



# Policy Brief on SDG Goal 2

**Eradicate hunger, ensure nutrition, sustainable agriculture and food security, and enhance farmers income**

**2** ZERO HUNGER



*“To the Hungry, God is bread; this God should prevail in every house and hut in the country” Mahatma Gandhi*

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June 2017

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Published by PAIRVI

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## **Abstract**

The current paper looks at SDG 2 and its potential to eradicate hunger and malnutrition in India and globally. The paper argues that the SDG2 and current approaches towards reducing hunger and malnutrition is flawed as it is not based on current realities. The paper explains that the framing of the SDG2 is highly restrictive and looks at the problem essentially in the rural context, and defines it as one of food scarcity, which is problematic. The paper also argues that unless rapid urbanization of hunger and increasing disconnect between food and calorific requirement is taken into consideration, it might be impossible to achieve SDG2. The paper also looks into issues of sustainability in agriculture and doubling farmers' income (in Indian context) which are important aspects of the goals. Finally some policy and programmatic recommendations are suggested which the author think may be helpful in overcoming the crisis.

## **Introduction**

193 countries adopted the sustainable development goals (SDGs) in September 2015. SDGs are a set of 17 goals emerging out of intergovernmental negotiations of over two and half years, to integrate three pillars of development, economic, social and environmental. While the SDGs continue to pursue the unfinished agenda of the MDGs; it also goes beyond that mandating that sustainability is an equally important dimension of growth for all nations, communities and peoples, with the intention to leave no one behind. While the global communities convergence on the agenda 2030 (SDGs are popularly known as the agenda 2030, as most of the goals have to be achieved in the next 15 years till 2030), the critics have also pointed out that the SDGs remain a highly compromised agenda and doubt its capacity to bring the transformational change that is required to

make growth sustainable and inclusive and protect environment. While there are several and huge estimates of the financial requirements; lack of finances remain a sore point in achieving sustainable development goals.

The SDG framework is universal in the sense that all nations have to implement all the goals, the countries have the flexibility to choose indicators to suit their political, economic and social conditions; bringing in the element of differentiation between the countries. All the countries have reportedly started preparing for implementation of the SDGs, which became operational from 1<sup>st</sup> January, 2016. In the UN High Level Political Forum on the SDGs, which is tasked by the UN to oversee the implementation of the SDGs, periodical review and share lessons among the countries, 25 countries made a Voluntary National Review (VNR) of the SDGs implementation. In 2017, 44 countries including India have committed to do a VNR.

### **India and the SDGs**

India has committed to implement the SDGs in line with the global spirit to make growth sustainable and inclusive. The Prime Minister of India, speaking the SDGs Summit in the UN in September, 2015 said “Today, much of India’s development agenda is mirrored in the Sustainable Development Goals. Since Independence, we have pursued the dream of eliminating poverty from India. We have chosen the path of removing poverty by empowering the poor.” India has notified NITI AAYOG as nodal agency for the implementation of the SDGs, has asked the states to prepare action plans and has also embarked upon exercise to develop national indicators for the 17 goals, besides undertaking consultations on specific goals.

**GOAL 2:** End hunger, achieve food security and improved nutrition and promote sustainable agriculture

**2.1** By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round

**2.2** By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons

**2.3** By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment

**2.4** By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

**2.5** By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and ensure access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed

2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries

2.b Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round

2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility

The goal 2 talks about ending hunger and all forms of malnutrition, double agricultural productivity and incomes of small farmers including through ensuring their access to land and other productive assets, ensure sustainable food production systems and maintain genetic diversity.

● **Facts and figures**

- Around 800 million people in the world, or about one in nine, suffer from hunger
- The number of hungry has fallen by 167 million over the past decade and by 216 million since 1990–92
- About one in four people living in sub-Saharan Africa suffers from chronic hunger, but the region with the largest number of undernourished is Southern Asia (281 million)
- The world has the capacity to produce enough food to feed everyone adequately

- Agricultural production will have to increase by an estimated 50 percent by 2050 to meet projected demands for food and feed from a world population projected to rise to over nine billion people by 2050
- More than one in four children under the age of five are stunted (too short for their age) due to chronic under nutrition
- More than two billion people suffer from one or more micronutrient deficiencies or “hidden hunger”
- About 1.9 billion people are overweight, of whom 600 million are obese.
- World agricultural production has grown on average between 2 and 4 percent per year over the last 50 years, while the cultivated area (permanent cropland and arable land) has grown by only 1 percent annually
- The world land area dedicated to agriculture is 38.5 percent
- Smallholder farms (i.e. less than 2 hectares) represent over 90 percent of the world’s 570 million farms, producing most of the world’s food
- An estimated 75 percent of crop genetic diversity has been lost since the 1900s; 17 percent of the world’s livestock breeds are classified as being at risk of extinction
- Just 3 crop species (wheat, rice and maize) represent virtually half of the average daily calories consumed by the world population; and five animal species (cattle, sheep, goats, pigs, chicken) provide 31 percent of average daily protein consumed

Source: FAO, 2017

Goal2 has strong interlinkages with many other goals and delivering on Goal 2 will require robust action on those goals too, and positive action will also strengthen possibilities of delivering on those goals. Hunger and nutrition is directly related to eradicating poverty (Goal1), health (Goal 3),

Gender (G5), water and sanitation (G6), energy (G7), decent work and employment (G8), inequality (G10), SCP (G12), climate action (G13), life below land (G14), life over land (G15), peaceful and inclusive societies (G16) and International cooperation and finances (G17). A clear intention to deliver on goal 2 will mean to ensure that other linked goals receive equal focus.

## **Concerns with regard to Goal 2**

Goal 2 goes beyond food production and consumption and looks into important dimensions of the food and nutrition including supply chains and emphasizes social groups vulnerable to hunger. It also talks about sustainable agriculture and need for conservation of genetic biodiversity of plants and animals, and it also places emphasis on making land and other productive resources available to small farmers and food producers. However, it fails short of recognizing food as fundamental human right. It also fails to identify structural reasons for hunger and under nutrition in view of the fact that we produce enough food to feed all mouth on this globe. A clear focus on identifying barriers and addressing appropriate, equitable and rights based access to food would have a better chance of attacking the structural reasons. The goal fails to identify concentration of land, alienation and land grabbing, which are main hurdles in making land available for food production. It should also reduce agriculture land use for meat production, and bio-fuel production in the light of their negative impact. Reducing wasteful use of water, chemicals, energy and subsidies in developed countries could also have been one of the priorities for the goal. The primacy of adopting and promoting agro-ecological practices, which is the most important step in sustaining food production, has been undermined. The main reason of food price hikes in recent



years has been the speculation of food derivatives and future markets, goal 2 would have better put a valid critique on that rather than trying to put safeguards on derivative and future markets. However, despite the shortcomings, the SDGs framework allows us an opportunity to engage with the state and ask accountability questions. Now it's largely up to the countries to make this framework work better for people in the line of hunger.

## **Status of India on Goal 2**

In the circumstances, the current paper attempts to look into three important dimensions of the goal 2, hunger and malnutrition, sustainable agriculture and food production, and farmer's income.

### ***Hunger and malnutrition in India***

India is ranked 55 out of 71 countries surveyed by the Global Hunger Index.<sup>1</sup> India has over 194 million (or 15% of global hunger population) hungry people, achieving goal 2 will be formidable challenge for India.<sup>2</sup> 51% women between 15-59 years and 44% children are underweight.<sup>3</sup> 3000 children die every day from hunger, malnutrition, and poor diet related deaths every day. Despite the fact that India is a food surplus country, 40% of fruits and vegetables and 20% food grains are wasted due to poor storage and inefficient supply chains.

India's nutrition profile has been aptly called a silent time bomb. 39% of children below 5 years are stunted (low height for age), 15% are wasted (low weight for height), 29% are underweight (low weight for age), 2% are overweight (above normal weight for height) and nearly 70% of children aged

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<sup>1</sup> Global Hunger Index, 2015

<sup>2</sup> Global Hunger Report, 2015, FAO

<sup>3</sup> NFHS 4

between 6 and 59 months are anemic (hemoglobin deficiency).<sup>4</sup>

An analysis of NFHS 4, reveals that all the states have managed to reduce percentage of children who are stunted. 13 states have done significant progress by reducing stunting among children below 5 by 10 percentage points, Maharashtra and WB lead by reducing stunting by 12 percentage points. Urban Rural divide remains a cause of concern, with more children in rural areas under stunting as more than 10 states have registered more than 10% stunting in rural areas as compared to the urban area. However, still stunting remains a major concern with many states reporting unacceptably high levels of stunting among children below 5 years of age. More than 6 states have more than 40% children under 5 who are stunted (Bihar, UP, Dadra Nagar Haveli, Jharkhand, MP and Meghalaya). 17 states have more than 1/3<sup>rd</sup> children below 5 who are stunted. Bihar tops the list with 48.5% of children under five stunted, followed by UP (46.3%) and Goa having least (20.1%) population of children facing stunting.

