

# Policy Gap Analysis in Nutrition and Nutrition Sensitive Agriculture in India

**With specific focus on mountainous states**

Welthungerhilfe India along with implementing partner  
*Lok Chetna Manch*

**Nutrition in Mountain Agroecosystems**  
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## INDEX

Abstract	4
Chapter 1. Introduction	6
Chapter 2. Methodology	7
Chapter 3. Nutrition in India	8
3.1 Overview	9
3.1.1 Child undernutrition	
3.1.2 Undernutrition in women and girls	
3.1.3 Maternal care	
3.1.4 Infant and Young child feeding practices	
3.1.5 Prevention and management of common neonatal and childhood illness	
3.1.6 Safe drinking water, sanitation and hygiene	
3.2 Mountain States	10
Chapter 4. Results	13
4.1 Nutrition in Policies	
4.1.1 National Nutrition Mission	
4.1.2 Current Projects/Programs Addressing Nutrition	
4.2 Multisector approach to nutrition	
4.2.1 Convergence in agriculture-nutrition	
Chapter 5. Discussion	20
5.1 Agriculture and Nutrition	
5.2 Nutrition	
5.3 SUN Membership and India	
5.4 Relevant existing models	
5.4.1 LANN+	
5.4.2 Sustainable Integrated Farming Systems (SIFS)	
Chapter 6. Key Issues & strategies	30
7. References	33
8. Annexes	34
Annex 1 Major Programmes and concerned department/Ministries	

## ABBREVIATION

ANM	Auxiliary Nurse Midwives
ASHA	Accredited Social Health Activist
AWC	Anganwadi Centres
AWW	Anganwadi Workers
BMI	Body Mass Index
GDP	Gross Domestic Products
GHI	Global Hunger Index
GoI	Government of India
GSO	Global Social Observatory
IBFAN	International Baby Food Action Network
ICDS	Integrated Child Development Scheme
ICT	Information Communication Technology
IFA	Iron Folic Acid
IHR	Indian Himalayan Region
IYCF	Infant and Young Child Feeding
JSY	Janani Suraksha Yojana
LANN	Linking Agriculture and Natural Resource Management with Nutrition
MAFW	Ministry of Agriculture and Farmer's Welfare
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MHFW	Ministry of Health and Family Welfare
MHRD	Ministry of Human Resource Development
MI	Micro Intervention
MSP	Minimum Support Price
MWCD	Ministry of Women and Child Development
NFHS	National Family Health Survey
NFSM	National Food Security Mission
NHM	National Horticulture Mission
NITI	National Institution for Transforming India
NMA	Nutrition in Mountain Area
NNM	National Nutrition Mission
NSA	Nutrition Sensitive Agriculture
ORS	Oral Rehydration Solution
PDS	Public Distribution System
PMMVY	Pradhan Mantri Matru Vandana Yojana
RKVY	Rashtriya Krishi Vikas Yojana
RSP	Rural Service Provider
SAG	Scheme for Adolescent Girls
SBN	SUN Business Network
SIFS	Sustainable Integrated Farming Systems
SMF	Small and Marginal Farmers
SUN	Scaling Up Nutrition
TFR	Total Fertility Rate
UN	United Nations
WHH	Welthungerhilfe

## ABSTRACT

India celebrated 72 years of democratic governance this year and continues to be the world's largest democracy. India continues to be majorly an agricultural economy, employing about 60% of the rural population and comprising a large number of small and marginal farmers. However, public investment in agriculture remains very low and the agricultural growth rate hovers around 2%, as opposed to the overall GDP of 6-7%. India also experiences high levels of maternal and child under-nutrition despite strong constitutional legislative policies, programmes and planning. Of 130 countries in this year's GHI with data and estimates on child wasting, India's rate is the second highest, with only South Sudan's rate higher. India's child wasting rate has not shown substantial improvement over the past 25 years. By contrast, the country has made considerable progress in reducing its child stunting rate, which stands at 38.4 percent, down from over 60 percent as of 1990.

The Government's commitment towards improving the nutrition challenge is unquestionable. But why is India experiencing restrained acceleration in improving its nutrition situation even with the plethora of food and nutrition initiatives and schemes? Nutrition has been classically dealt with by the Ministry of Health and the Ministry of Women and Child Development. These dealings had focussed mostly in resolving immediate causes and symptoms of malnutrition through interventions around food allocation and improving undernourishment among children. In the process, key underlying causes like inequity, disempowerment, inadequate access to complementary sectoral resources remained untouched. Realising the fact, it is only during 2017, the National Nutrition Mission, the first ever of its kind, was released by the National Institution for Transforming India, NITI Ayog envisioning ages a "Kuposhan Mukta Bharat 2022" (Malnutrition Free India 2022).

