledge transfer program in Asia for rice farmers

## 15 Unilever

**Principle Lines of Business:** Production, Marketing and Sale of a variety of Consumer Goods

**Major Subsidiaries:** Hindustan Unilever Limited.

**Presence in India:** Present as Hindustan Unilever for over 80 years. India's largest FMCG Company. Shakti Initiative: to train rural women as local sales agent. Hindustan Unilever Foundation found in 2010 (non-profit) to promote water conservation. Started 'Water for Public Good' program. Partners with about 3500 farmers across Karnataka and Punjab to source tomatoes for its Kissan tomato ketchup. Procurement through vendors who buy tomatoes and sell HUL its pulp. Extension work with farmers. Partnered with Varun Agro in Maharashtra to source tomatoes from small farmers. PPP with Maharashtra government for procuring tomatoes.

**Other Significant Details:** HUL's Shakti Initiative also applied in Bangladesh, Vietnam, Sri Lanka, Egypt and some other countries with slight variations to conform to local norms and preferences. Unilever is world's largest consumer goods company

## 16 Walmart

**Principle Lines of Business:** Retail Shops, Supply Chain Management, B2B e-commerce.

**Major Subsidiaries:** A Joint Venture, Bharti-Walmart (Best Price Stores), which ended in 2013.

**Presence in India:** Entered India in 2007 under a Joint Venture with Bharati Enterprises. This ended in 2013. 21 cash and carry stores.

**Other Significant Details:** World's largest company by revenue (Forbes); controlled by Walton family. Spread in 27 countries with 11,000 stores. Entered into a PPP with USAID, linking latter's Feed the Future with the former's Global Sustainable Agriculture Goals, to connect Central American smallholder farmers with Walmart's regional and international supply chains

## 17 Yara International

**Principle Lines of Business:** Fertilizer producer and supplier.

**Major Subsidiaries:** Tata Chemicals Limited Babrala Urea plant in 2016.

**Presence in India:** Domestic Marketing Unit set up in 2011.

**Other Significant Details:** Ghana Grains Partnership: With Weinco (a local inputs provider in Ghana) to make maize value chain in Northern Ghana more profitable. Provides seeds, fertilizers, credit, storage and transport facilities to small farmers. Agricultural Growth Corridors: to “finance regional development for poverty alleviation”. Focus on strengthening value chains through increased investments. Concept introduced by Yara in UN General Assembly in 2008. Identified corridors: Beira Agricultural Corridor (BAGC), Southern Agricultural Corridor of Tanzania (SAGCOT)

**Source:** Compiled from various primary and secondary sources