As far as wasting is concerned, Jharkhand and Dadra Nagar Haveli top the list with 29% and 27.6% children respectively. 13 states have more than 1/5<sup>th</sup> children below 5 who are wasted. 14 states have shown increasing wasting (or stagnation) as compared to the NFHS 3. Maharashtra has shown maximum backsliding (by more than 10 percentage points). Almost all the states (25) show urban bias, with more children in rural areas under wasting, the difference being stark in Dadra Nagar Haveli. 9 states have also shown

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<sup>4</sup> Achieving SDG 2: India needs comprehensive approach, Rumi Aijaz, ORF

more wasting in urban areas, with Goa showing more wasting in urban areas by more than 15 percentage points.

Underweight women are also a cause of major concern as far as nutrition is concerned, and shows more than lack of nutritious food for women. Almost half of the states have 1/5<sup>th</sup> women underweight. Jharkhand with 31.5% and Bihar with 30.5% top the list, closely followed by DNH with 28.9%. Although almost all the states have managed to reduce the number of underweight women, many states have done significant progress. WB and Tripura have shown maximum progress by reducing the number by more than 18 percentage points, followed by CG, Bihar, Karnataka and Odisha who have reduced underweight women by more than 15% points. Vast urban rural difference is seen except in the states of Arunachal Pradesh, Daman and Diu, Mizoram, Nagaland, Puducherry and Sikkim where underweight women are more in urban areas than in rural areas. Huge difference is seen in Gujarat and Maharashtra where underweight women in rural areas are significantly higher by 16% and 14% respectively, followed by Dadra Nagar Haveli (13%) and MP (11%).

Underweight women are a concern dwarfed by anemic women. With regard to anemia among all women (15-49 years), DNH and Chandigarh tops the list with 79.5% and 75.9% anemic women respectively. 6 other states have more than 60% anemic women (Andaman & Nicobar, AP, Bihar, Haryana, Jharkhand and WB). At least 10 states show stagnation or increase in the number of anemic women including NCT Delhi, Haryana, HP, Kerala, Lakshadweep, Meghalaya, Odisha, Punjab, Puducherry, Telengana & UP. At least 8 states have fallen back in reducing the number of anemic women by around 10 percentage points (NCT Delhi,

HP, Lakshadweep, Meghalaya and Punjab). Punjab tops the list of backsliding states where anemia among women has increased by 19 percentage points.

### ***Food and nutrition Policy Framework***

India adopted a National Nutrition Policy in 1993, and set up National Nutrition Mission at the national and state levels, monitored by the Ministry of Women and Child Development. However, it unfortunately could not meet the rising challenges of under nutrition in the country. Now Niti Aayog is mulling over another National Policy on Nutrition. In comparison, the country has a far more visible and outcome oriented policy framework on food security, which also seeks to improve calorific nutrition outcomes, besides addressing access to food.

The national food policy framework is built around a complex web of several programmes including the PDS, ICDS, midday meal scheme, national social access programme, maternity benefits, and MG national employment guarantee programme. Cash transfers etc. However, the most important of them is the National Food Security Act, 2013. The National Food Security Act, also called Right to food Act aimed at providing subsidized food to 2/3<sup>rd</sup> of India's population. The estimated cost of the implementation of the Act has been \$ 22 billion, almost 1.5% of the GDP. The Act aimed to cover people eligible under the Act, below poverty line population, poorest population, children, pregnant and lactating mothers. It also aimed to reform the PDS by identifying errors of inclusion and exclusion, plugging corruption and digitizing the records and PDS operations.

A performance audit of the NFSA conducted by the CAG of India, covering the period from July 2013 to March 2015, declared that as of October, 2015, 18 States/UTs implemented the NFSA by covering less than half of the intended beneficiaries ( 41.69 crore beneficiaries against the total 81.34 crore beneficiaries to be covered in all 36 states/UTs).<sup>5</sup>The report also stated that, so far only 49 per cent of the eligible beneficiaries have been identified and 51 per cent beneficiaries are yet to be identified in all the States/UTs, most of the implementing States did not identify the AAY and priority household's beneficiaries as required by the NFSA but used the old database of beneficiaries for extending the benefits, computerization of TPDS operations was not completed in the selected States/UTs and were at different stages of implementation, and that six out of nine selected States/UTs have put in place the grievance redressal mechanism however these were not fully functional. Vigilance committees at all the four levels were not found to be in existence in any of the selected States\UTs. The CAG has found similar shortfalls in the ICDS in an audit conducted in 2012 <sup>6</sup> and an evaluation of the MDM conducted in 2009.<sup>7</sup>

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<sup>5</sup> Press Release, CAG Compliance Audit Report on Preparedness of the Implementation of the NFSA,, Report No.54 of 2015, dated 29<sup>th</sup> April, 2016.

<sup>6</sup>Report No. 22 of 2012 -13 Performance Audit of Integrated Child Development Services ICDS Scheme of Union Government, Ministry of Women and Child Development, CAG, 2013 at <http://www.cag.gov.in/content/report-no-22-2012-13-performance-audit-integrated-child-development-services-icds-scheme>

<sup>7</sup> Audit Evaluation of the Mid-Day Meal Scheme, CAG, 2009, at [http://www.cag.gov.in/sites/default/files/cag\\_pdf/Compendium\\_Performance\\_Audit\\_Reviews\\_Evaluation\\_MidDay\\_Meal\\_Scheme.pdf](http://www.cag.gov.in/sites/default/files/cag_pdf/Compendium_Performance_Audit_Reviews_Evaluation_MidDay_Meal_Scheme.pdf)

### ***Judicial intervention on the right to food***

India's food security framework was strengthened substantially due to the intervention of the Supreme Court in the PIL PUCL Vs. Union of India and Others, 2001 popularly known as the right to food case, wherein it was cited that several hunger deaths have taken place in Rajasthan despite the Union of India had sufficient food reserve, and was argued that better monitoring mechanism was required to facilitate and monitor peoples access to food. The Supreme Court created an exceptional mechanism, opening a window for continued access to the Supreme Court, appointing two Commissioners to help the court monitor right to food in India. The Commissioners regularly updated the apex court on the status and performance of several programme and schemes, on which the Court issued instructions to the relevant government officials. However, after 17 years, the Supreme Court closed this case unceremoniously on 10<sup>th</sup> February, 2017. "In view of the passage of the National Food Security Act, 2013, nothing further survives in this petition. In case the petitioner has any grievance with regard to the implementation or otherwise of the National Food Security act, 2013, he may file a fresh petition," the Court said while disposing off the case.<sup>8</sup> This case is considered a landmark judicial intervention in the history of the struggle for the food security.

While India faces significant hurdle to overcome traditional triple under nutrition challenges of calorific deficiency,

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<sup>8</sup> What are the lessons learned from the right to food case, Apurva Vishwanath, 20<sup>th</sup> March, 2017, Livemint, at <http://www.livemint.com/Politics/IEBWhfvkvPCaQW6xky5TjO/Wh-at-are-the-lessons-learnt-from-the-Right-to-Food-case.html>

micronutrient deficiency, and obesity and overweight. Newer challenges are also emerging. Significant among those is disconnect between poverty and malnutrition (many states have shown increasing trends of under nutrition even among the better of communities), and increasing trends of overweight children. India's food security programme especially food stockpiling programme for implementing PDS has also been challenged under the trade rules of the WTO.

### **Food Production and Sustainable Agriculture**

Food grains production in India has made rapid strides rising from dismal 51 MT in 1950s to the record production of 265 MT in 2014-15. It declined in face of two consecutive drought years. However, it has failed to keep pace with overall economic growth largely limited to maximum 3%-5% as against the overall growth in economy which grew at 7%-9% pa during the last decade. The share of agriculture and allied sectors in the total GDP has declined to 14% in 2013-14. Removing contribution from forests and fisheries, the share of agricultural comes down to 12% in the total GDP.<sup>9</sup> However, around 50% of the population is still dependent on agriculture for its livelihood. Madhya Pradesh, Odisha, Bihar and Chhattisgarh are the major drivers of agricultural growth.<sup>10</sup> Agricultural production has diversified over the years with horticulture and livestock sectors doing much better.<sup>11</sup> Livestock, dairy and fishery have also shown and sustained tremendous growth potential.<sup>12</sup>

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<sup>9</sup> State of Indian Agriculture 2015-16, DAC&FW, GOI

<sup>10</sup> 12<sup>th</sup> FYP document, Planning Commission

<sup>11</sup> While growth in food grain production has been around 3%, horticulture has registered sustained growth of 7%

<sup>12</sup> India is the largest producer of milk in the world. India's is second biggest producer of fruits and vegetables after china, as is India in production of wheat and rice.