Over the years, through a continued and dense focus on provisions of food, health and care, the Government of India has developed robust nutrition-specific interventions. These have certainly strengthened India's nutrition situation and improved key nutrition indicators over the last couple of decades. However, the advancements have lacked pace. There is an opportunity to engage complementary sectors like agriculture, natural resource management, water and sanitation, social protection, etc. with nutrition to improve the uptake and pace of the existing Government programmes. It is increasingly recognized that addressing under-nutrition needs a multi-pronged strategy, which address the immediate and underlying causes, and other social determinants. Different determinants that affect nutritional status include food security at household level, access to food within household, living conditions and morbidity, home care practices and access to quality health care. Gender, education, economic condition, political situation are significant factors that determine how the other determinants play out. An approach encompassing complementary sectors like agriculture, education, livelihood, water and sanitation, social security nets, early childhood development and health care is needed for addressing the situation of malnutrition. The Indian part of Himalayas is covering about 16.2% of country's total geographical area. Unfortunately, there is no specific planning focus on agriculture development for mountain region which can be developed through the experience of the project.

A good policy environment towards that would be expected to include 1) nutrition-specific policies focussing particularly on malnutrition; 2) nutrition-sensitive policies, which grapple with the underlying factors that form pathways to improved nutritional status; and 3) a broadly enabling environment (including the socio-economic and cultural context) at the basic level.

Some of the recommendation by understanding the context are

- We believe malnutrition should be made the outcome indicator for all poverty alleviation schemes.
- For that, India needs an overarching community-led delivery process of nutrition-sensitive interventions. Sincere effort for training up mainstreaming mechanism on how to make behaviour change of the community is a necessity – because only political will is not sufficient. The community has to take charge of it.
- We strongly feel the role of agriculture in accelerating our nutrition status should come to the forefront. We propose Nutrition Sensitive Agriculture as a key recommendation for addressing insufficient access to nutritious food systems.
- Agricultural policies should shift toward a “crop-neutral” lens that does not incentivize staple crops over other crops, including MSPs for other crops. Diversified and integrated agriculture can be promoted through various stakeholders like network.

## Chapter 1. Introduction

This review work of a Policy-Gap Analysis was conducted as a part of the **Nutrition in Mountain Area II programme**, which emphasises on:

- On Local Levels:
  - Households increase production and consumption of nutritious foods, adopt RSPs design and implement MIs
  - Increase value of the benefits from consumption of nutritious foods in India
- On National Levels:
  - National policies and action plans support and stimulate diversified production and consumption in India
  - Advocacy for nutrition sensitive agriculture at the national and global level

Nutrition in Mountain Agro-ecosystem (NMA) focuses on mountain agro-ecosystems that are vulnerable to malnutrition caused by limited diversification of crops, Lack of irrigation facilities, insufficient intake of nutritious food, poor dietary diversification, water, sanitation, behaviours and poverty related issues.

The mapping exercise was conducted

- to understand the policy scenario of nutrition in India
- to map the existing government policies and area of improvement
- to map the stakeholders involved.

India, which celebrated 72 years of democratic governance this year, continues to be the world's largest democracy and according to the UN estimates, India's population is expected to overtake China's in 2028. This shall make India the world's most populous nation. As a result of being a rising economic powerhouse, India has emerged as an important regional power. India is also comparatively more politically stable than many other developing countries.

However, high levels of maternal and child under-nutrition in India have also persisted, despite strong Constitutional legislative policies, planning and programming commitments. According to GHI 2018, India's hunger level has been ranked as **Serious**. The Country scores 103 out of 119 with a higher hunger level worse than Bangladesh, Nepal, Iraq and in a tie with Nigeria. India's high ranking on the 2018 Global Hunger Index (GHI) draws attention to the country's stubbornly high proportions of malnourished children i.e. more than one-fifth of Indian children under five years of age weighs too little for their height and over a third are too short for their age according to the latest data.

## Chapter 2. Methodology

This study draws from relevant literatures, policies, programmes and projects in relation to agriculture, food and nutrition in India. While reviewing the documents, the focus was on current GoI policies and programmes that are being implemented. This study followed the flow of:

- a) Studying nutrition status from various angles
- b) Studying existing policy documents
- c) Reviewing relevant published works on nutrition and agriculture
- d) Framing recommendations and advocacy strategies.

During the process, we have also listed actors (both state and non-state) with whom the ideas of NSA can be shared and advocated.

## Chapter 3. Nutrition in India

India celebrated 72 years of democratic governance this year and continues to be the world's largest democracy. According to the UN estimates, its population is expected to overtake China's in 2028 to become the world's most populous nation. As a rising economic powerhouse, India has emerged as an important regional power and comparatively a politically stable nation. India has a quasi-federal form of government, with 29 states and 7 union territories. Key priorities of the Indian government include ensuring high growth levels, fostering faster job creation, addressing distress in the agricultural sector, and ensuring implementation of flagship government programs.

India has more than 50% of its population below the age of 25 and more than 65% below the age of 35. It is expected that, in 2020, the average age of an Indian will be 29 years. The demographic dividends also put pressure on the government to skill and provide enough jobs for employing the 10 million more people who join the labour force every year. India has more than two thousand ethnic groups, and every major religion is present within the country. This diversity is reflected in the plurality of languages of which 22 are constitutionally recognised. As a secular country, India has enshrined the right to freedom of religion in its Constitution, granting *'equality before the law' for 'all persons'*.