### ***India as agricultural powerhouse***

According to the World fact book of the CIA in 2014, the global agricultural output was \$ 4771 b. but a full 42% of this output comes from only 6 countries. China (\$ 1005 b) leads the pack followed by India (\$367 b). USA (\$279 b) is the third, followed by Brazil (\$ 130 b), Nigeria (\$122 b) and Indonesia (\$121 b). China and India also account for close to 30% of the total global output. India ranks 11<sup>th</sup> and 12<sup>th</sup> globally in services and manufacturing respectively, however, it is second in the agricultural sector after China.<sup>13</sup> In the 3 decades from 1970 to 2000 India's agricultural GDP grew from \$ 25 b to \$ 101 b. However, in the next 14 years it leaped from \$ 101 b to \$ 367 b. This tremendous increase is mainly due to rise in the dairy, horticulture and inland fisheries. These three account for more than 60% of the agricultural GDP of India. UP, undivided Andhra Pradesh and Maharashtra make up the three top spots, relegating grain centers like Punjab and Haryana to 10<sup>th</sup> and 12<sup>th</sup> rank respectively. India ranks 19<sup>th</sup> in merchandise exports but 6<sup>th</sup> in agricultural export (WTO, 2014). However, India's share in total global agricultural export (\$176 b) still remains small at 2.5% despite India growing maximum variety of edible oils; it is the largest importer with 14 MT worth \$ 10 b per year. The second largest agricultural commodity that India imports is pulses.

While India's agricultural growth has been much celebrated; regional disparities remain. The government also acknowledges that agricultural sector currently faces a dilemma. While it has made large strides in achieving the

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<sup>13</sup> China has less area under agricultural cultivation, consumes less fertilizer and produces more. Total food grains production in China was 571 MT in 2012 as compared to 250 MT of India.



agricultural development goals, it is still being challenged by a formidable agrarian crisis.<sup>14</sup> The policymakers acknowledge “pressures emanating from natural resources constraints, increasing fragmentation of holdings, frequent climatic variations, rising input costs and post-harvest losses, and agrarian crisis as an interplay of all these factors pose an enormous challenge to sustaining agricultural growth.<sup>15</sup> However, there is very little recognition of structural causes and therefore, lesser efforts to address these. Some of the structural issues are discussed below

### ***Agricultural performance and sustainability***

The green revolution has been the country’s best advertised story. The sharp rise in the food grains production during green revolution in the 1970s enabled the country to achieve self-sufficiency in the food production. Agricultural intensification in the 1970s and 1980s saw an increased demand for rural labour that raised rural wages and together with declining food prices, reduced rural poverty.<sup>16</sup>

However, the green revolution outcomes have been over emphasized, as some critics say. The wonder year of the start of the green revolution 1968 did raise the production of food grains from 74.2 MT in the previous year to 95 MT. The increase of 20.9 MT was contributed by rice (7.2 MT), coarse cereals including gram (7.1 MT), and wheat (5.2 MT). In fact the good weather the world over had made it a bumper year of production. While increase in wheat production may have

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<sup>14</sup> State of Indian Agriculture 2015-16, DAC&FW, GOI

<sup>15</sup> *ibid*

<sup>16</sup> India: Issues and Priorities for agriculture, WB, May 17, 2012.

some contribution of Norma Borlaug's magic seeds but rest of the production came from the same indigenous seeds.<sup>17</sup>

The green revolution definitely led to monoculture<sup>18</sup>, the area under irrigation, use of fertilizers and pesticide, and attendant environmental degradation and sharply reduced the area under coarse grains. The green revolution only provided more wheat; the production grew from 20 MT in 1970s, 32 MT in 1980s and 90 MT in 2016. High yielding variety of rice was a later phenomenon (late 1970s) which came from International Rice Research Institute, Philippines. Policy measures during the green revolution have their own contribution in increasing area under wheat and later paddy. As farmers in irrigated areas realized that government was giving input subsidies including seeds to grow wheat and was also buying back on a predetermined profitable price, they fell over each other especially in north India to grow wheat and rice. From a high of 55.6 M ha in 1968, coarse cereals and gram lost acreage steadily, falling to 28 M ha in 2006. During the green revolution water consumption in agriculture rose sharply as the net irrigated area increased from 31.1 M ha between 1970-2000 while the area irrigated more than once per year increased from 7.09 m ha to 20.46 m ha during the same period. Ground water, one of the India's main sources of irrigation is also being depleted rapidly. The no. of dark blocks (taluks or mandals), where extraction is more than 85% of the availability increased from 253 to 428 out of over 5700 blocks between 1984-1999 (GOI, 2002).<sup>19</sup> Fertilizer application rose more than fivefold between 1970 and 2002 to 17360 thousand tonnes with

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<sup>17</sup> Putting wheat in its place, or why the green revolution wasn't quite what its made out to be, Richa Kumar, 2016, IIT Delhi

<sup>18</sup> *ibid*

<sup>19</sup> India-Policies for sustainable agriculture, TNAU

significant imbalance of nutrients (N, P & K). Pesticide consumption almost doubled from 24.32 MT in 1970 to 46.2 MT in 2000.<sup>20</sup> However, agricultural growth in the 1990s and 2000s slowed down averaging about 3.5% per annum, and cereal yields have increased by only 1.4% per annum in the 2000s. The slowdown in the growth is a major cause of concern.<sup>21</sup> The major reason for falling productivity besides, water constraint is land degradation. By the early 1980s approximately 53% of India's geographical area had been considered degraded (GOI, 2001a). Soil erosion, through water and wind, is the major contributor to land degradation (over 71%) NRSA data suggest that 15% of India's total geographical area was comprised of cultivable wasteland (NRSA, 200). One third of this land was degraded by human activity; nearly half was degraded by combination of human and natural causes (NRSA 2000).<sup>22</sup>

Punjab, Haryana and western UP, the heartland of green revolution have borne the maximum brunt of the revolution. Hybrid seed varieties, extensive irrigation systems (mainly through submersible pumps), and the heavy handed use of chemical fertilizers transformed Punjab into the agricultural power horse. It comprises only 1.5% of India's territory, but it produces 60% of country's wheat and 45% of its rice.<sup>23</sup> However, this has not been without its environmental and human costs. Punjab has seen maximum rise in cancer cases, so much so that a train running from Punjab to a city in Rajasthan, known for its cancer hospital is named 'cancer

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<sup>20</sup> India-Policies for sustainable agriculture, TNAU

<sup>21</sup> India: Issues and Priorities for agriculture, WB, May 17, 2012

<sup>22</sup> India-Policies for sustainable agriculture, TNAU

<sup>23</sup> Green Revolution Fallout Plagues India's Punjab Region. Sonia Schmanski, 21<sup>st</sup> Aug, 2008, [www.newsecuritybeat.org](http://www.newsecuritybeat.org)

train'.<sup>24</sup> Water table in Punjab and Haryana sinks as much as 100 feet every year. Ashok Gulati, former chair of the CACP, says to produce 1 kg of rice in Punjab, the farmers have to consume approximately 5000 litres of water, while it is 3000 in West Bengal and Assam.<sup>25</sup>

The trajectory of Indian agriculture and associated environmental problems has brought about the understanding that agricultural growth and productivity will have to be consistent with environmental sustainability.<sup>26</sup> However, very little seems to be done on the ground consistent with these theoretical emphases. Small holdings of small and marginal farmers have been repeatedly cited by the policymakers as biggest impediment in raising productivity. This is needs to be reviewed whether the small farmers have failed agriculture or is it the agricultural policies that have failed small farmers. The

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<sup>24</sup> WHO found that in developing countries, over 3 million agricultural workers are annually subjected to severe poisoning for failing to take adequate precaution while spraying insecticide. As many as 59% of deaths attributable to pesticide use reported from developed countries, even though the latter account only for one-fourth of world wide consumption of these chemicals. Green Revolution that has resulted in chaos, Sandhya Jain, 17<sup>th</sup> May, 2016, [www.dailypioneer.com](http://www.dailypioneer.com)

<sup>25</sup> Green Revolution in Haryana: facing fallout, Mohd. Mustaqim, 12<sup>th</sup> April, 2016, [www.ruralmarketing.in](http://www.ruralmarketing.in)

<sup>26</sup> National Agricultural Policy, 2000 and 10<sup>th</sup> FYP onwards are replete with references of management and conservation of natural resources, land, water and genetic endowment to promote sustainable development of agriculture. FYPs have put emphasis on rainwater harvesting, controlling groundwater exploitation, watershed development, addressing imbalanced use of NPK, and address soil organic content, and identifying organic farming as a thrust area etc.

Indian Rural development Report 2012-13 recognized that “small farms have proven to be more efficient than large ones in using land and resources, especially in labour intensive crops or tending livestock, but the holdings are often too small to support a family. Crucially small farmers suffer serious disadvantages in marketing and distribution. Their smaller outputs, fragmented landholdings and often distant locations from major markets deprive small farmers of access to modern storage facilities for perishable items and distribution networks.”<sup>27</sup> Chand et al (2011) said “smallholders do not lag behind other farm size categories in adoption of technologies and use of fertilizer and irrigation. Moreover, small holders make better use of inputs as revealed by the lower fertilizer imbalance index. Crop intensity, which is the main source of growth in agriculture in India, was found to be highest in marginal holdings and it declined with the increase in farm size. Advances in technology and the scale factor did not dilute the superior performance of lower size holdings. Any move towards increasing farm size on considerations like non-viability of smallholders will adversely affect productivity and growth of India agriculture.”<sup>28</sup> However, he also underlines, “while the small farms in India is superior in terms of agricultural performance, it is weak in terms of generating adequate income and sustaining livelihood. Tiny holdings below 0.8 ha do not generate enough income to keep a farm family out of poverty despite high productivity. Nearly three fourths of small farmers in India fall under poverty if they do not get income from non-farm sources.”<sup>29</sup> On the pretext of non-

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<sup>27</sup> State of Indian Agriculture 2015-16, DAC&FW, GOI

<sup>28</sup> EPW, June 2011

<sup>29</sup> Farm size and productivity: understanding the strengths of smallholders and improving their livelihoods, Ramesh Chand, P A Lakshmi Prasanna, Aruna Singh, EPW, June 25, 2011

viability of small farming, government has suggested small farmers to leave agriculture and pool their lands by leasing.<sup>30</sup> However, the plan does not offer any alternative employment to farmers, 85% of whom have a holding of less than 2 ha. This will have grave consequences on farmers as they lose their land, identity and sovereignty swelling the ranks of informal labor in the cities, which in turn will have serious impact on their and their dependents food security and nutrition. This is despite the fact that more 2000 farmers are leaving agriculture every day and more than 76% want to quit agriculture.<sup>31</sup>

The policymakers supported by mainstream economists have been consistently driven by the maximization of production approach, rather than minimizing risks. They have steadfastly maintained that rise in productivity, efficiency in irrigation, increased adoption of mechanization and technology including GM technology will sustain India's food production and will increase farmers' income. However, this premise also wears thin when one looks at agriculture in Punjab, which is increasingly in news now due to rising suicide of farmers. The assured irrigated area in Punjab is 98% as compared to 11.4%, 2.0% and 35% in the USA, UK and Japan respectively. The per hectare yield for wheat (4500kg/ha) is equal to that in the USA and paddy (6000kg/ha) is equal to that in China. As regards

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<sup>30</sup> 12 FYP document suggests farmers to leave agriculture and look for other employment opportunities. It is also suggested that consolidated land holdings will be given to farmers producer organizations

<sup>31</sup> Over 2000 fewer farmers every day, P Sainath, the Hindu, May 02, 2013, <http://www.thehindu.com/opinion/columns/sainath/over-2000-fewer-farmers-every-day/article4674190.ece>

mechanization, number of tractors/1000 ha in Punjab is 122 far above of tractor concentration in the US (22), UK (76) or Germany (65). Fertilizer use is 449kg/ha as compared to 103 kg in the US, 208kg in the UK, and 278 kg in Japan. Maximum productivity in cereal crops (wheat, rice, maize) at 7633 kg/ha is above that of the (US (7238kg), UK (7008 kg), France (7460 kg) and Japan (5920 kg)).<sup>32</sup> However, these figures fail to explain why Punjab has second highest rate of suicides after Maharashtra?<sup>33</sup> This calls for a compelling and comprehensive review on why farmers languish while agriculture flourishes in India.

### ***Farmers' income***

A number of studies have emphasized that the smallholder agriculture is non-remunerative with inputs costs increasingly and income from farming reducing.<sup>34</sup> Narayanamoorthy (2006) analysed the level of farm income using SAS data across the major states and found that the annual average income from crop cultivation for the country as a whole was only Rs. 11,628 per household. That is, the per day income of the farmers' household was just about Rs. 32 during 2002-03, which was much lower than the average agricultural wage rate that prevailed at that time in the country. Chand et al used a

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<sup>32</sup>Devinder Sharma, 2016

<sup>33</sup>449 farmers committed suicide in 2015

<sup>34</sup> Despite the fact that 2/3rds of the population was dependent on agriculture farm income did not receive much attention in the policy circle till late 1990s. The two sources of data for farm income are generated by Situation Assessment Survey (SAS), published by NSSO, and Cost of Cultivation Study (CCS) brought up by CACP. While CCS data provides crop wise cost and income details per hectare, SAS data provides annual income from crop cultivation per household.

different methodology to compute farmers' income during 1983 to 2011-12. They concluded that per cultivator income increased from Rs. 16,103 to Rs. 42,781 during this period. Interestingly, the annual growth rate of per cultivator farm income increased at a rate of 7.29 per cent during 2004-05 to 2011-12, which is more or less equivalent to the overall growth of the economy during this period.<sup>35</sup>

A Narayanmoorthy (2016) calculated farm income from actual data on farm income fairly comparable for two time points namely 2002-03 and 2012-13 from SAS published by NSSO (2005; 2014), which reveals the reality about the state of farm income. It concluded that the annual income per farm household from cultivation has increased from Rs. 3,645 in 2002-03 to Rs. 5,502 (at constant prices of 1986-87) in 2012-13, an increase of about 3.81 percent per annum. But, the increase in income from crop cultivation was not very significant as compared to the income realized through farming of animals.<sup>36</sup>

The government has declared in the budget speech of 2017 that it is committed to double farmer's income in next 15 years.<sup>37</sup> Ashok Gulati, former chair of the CACP says that doubling farmers' income in 15 years will be a "miracle of miracles," as it would imply a compound growth rate of 12% per annum.<sup>38</sup> One analysis, says that after adjusting rising

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<sup>35</sup> Farm Income in India; Myths and Realities, A Narayanmoorthy, 2016

<sup>36</sup> *ibid*

<sup>37</sup> [indiabudget.nic.in/ub2017-18/bs/bs.docx](http://indiabudget.nic.in/ub2017-18/bs/bs.docx)

<sup>38</sup> What is the future of agriculture in India, Vishwajeet Chaudhary and Gursharan Singh, 19<sup>th</sup> July, 2016, [www.thewire.in](http://www.thewire.in)



costs an Indian farmer's income effectively rose by only 5% pa over the decade (2003-2013).<sup>39</sup>

Niti Aayog has brought out a vision document on sustainable development recently (India long term vision).<sup>40</sup> It argues that doubling farmers incomes can be pursued through a variety of measures including remunerative prices for farmers (marketing reforms, &MSP Reforms), raising productivity (irrigation, seeds and fertilizers, new technology, shifting to high value commodities, horticulture, animal husbandry, blue economy, forestry etc.) and agricultural land policy: Leasing and records, and relief measures.

There is much emphasis on raising productivity for raising farmer's income. It is often believed that the increased productivity would help the farmers to reap higher profit. An Occasional paper by NITI Aayog (2015) on "Raising Agricultural Productivity and Making Farming Remunerative for Farmers" has also stressed this point elaborately to have more income from farming. Narayanmoorthy (2016) showed that the results generated from 1971-72 to 2013-14 prove that the profitability of high productivity states (HPS) is not significantly different from that of low productivity states (LPS) in most crops. The reason is obvious. The cost of cultivation of HPS states in all the crops is not only substantially higher than that of the crops cultivated in LPS states but also increased at faster rate.<sup>41</sup> The farmers at large would not benefit through increased productivity unless

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<sup>39</sup> *ibid*

<sup>40</sup> India long term vision, chapter 5, Agriculture: Doubling farmers' Incomes, Niti Aayog, May, 2017.

<sup>41</sup> Farm Income in India; Myths and Realities, A Narayanmoorthy, 2016

efforts are made simultaneously to control the cost of cultivation and improve the procurement arrangements through state agencies, which are missing in the listed strategies, he concludes. A similar myth like increasing irrigation was also been busted by Narayanmoorthy.<sup>42</sup> However, he noted significant increase in come by adoption of Drip irrigation technology and SRI. Low farm incomes have resulted in high indebtedness among farmers.

In fact, the income realized from cultivation by the farmer household at current prices works out to be only about Rs. 101 per day during 2012-13.

### ***Farmer's indebtedness***

A recent study compared farmers' indebtedness from SAS data between 59<sup>th</sup> round and 70<sup>th</sup> round of the NSSO surveys.<sup>43</sup> After 59<sup>th</sup> round 48.6% farmers were indebted, which increased to 51.9% farmers after the 70<sup>th</sup> round.<sup>44</sup> During the 59<sup>th</sup> round most indebted farmers were in Andhra Pradesh (82%), followed by Tamil Nadu (74%), Punjab (65.4%), and Kerala (64%). After 70<sup>th</sup> round, most

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<sup>42</sup>Narayanmoorthy (2016) showed that the average income from the cultivation for the States Having Above National Level Irrigation (SHANLI) is not substantially different from that of the States Having Below National Level Irrigation. (SHBNLI) at both time points namely 2002-03 and 2012-13. During 2002-03, the average annual income of SHANLI was Rs. 4,636 per household, whereas the same was Rs. 4,115 for SHBNLI category, a difference of only about Rs. 521.

<sup>43</sup>Agricultural indebtedness in India: A comparative analysis of NSSO 59<sup>th</sup> and 70<sup>th</sup> round, Reetu, International Journal of Multidisciplinary Research and Development, undated

<sup>44</sup> 59<sup>th</sup> round was conducted in 2003 while the 70<sup>th</sup> round was conducted in 2013.

farmers indebted were in Andhra Pradesh (92.9%), followed by Telengana (89.1%), and Tamil Nadu (82.5%). The average amount of outstanding loans for all India was INR 12585 after 59<sup>th</sup> round, with farmers in Punjab having maximum loans of Rs. 41,576, followed by Kerala Rs 33,907 and Haryana Rs. 26002. After 70<sup>th</sup> round average debt rose approximately four times. For all India farmers the average loan was Rs.47000, with Kerala farmers emerging as most highly indebted by Rs. 2,13,000 followed by Andhra Pradesh farmers by Rs. 1,23,400 and Punjab farmers by Rs. 1,19,500, TN Rs. 1,15,990. During this period, institutional loans increased from 58% to 60% only.

A newspaper report says that the average debt per farm household including crop loan, in Punjab works out to be Rs. 8 lakh.<sup>45</sup>

### ***Farmers' suicide***

Declining income from farming and increasing debts, one of the essential aspects of agrarian crisis, is manifested by the fact 270,000 farmers since 1995 have committed suicides.<sup>46</sup> Though the government hardly admits farmer's suicides, even when the government admits farmer's suicide, there are huge differences in the estimates.<sup>47</sup> A 2007 survey

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<sup>45</sup> Punjab govt. sets up expert group to study debts, waiver, Vikas Vasudeva, The Hindu, Chandigarh, april 16, 2017, <http://www.thehindu.com/todays-paper/tp-national/punjab-govt-sets-up-expert-group-to-study-debts-waiver/article18069775.ece>

<sup>46</sup> Over 2000 fewer farmers every day, P Sainath, the Hindu, May 02, 2013

<sup>47</sup> Central government recently told the Supreme Court of India that the number of farmers who committed suicide has decreased since

commissioned by Shiromani Akali Dal government to the local administration pegged the number of suicides at 32. At the same time Bhartiya Kisan Union drew up a list of 2600 farmers who killed themselves. Later a survey conducted by three universities Punjab Agriculture University, Ludhiana, Punjab University, Patiala and Guru Nanak Dev University, Amritsar concluded that between 2000 to 2011, 6926 suicides were committed, and farm workers suicides contributed 42% of total suicides.<sup>48</sup>

The government data shows that 80 per cent of farmers killed themselves in 2015 because of bankruptcy or debts after taking loans from banks and registered microfinance institutions. According to National Crime Records Bureau's latest farmer-suicides data, of the over 3,000 farmers who committed suicides across the country in 2015 due to debt and bankruptcy, 2,474 had taken loans from banks or microfinance institutions.<sup>49</sup> First reported by The Indian Express on August 19, 2016, farmer suicides saw a spike of 41.7 per cent in 2015 from 2014. The year 2015 saw 8,007 suicides by farmers compared to 5,650 in 2014, according to NCRB data.

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2009 and that factors other than agrarian and financial distress also led them to end their lives, Agriculture Crisis in India, Jayati Ghosh, Frontline

<sup>48</sup> Forget Green Revolution. Punjab's farmers are now killing themselves, Rajeev Khanna, 14<sup>th</sup> February, 2017, [www.catchnews.com](http://www.catchnews.com)

<sup>49</sup> In 80% farmer-suicides due to debt, loans from banks, not moneylenders, Deeptiman Tiwary, 7<sup>th</sup> January, 2017, Indian Express, <http://indianexpress.com/article/india/in-80-farmer-suicides-due-to-debt-loans-from-banks-not-moneylenders-4462930/>

Among the states, the data showed, Maharashtra (3,030), Telangana (1,358), Karnataka (1,197), Chhattisgarh (854) and Madhya Pradesh (516) led the table. Karnataka saw a more than three-fold rise in farmer suicides in 2015, as compared to 2014 when around 300 farmers ended their lives.<sup>50</sup> The latest data is revealing as most thought that usurious moneylenders were the culprits, while it is the loans from institutional sources that are driving people to suicides.<sup>51</sup>

### **Other Critical Aspects Affecting Farmer's Income**

Farmers' income is also affected by iniquitous distribution of benefits in the farming sector (MSP, subsidies, access to credits, insurance, loan waiver etc.).

#### ***Minimum Support Price (MSP)***

The government declares MSP for 24 crops, but it buys only wheat and rice from farmers through the FCI and other procurement agencies. Only a miniscule number of farmers are able to sell their products at MSP. Shanta Kumar Committee estimated how many farmers avail MSP by using 70<sup>th</sup> round of the NSSO/SAS data.<sup>52</sup> During the period July to December 2012 out of 90.2 million agricultural households in India, only 2.52 million households sold paddy to the procurement agency. Of this who sold to a procurement agency only 27% of their sales were at the minimum support price. Between January and June 2013, only 0.55 million

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<sup>50</sup> *ibid*

<sup>51</sup> A study estimates that 16000 farmers commit suicide every year due to indebtedness and numerous other related factors, Factors associated with the farmer suicide crisis in India, Dominic Merriott, Review Article, Elsevier, published April, 2016, [www.creativecommons.org](http://www.creativecommons.org)

<sup>52</sup> Report of the High Level Committee on Reorienting the Role and Restructuring of Food Corporation of India

households sold to a procurement agency. And of those who sold to a procurement agency only 14% of their sales were at the minimum support price. The situation is similar when it comes to wheat. As per the survey, between January and June 2013, 13 million households reported the sale of wheat, but only 16.2% reported to have sold wheat to a procurement agency. Of those who sold to a procurement agency, only 35% of their sales happened at the minimum support price.<sup>53</sup> Besides, the MSP hardly covers the costs of production. The National Commission on Farmers (NCF, 2006) and the Working Group on Agriculture Production (Business Line, 2010) have suggested that the MSP for crops at 50 percent more than the actual cost of production. Due to changing nature of agriculture, cost on fixed investment, rent and supervisory cost has increased substantially over the years. This difference in costs and MSP becomes more pronounced for instance, in Punjab for wheat, for paddy in Andhra Pradesh and sugarcane in Maharashtra as well.<sup>54</sup> It is also said that the raise in the MSP has not been consistent with rising costs/prices and remunerations in other sectors. MSP of wheat has increased from Rs. 76/quintal (1970) to Rs. 145/quintal (2015), rise of 19 times while during the same period the salaries of government employees jumped 120-150 times, university teachers by 150-170 times and school teachers by 280-300 times.<sup>55</sup>

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<sup>53</sup> Only 5.8% of farmers benefit from the minimum support price system, Vivek Kaul, 12<sup>th</sup> May, 2015, <https://www.equitymaster.com/dailyreckoning/detail.asp?date=05/12/2015&story=1&title=Only-58-of-farmers-benefit-from-the-minimum-support-price-system>

<sup>54</sup> Farm Income in India; Myths and Realities, A Narayanmoorthy, 2016

<sup>55</sup> Devinder Sharma, 2017

### ***Subsidies***

The central government and state governments provide subsidies on inputs including seeds, fertilizers, water, electricity, insurance etc. The fertilizer subsidy alone amounted to around 10 per cent of the total agriculture GDP in 2013-14.<sup>56</sup> The situation in India is that there are far too many small growers whose holdings are less than an acre and it is the big farmers who walk away with most of the benefits.<sup>57</sup> A survey commissioned by NABARD and undertaken by Punjab Agriculture University has confirmed that 94% of the government subsidies are being availed by big and medium farmers, leaving the smaller farmers for whom subsidies are actually meant sidelined.<sup>58</sup> The study shows that small and marginal farmers (34%) receiving only 6% of total subsidies.

### ***Access to credits***

Based on the 70<sup>th</sup> round of the NSSO/SAS data the State of Indian Agriculture 2015-16, DAC&FW, GOI, says that access to institutional credits during 2003 to 2013 increased only by

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<sup>56</sup> Economic Survey 2015-16 Highlights for Agriculture Sector February 26, 2016, Religare, Brookings, [http://www.religareonline.com/mediagalary/religare\\_research\\_docs/201602261413589509503-economic%20survey%202015-16%20highlights%20for%20agriculture%20sector.pdf](http://www.religareonline.com/mediagalary/religare_research_docs/201602261413589509503-economic%20survey%202015-16%20highlights%20for%20agriculture%20sector.pdf)

<sup>57</sup> Digging into farm subsidies, M.R. Subramani, the Hindu Business line, January 24, 2011, <http://www.thehindubusinessline.com/todays-paper/tp-opinion/digging-into-farm-subsidies/article2327015.ece>

<sup>58</sup> Big farmers eating away subsidies, PriyaYadav, Times News Network, 23<sup>rd</sup> June 2013, <http://timesofindia.indiatimes.com/city/chandigarh/Big-farmers-eating-away-subsidies/articleshow/20721822.cms>

2%.<sup>59</sup> Institutional loans included those from the banks (42.9%) and cooperative society (14.8%) and more than 25% farmers remained dependent on moneylenders during the period.<sup>60</sup> The poor rate of lending by banks to farmers less than 0.01 ha emerged as a major concern. According to the 70<sup>th</sup> round survey report, 63.7% of such agricultural households had outstanding loans taken from moneylenders while it was a mere 12.9% from banks.<sup>61</sup> The rigidity of the institutional loan structure, as also the public humiliation of defaulters by many commercial and cooperative banks, makes it difficult to deal with even for farmers who can access such loans.<sup>62</sup>

### ***Insurance***

In times of climate change driven weather uncertainty insurance is crucial. Currently 20% of the farmers and 23% of total cropped area in the country is insured. Recently launched Pradhan Mantri Fasal BimaYojana seeks to increase coverage of insured cropped area to 50%.<sup>63</sup> The scheme substantially reduced the premium to be paid by the farmers (1.5% for rabi crops, 2% for all kharif crops and 5% for commercial crops), increased risk coverage and promised faster settlement of the claims.<sup>64</sup>

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<sup>59</sup> State of Indian Agriculture 2015-16, DAC&FW, GOI,

<sup>60</sup> Agricultural indebtedness in India: A comparative analysis of NSSO 59th and 70th round, Reetu, International Journal of Multidisciplinary Research and Development, undated

<sup>61</sup> Survey proves most Indian farmers born, live and die in debt, Shemin Joy, the Deccan Herald, Delhi, 19<sup>th</sup> June 2016

<sup>62</sup> Agriculture in Crisis, Jayati Ghosh, Frontline, 2016

<sup>63</sup> A fifth of Indian Farmers covered under crop insurance scheme, Governance now, 9<sup>th</sup> May, 2016

<sup>64</sup> Crop Insurance new dawn for farmers?, Rajkamal Nirmal, the Hindu Business Line, 3<sup>rd</sup> April, 2016



PMFBY has increased the coverage of cropped area and number of farmers insured. However, many feel that a lot of optimism is being placed in this scheme, and it is too early to judge how it has performed, as it was started only last year. However, if the early indications are to be believed, this scheme is also failing farmers and benefitting only insurance companies. Responding to a question in Rajya Sabha on 7<sup>th</sup> April, 2017, Mr. Arun Jaitley, Finance Minister, said that during kharif season in 2016. The farmers presented a claim of RS. 4270.55 crores, however, the Rs. 714.14 crore was paid to the farmers in settlement of their claims. This amounts to only 16% of the claims made. Insurance companies collected a premia of Rs. 21,500 crore during kharif in 2016. The total claims presented was less than 20% of the premia collected, and the actual payment against the claims was only 3.31% of the collected premium.<sup>65</sup>It is obvious that insurance companies have made a killing.

### **Do the SDGs Appropriately Address Hunger, Food and Nutrition?**

Both MDG and SDGs have failed to look at hunger and under nutrition issues from the perspective of fast changing world. Approaches to food and nutrition insecurity in the global south continue to consider hunger and hunger based under nutrition as the main or the only problem to be addressed and imagine the food insecure population to be primarily rural dwelling individuals (FAO, 2015). This has resulted in responses that focus largely on production based responses, despite issues of access and entitlements being identified as

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<sup>65</sup>Pradhan Mantri Fasa IBimaYojana; Naam Kisan Ka Fayda Companiyon ka, Bharat Sharma, Deshbandhu beaureu, May 21, 2017

early as the 1980s (Maxwell, 1996 p.157). This largely involves a twin track approach, (i) food aid and social safety nets, and (ii) development programmes to enhance performance of production systems. This approach focuses almost exclusively on rural areas. Levels of urban poverty are consistently underestimated on the basis of use of same indicators, which fail to account for the higher income required to survive in urban areas. Urban poor (and especially migrants) with very little or no purchasing power are left completely to the markets. The high dependence of the urban poor on the markets as their sources of food should explicit focus on overcoming the challenges faced by urban households in accessing affordable, nutritious, hygienic and culturally appropriate food through these markets. The food and nutrition has been largely absent in the global discussions on urban development, as much as the urban focus has been missing in the discourses of hunger, food and nutrition.

Urban poor are also witnessing a significant change in the diets and the food basket. Households in the global south are witnessing triple burden of under nutrition, micronutrient deficiency and over nutrition manifest in overweight and obesity. Overweight and obesity are often framed as outcomes of income growth, yet in many developing countries (especially eastern and southern Africa) diet change is happening most rapidly in the three quarters of population that lie below the international poverty line of USD 2 per capita per day.<sup>66</sup> Changing diets more than increasing income shows changes due to poverty. This is confirmed by the fact that while fruits and vegetable prices are increasing constantly, many of the cheap and imitation

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<sup>66</sup>Tschirly et al., 2015, p 110

fast food is luring urban poor with reduced prices. In the circumstances, traditional approaches not only address the problem, but exacerbates food system transition that is leading to new forms of under nutrition. It requires a set of policies and programmes that take a systemic view and stronger regulation of the private food sector, which is also required to reinforce food safety standards.

### ***Food and nutrition in the MDGs and the SDGs***

Food and nutrition security was included in the MDG under Target 1c: ‘Halve between 1990s and 2015, the proportion of people who suffer from hunger.’ Both indicators of the target 1c did not acknowledge micronutrient deficiency or over nutrition. It has been generally accepted that the MDG 1 failed to reach hunger target, although the extent to which it failed is open to debate.<sup>67</sup> The MDG target narrowed the broader framing of food sovereignty and opened up space for large scale industrial agriculture and nutrition supplementation programme focus. This has been largely critiqued on the basis of unsustainable agricultural projects that have emerged, as well as unquestioned increased role of private sector actors as partners in development.<sup>68</sup> The flawed approach diluted the focus of the hunger, food and nutrition and ultimately encouraging a lot of programme dominated by private interests in food aid, trade and growth champions. This misappropriation by trade, aid and growth lobbies has been argued to have put a disproportionate emphasis on the importance of large international donors and companies, rather than national governments.<sup>69</sup>

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<sup>67</sup>Hickel, 2015...

<sup>68</sup>Vandemoortele, 2009, also see FAO, 2015c, the state of Africa Food Security...

<sup>69</sup>Nayyar, 2012....

The SDG 2 continues to frame the food problem as one of scarcity, and does not reflect the present and future realities of food insecurity in the global south. Targets 2.1 and 2.2 are the only two food security targets, and both frame the food problem as one of scarcity.<sup>70</sup> This construction of the problem, in combination with the persistent rural framing of food and nutrition insecurity leads to a productionist bias evident within the remaining targets of the goal 2. The framing clearly shows that the goal has been influenced by food sovereignty campaigners as well as the agribusiness companies.<sup>71</sup> The Campaign for Peoples Goals for Sustainable Development (2014) had challenged the approach and inadequacy in framing SDGs in general, and SDG 2 in particular.<sup>72</sup> In the two statements delivered in the OWG Session (dated July 2014....) by the Campaign, it challenged the logic of global food production and neoliberal food policies, and lack of emphasis on land alienation and grabbing, increasing role and influence of the agribusiness companies in global negotiations.<sup>73</sup>

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<sup>70</sup>Jane Battersby (May, 2017), MDGs to SDGs-new goals, same gaps; the continued absence of urban food security in the post 2015 global development agenda. *African Geographical Review*

<sup>71</sup>The target 2.3, doubling the food production for meeting hunger and nutrition, supported by 2a, (increasing investment in agriculture including through international cooperation) and 2c (ensure proper functioning of the food commodity markets..) are clearly an agribusiness agenda, rest of the targets manifests influence of food sovereignty campaign by bringing focus on small farmers,, sustainable agriculture and genetic diversity. Both overlook the crisis in the urban contexts.

<sup>72</sup>The author has been an active member of Campaign for Peoples Goals for Sustainable Development.

<sup>73</sup>The statements were delivered by Mr. Paul Quintos and the author. Date of the OWG/PGA Meeting, link of statements on the UN NGLS

### ***Changing context of hunger and malnutrition in India***

Food Insecurity Atlas of Urban India (2002) for the first time brought significant attention on under nutrition in urban areas.<sup>74</sup> It indicated that more than 38% children under the age of three in India's cities and town are underweight and more than 35 children in urban areas are stunted. Besides, availability, accessibility and affordability of food, the nutritional status of children in urban areas are also impacted by non-food factors like housing, drinking water and sanitation, education and health services. People in urban areas are more likely to live in congested spaces, having limited access to drinking water and in poor sanitation. Even though urban wages and salaries are higher than rural wages and salaries urban poor fare poorly in terms of livelihood security as they often depend upon casual employment and daily wages. One surprising finding of the report was that urban Kerala was not considered to be food secure even though it is one of the most advanced states in terms of human development and all basic indicators.<sup>75</sup> Kerala fell in the same category in the map as urban Haryana, Rajasthan, Gujarat, Karnataka etc. the calorie intake in urban Kerala was lower than Madhya Pradesh, the most food insecure state.<sup>76</sup> Another surprising finding is that urban population in Rajasthan is more food secure than urban Tami Nadu and urban Maharashtra. This reinforces the paradox that is being argued in this paper, and advocates for the different lens to see and tackle urban poverty. The Atlas revealed a relationship between urbanization and the

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<sup>74</sup> Food Insecurity Atlas of Urban India, MSSRF and the WFP, 2002

<sup>75</sup> Food insecurity in urban areas, Kanta Murali, Frontline, undated

<sup>76</sup> One view point suggests that even though calorie intakes are lower in Kerala, nutrients are better utilized since health care, sanitation and education are more advanced in the state.

food consumption of the bottom 10% of the population. The report shows that the cereal intake of the lowest 10% is negatively related to the extent of the urbanization. This is vital information since cereal consumption is the main source of calories for the poorest population. The report also showed that there is disproportionate representation of SCs, and STs in the poorest sections of the urban population.<sup>77</sup> The report concludes that the problem of hunger and malnutrition in India is definitely not one of the scarce food production.<sup>78</sup>

The MSSRF and WFP together again brought the report of the state of Food insecurity in Urban India in 2010.<sup>79</sup> The report argued that urban food security deserves serious attention. It also confirmed debilitating trends. It said that about half the women in urban areas are anemic and undernutrition among women, indicated by chronic energy deficiency is increasing.

UNICEF's the State of the World's Children 2012 reported that like most parts of the world, children living in around 49000 slums in India are "invisible."<sup>80</sup> it noted "that the notion that even poor in urban areas is better" is not correct.<sup>81</sup>

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<sup>77</sup> Food insecurity in urban areas, Kanta Murali, Frontline, undated

<sup>78</sup> In 2002 India had a surplus of 53.56 MT of food grains.

<sup>79</sup> Food Insecurity in Urban India identifies hunger hot spots across the country, WFP, 27<sup>th</sup> September 2010

<sup>80</sup> Half of these slums are in five states-Maharashtra, Andhra Pradesh, West Bengal, Tamil Nadu and Gujarat.

<sup>81</sup> Rural Poor in India better off than urban poor; Unicef, Hindustantimes.com, 1<sup>st</sup> March 2012, Delhi

The situation in urban slums is particularly worrying. Over the next five years, India's urban population is projected to double to more than 800 million, of which about 200 million more than the current population of Pakistan-is likely to live in poverty. The population growth rate of urban slums is double the growth rate of overall urban population.<sup>82</sup> Children are especially vulnerable to the easy availability of packaged food and irregular, unbalanced diets, and unhealthy conditions in urban slums. Activists working on food security believe that India's policies for tackling hunger have largely remained focused on rural regions.<sup>83</sup> Hunger in urban areas cannot be approached in the same way as in rural areas as they have different challenges.

NGO Child Rights and You (CRY) found in a survey in 2016 that Delhi, India's capital bears the shame of having 47% of its children (urban poor) diagnosed as malnourished.<sup>84</sup> The children do not fare any better with respect to the other indicators of malnutrition with over 45% stunted and 43% found to be wasted (acute malnutrition). It emphasized that without a ration card or Aadhar card, a sizeable population of migrants is battling severe malnourishment as they remain invisible to government policies.

The IFPRI in its 2017 report showed that India is caught in a paradox situation, its rapid economic growth is coupled with

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<sup>82</sup> Why malnutrition grows in Rising Urban India, Dilnaz Boga, 3<sup>rd</sup> June 2015, [Indiaspend.com](http://Indiaspend.com)

<sup>83</sup> India has programmes to alleviate hunger but not the will to enforce them, Priyanka Vora, 15<sup>th</sup> Oct, 2016, [scroll.in](http://scroll.in)

<sup>84</sup> Capital Shame; hunger gnaws at them, Bindu Shajan Perappadan, 2<sup>nd</sup> May 2016, [thehindu.com](http://thehindu.com), Delhi

much slower decline in under nutrition.<sup>85</sup> The report said that in India where 17% of urban dwellers or 65 million live in slums, the problem of malnutrition is glaring.<sup>86</sup> The report also projects that 900 million urban residents will be added in just three countries-China, India and Nigeria-by 2050. The report says that one in three stunted children now lives in an urban area of a developing countries such as India, and persistent child under nutrition, stubborn micro nutrient deficiency and an alarming rise in overweight and obesity in urban areas mark the shift of the burden of malnutrition from rural areas to cities. The study identified lack of exclusive breastfeeding and packaged food as major reasons, and found that 66% of households consume packaged food high in fat, with two-thirds consuming these daily. However, it also noted that (based on a survey with responses from over 100 countries) people believe that hunger and under nutrition can be eliminated by 2025 in their own countries.<sup>87</sup>

## **Conclusions and Recommendations**

United Nations has declared 2016-2025, the decade for action on Nutrition. By reducing hunger and malnutrition, we can make progress not only on Goal 2 of the SDGs but also goals on poverty, inequality, water and sanitation, health, gender and sustainable cities. The Global Hunger Index Report predicts that India will fail to achieve its sustainable

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<sup>85</sup> Its Oct. 2016 report ranked India 97 among 118 countries on Global Hunger Index. India fared worse than almost all its neighbors', China, Myanmar, Sri Lanka and Bangladesh. Only Pakistan was ranked lower at 107

<sup>86</sup> India's economy is growing but distress migrations ensures that children are not, Anindito Mukherjee/Reuters, and PriyankaVora, 24<sup>th</sup> March 2017, scroll.in

<sup>87</sup> 2017 Global Food Policy Report; Rapid Urbanization is Critical Issue for Addressing Hunger, Nancy Lu, 14<sup>th</sup> April 2017, thp.org



development goal target of ending hunger by 2030.<sup>88</sup> India and many other developing countries will require a sea change in the policies and programmes to tackle hunger and under nutrition besides a determined political will and robust action. Our policies have approached hunger mainly as rural phenomena and as one of food scarcity. However, as explained earlier we need to identify emerging challenges of rapid urbanization of hunger and malnutrition, and increasing disconnect between food and nutrition. Other important determinants like livelihoods, decent wage, housing, drinking water, sanitation, education, open spaces will have to be factored in tackling hunger and under nutrition. Food production aspects require strong action with view to minimize risks in the long run, rather than emphasizing maximizing production in the short term. Farmers' income need to be enhanced significantly so they have an incentive to engage in agriculture. Food production systems need to be made sustainable by enhancing biodiversity and meet the challenges produced by climate change. Besides, challenges in reduced nutrition and supply side impediments also need to be met. Public reinvestment in agriculture is an urgent need. Though the focus needs to shift to urban poor, balance will have to be maintained in terms of rural development as moving all rural population to urban areas might not be feasible or desirable. Some of the recommendations are laid down below

1. Identifying urban hunger and under nutrition: While urban dimension has remained largely absent in hunger and food security debates; hunger also has been largely invisible in urban planning and governance contexts. There has recently been an upsurge in city scale food

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<sup>88</sup> India has programmes to alleviate hunger but not the will to enforce them, Priyanka Vora, 15<sup>th</sup> Oct, 2016, scroll.in

governance in Europe and North America, but outside a few notable examples such as Belo Horizonte in Brazil, the global south has not been actively engaged in urban food planning outside of the context of urban agriculture.<sup>89</sup> We need to identify hunger hot spots in urban areas and should have a concrete strategy to deal with that in urban planning and governance.

2. Strengthening food safety nets in urban areas: As half of the children now live in urban areas and a significant proportion of them are below poverty, the focus needs to shift to urban areas and especially to urban slums. Improving functioning of programmes like PDS, ICDS and Mid-day meals should be a priority. In fact, PDS was initially started for urban labour and factory workers.<sup>90</sup>
3. Food for work programme in urban areas: Looking at the grim scenario of hunger and under nutrition and lack of jobs in urban areas, there is a compelling need for work for food programme. Work for food programme was also

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<sup>89</sup>Jane Battersby (May, 2017), MDGs to SDGs-new goals, same gaps; the continued absence of urban food security in the post 2015 global development agenda. *African Geographical Review*

<sup>90</sup> India had been importing wheat from the US under Public Law 480 (PL480) since 1954, which gave developing countries the opportunity to purchase using their own currency instead of Dollars. In 1965, due to India-Pakistan war and condemnation of the role of the US in Vietnam war, US threatened to withdraw PL480 programme. By then urban laboring class had become dependent on wheat from ration shops. The circumstances unfolding gave rise to the famous expression “ship to mouth existence,” which made india not only to renegotiate PL480 from the US but also experiment with Norman Borlaug’s wheat seeds, which had solved the problem of rust and helped Mexico become exporter of wheat. Putting wheat in its place, or why the green revolution wasn’t quite what its made out to be, Richa Kumar, 2016, IIT Delhi

recommended by Food Insecurity Atlas of Urban India in 1992.

4. Ensuring critical interlinkages of services necessary for eradicating malnutrition: Food and calorific intake are only a small part of ensuring nutrition especially in the urban areas. Equally important are ensuring appropriate housing, access to drinking water and sanitation, ending open defecation, health services, education, ensuring nutrition of pregnant women. Another layer of complexity is added as different departments responsible for managing these services work in poor coordination, or at times at cross purposes. A convergent approach facilitating smooth coordination needs to ensure that these services expedite achieving better nutrition outcomes rather than impede them. Women's education and livelihood should also remain in the focus of attention.
5. Jobs vs. livelihood: Urban poor main depend on daily wages for food security and spend substantial proportion of their earning on food. However, it's largely dependent on job. Rural poor too mainly depend on wages for food. Rapid urbanization presupposes that majority of rural population will move to urban areas and jobs have to be created in urban areas. While focus on job creation in urban areas is good, it may be fallacious to think that all livelihoods can be replaced by jobs.<sup>91</sup> Neither this is desirable. In rural areas and especially in agriculture, analysts have warned against moving all farming population to urban areas. Chand et al. has warned "raising income of farmers by moving

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<sup>91</sup> Under Skill India Mission, India's target is to create 500 M skilled workers by 2022, while the current capacity of skilling is 2 million per year. In 2015 1.76 million received training, of which only 58,000 could be certified. Only 82,000 got placements. (R)

sizeable chunk of them outside agriculture (and thus raising farm size) has not worked in India and other major Asian countries.<sup>92</sup> Rather, the government should make efforts to create jobs and livelihood options based on natural resources (forests and fisheries etc.) in a manner that both reinforce each other. The current approach of the government, while on hand failed to create desired number of jobs, on the other it has also reduced significant number of livelihoods based on natural resources or traditional skills.

6. Increased investment in social services, health and education: India needs to urgently enhance its investment in health and education, and other social sectors. India's social spending on health and education remains smaller than sub-Saharan Africa.<sup>93</sup> Many smaller countries and poorer countries have shown better commitment and progress towards reducing hunger and under nutrition.<sup>94</sup>
7. Localizing food systems: The current model of FCI procuring food grains from the farmers all over the country bringing it to warehouses and then sending it back was a model with inherent deficiency and thus

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<sup>92</sup> Farm size and productivity: understanding the strengths of smallholders and improving their livelihoods, Ramesh Chand, P A Lakshmi Prasanna, Aruna Singh, EPW, June 25, 2011

<sup>93</sup> India has programmes to alleviate hunger but not the will to enforce them, Priyanka Vora, 15<sup>th</sup> Oct, 2016, scroll.in

<sup>94</sup> India has improved its ranking on the Global Hunger Index, moving up from "alarming" to "serious", the improvement is dwarfed by countries like Nepal, which is also in serious category, but has improved from 43 rank (in 1992) to 21 in 2016. India's economy is growing but distress migrations ensures that children are not, Anindito Mukherjee/Reuters, and Priyanka Vora, 24<sup>th</sup> March 2017, scroll.in

prone for failure. In rural areas better purpose will be served with localizing food production, procurement and distribution. There are no country scale models available, but many CSOs have made successful efforts at local levels, which are worth experimenting scaling up. The IFPRI report also advocates “importance of local democracy by empowering communities to make policies that address their specific strengths and needs, we have a better chance of ending hunger and malnutrition for everyone.”<sup>95</sup>The FCI procurement can be limited to make food grains available in scarce areas.

8. Preventing land alienation and: Ministry of agriculture and farmer welfare identifies alienation of agricultural land as one of the challenges.<sup>96</sup>The evidence shows that agricultural land conversion has become a serious issue in the country but the extent and intensity varies across different states. Between triennium ending (TE) 1991-92 and TE2011-12, net sown area in the country declined by about 1.8 million ha but it increased in some states, e.g. about 20 lakh ha in Rajasthan and 9.5 lakh ha in Gujarat. In contrast, Odisha lost over 17 lakh ha net sown area, Bihar (including Jharkhand) 12.4 lakh ha, Maharashtra (7.6 lakh ha), Tamil Nadu (7.1 lakh ha), Karnataka (3.1 lakh ha), Andhra Pradesh (2.7 lakh ha) and West Bengal (2.6 lakh ha). Contrary to general perception, Gujarat is the only state which has been able to add about 3 lakh ha to its total agricultural land during last two decades. The empirical results revealed that urbanization, road infrastructure expansion and industrial development were the most important factors affecting agricultural

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<sup>95</sup> 2017 Global Food Policy Report; Rapid Urbanization is Critical Issue for Addressing Hunger, Nancy Lu, 14<sup>th</sup> April 2017, thp.org

<sup>96</sup> State of Indian Agriculture 2015-16, DAC&FW, GOI

land.<sup>97</sup> According to the estimate of the Ministry of agriculture, more than 3.5 million ha of land went to non-agricultural purposes during 1990 to 2003.

9. Investing in agricultural R & D: There hasn't been any major breakthrough in agriculture research for quite some time as agricultural research is highly constrained financially. While India spent 31% of its agricultural GDP on research and development in 2010, in the same year China spent almost double the amount, with even Bangladesh spending more on agricultural R&D than India.<sup>98</sup>The gap between India and China has been increasing. Now China spends four times more in agricultural research than India. India needs to triple its invest in agricultural R&D to reach anywhere close to China.<sup>99</sup>Many of the State Agricultural Universities are in such a pitiable financial condition, that it is alleged that finances meant for research are spent on salaries of the staff.<sup>100</sup>
10. Zero tolerance to hunger deaths: Every hunger death is shameful for any developing country. In many countries including India, the government never acknowledges hunger death. All the efforts are made to show hunger deaths and deaths due to disease. In the PUCL case, the Supreme Court (2002) said that it is duty of all the states

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<sup>97</sup>Dynamics of Land Use Competition in India: Perceptions and Realities, Sharma, Vijay Paul, IIM Ahmedabad, 2015

<sup>98</sup> What is the future of agriculture in India, Vishwajeet Choudhary and Gursharan Singh, 19<sup>th</sup> July, 2016, thewire.in

<sup>99</sup> India needs to triple investment in agricultural research; IFPRI, The Hindu Business Line Bureau, 11<sup>th</sup> April, 2017, <http://www.thehindubusinessline.com/economy/agri-business/india-needs-to-triple-investment-in-agricultural-research-ifpri/article9693679.ece>

<sup>100</sup> XXX

to prevent hunger deaths. It also said that Chief Secretaries should be held responsible for any hunger death taking place in the state.<sup>101</sup> It is high time that the country should have a zero tolerance policy for hunger death.

11. Resisting false solutions: The narrow framing of the hunger and under nutrition has allowed a host of actors including agribusiness companies, hedge fund managers and private profiteers not only to enter the discussion but occupy significant policy space at all levels. Post MDGs and after the food crisis of 2008-09 saw a flurry among agribusiness companies to support food security through large scale industrial agriculture projects in Africa viz. Alliance for Green Revolution in Africa (AGRA) and Scaling Up Nutrition (Sun). Bill and Melinda Gates Foundation and Monsanto have significant stakes in AGRA in which they seek to sell their technology and monopolize seeds and other inputs.<sup>102</sup> SUN is platform representing countries, CSOs, UN agencies, business and donors. While SUN claims that these platforms should be 'government-led' it does not have in place adequate safeguards to stop corporations and their front groups

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<sup>101</sup> Chief Secretary liable for any hunger death in the state, says SC,, Times News Network, 30<sup>th</sup> October, 2002, <http://timesofindia.indiatimes.com/india/Chief-Secy-liable-for-starvation-deaths-says-SC/articleshow/26705652.cms>

<sup>102</sup>The Alliance for a Green Revolution in Africa (AGRA) is a \$400 million dollar enterprise funded by the Rockefeller Foundation and the Bill & Melinda Gates Foundation and has the former UN Secretary General, Kofi Annan as the Chairman of the Board. It is instructive to note that both AGRA and USAID top positions are filled with people that come from Monsanto and Dupont, AGRA's Technology Push in Africa, A commentary by Marrien Bassey, Friends of the Earth International, <http://www.foei.org/wp-content/uploads/2012/09/AGRAs-Technology-Push-in-Africa.pdf>

gaining unprecedented opportunities to influence nutrition policy shaping and setting and promoting unsustainable market-driven policies. Critics have raised a number of issues with regard to SUN's strategy.<sup>103</sup> SUN encourages governments – especially the world's most poorly resourced – to set up multi-stakeholder 'platforms' with the SUN Business Network, which includes food corporations like Pepsi, Cargill, Nutriset, Britannia, Unilever, Edesia and many others.<sup>104</sup> In these circumstances, no one can deny conflicts of interests in improving nutrition and promoting business interests of these food giants. Of the 58 countries in this network, 40 are from Africa. India is being lured to join this network. However, activists have suggested the government not to join the network, even though some of the states (Maharashtra, Uttar Pradesh and Jharkhand) have already joined the network.<sup>105</sup> Similar conflict of interest is being alleged against the Global Alliance on Climate Smart Agriculture, which seeks provide triple bullet solution to reduce carbon emission from agriculture, enhance food security and increase farmers income. It is being promoted by CGIAR, IFAD, World Bank, UN agencies in collaboration with agribusiness giants like Monsanto, Walmart, Syngenta and Yarra, and despite the fact that the results have been close to zero, its gaining currency in many

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<sup>103</sup> Concerns about the role of business in scaling up nutrition, International Baby Food Action Network (IBFAN), 13<sup>th</sup> June, 2012, <http://www.babymilkaction.org/archives/9868>

<sup>104</sup> Activists: don't join SUN, a nutrition drive, Times News Network, Times of India, 24<sup>th</sup> May 2017, Delhi

<sup>105</sup> *ibid*



countries and in Africa.<sup>106</sup> Genetically Modified Crops is also being sold as solutions to sustain agriculture and food production in changing climate.<sup>107</sup> These false solutions rather exacerbate hunger and malnutrition.

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<sup>106</sup> What's wrong with "climate smart agriculture" Ben Lillistan, 30<sup>th</sup> September, 2015, IATP, <https://www.iatp.org/blog/201509/what%E2%80%99s-wrong-with-%E2%80%9Cclimate-smart%E2%80%9D-agriculture>

<sup>107</sup> GM Crops will not solve India's food crisis, 22<sup>nd</sup> September, 2013, Wall Street Journal, <https://blogs.wsj.com/indiarealtime/2013/09/22/gm-crops-wont-solve-indias-food-crisis/>

Notes

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