India continues to be majorly an agricultural economy, employing about 60% of the rural population and comprising a large number of small and marginal farmers (SMF). However, public investment in agriculture remains very low and the agricultural growth rate hovers around 2%, as opposed to the overall GDP of 6-7%. **High external input dependent agriculture** has made agriculture unremunerative, economically, socially and ecologically unsustainable and has pushed farmers into a vicious cycle of poverty and debt. By 2018, about 300,000 farmers have committed suicide due to obscene amounts of debts, as per official figures. There is an alarming depletion in agrobiodiversity. Food safety is a major public issue today, as people become increasingly aware of the connection between food, environment and health. The **Green Revolution** had indeed tried to initiate a controlled environment on farms in India and to some extent, overlooked agricultural anthropology, and the link of the food system with agricultural ethics and politics. This is reflected in the fact that India has managed to achieve a phenomenal increase in agricultural production yet, remained 103rd in the list of 119 countries in the Global Hunger Index (GHI). Additionally, climate change models have predicted extreme weather conditions, with rainy days projected to be less frequent but more intense. Changes in the monsoon patterns have been adversely affecting the farmers since several years now.

India experiences high levels of maternal and child under-nutrition despite strong constitutional legislative policies, programmes and planning. The hunger level in India is indeed **Serious** and requires due attention. There is a phenomenal increase in the agricultural production in the country. It can be concluded that the country is not under a crisis of food shortage which has caused the prevalence of malnutrition and under-nutrition

in India. Malnutrition is a result of a shortfall of policies and misdirected interventions. Of 130 countries in this year's GHI with data and estimates on child wasting, India's rate is the second highest, with only South Sudan's rate higher. India's child wasting rate has not shown substantial improvement over the past 25 years. By contrast, the country has made considerable progress in reducing its child stunting rate, which stands at 38.4 percent, down from over 60 percent as of 1990.

## **3.1 Overview**

### **3.1.1 Child undernutrition**

India is home to the largest number of children in the world. Nearly every fifth young child in the world lives in India. Children and women together constitute around 70% of India's people. Thus constituting not just the present human resource base but also the future. This resource base is deeply challenged by under-nutrition - which undermines their survival, health, cumulative learning capacities and adult productivity and must be urgently addressed. Nearly every third child in India is undernourished – underweight (35.7%) or stunted (38.4%) and 21% of children under five years are wasted as per NFHS-4 (National Food Health Security) 2015-16. Moreover, the NFHS-4 data indicates that every second child is anaemic (58.4%). Recent data from states that are challenged in terms of nutrition figures are promising and suggestive of acceleration. However, the pace of reduction remains low and calls for focused interventions in the area for optimal results.

### **3.1.2 Undernutrition in women and girls**

As per NFHS 3, every third woman in India was undernourished (35.5 % with low Body Mass Index) and every second woman (15-49 years) was anaemic (55.3%). About 15.8 % were moderately to severely thin, with BMI less than 17. Bihar (45%), Chhattisgarh (43%), Madhya Pradesh (42%) and Odisha (41%) were the states with the highest proportion of undernourished women. However, the findings from NFHS 4 (2015-16) highlight that nutritional status of women and girls (in the age group 15-49 years) has improved for all States.

### **3.1.3 Maternal care**

NFHS-4 findings reveal that there has been an increase in better care for women during pregnancy and childbirth which has contributed to reduced maternal deaths and improved child survival. Almost all mothers have received antenatal care for their most recent pregnancy and increasing numbers of women are receiving the recommended four or more visits by the service providers. Overall, the Total Fertility Rate (TFR) or the average number of children per woman has also gone down from 2.7 in NFHS-3 to 2.2 in NFHS-4. However, in terms of absolute values, institutional births continues to remain extremely low in Nagaland

(32.8%), Meghalaya (51.4%), Arunachal Pradesh (52.3%), Jharkhand (61.9%) and Bihar (63.8%), which are the bottom five states with respect to institutional births. NFHS 4 findings reveal that around 26.8 per cent of currently married women in the age-group 20-24 years married before attaining the age of 18 years.

### **3.1.4 Infant and Young child feeding practices**

There has been an improvement in the early initiation of breastfeeding rate i.e. from 23.4% in NFHS-3 to 41.6% in NFHS-4. Similarly, there has been an overall improvement over NFHS 3 levels in children under six months who were exclusively breastfed, from 46.3% to 54.9%. Children aged between 6-8 months receiving solid or semi-solid food and breastmilk has gone down from 52.6% to 42.7%.

### **3.1.5 Prevention and management of common neonatal and childhood illness**

The prevention and management of common neonatal and childhood illnesses is critical for breaking the vicious cycle of malnutrition and infection, wherein infections such as diarrhoea, acute respiratory infections and measles adversely impacting nutrition status and undernutrition increases susceptibility to infections thus, perpetuating the cycle. Effectively managing the onset of infections such as diarrhoea and acute respiratory infections, adequate care and referral of severely undernourished and sick children remains a challenge.

### **3.1.6 Safe drinking water, sanitation and hygiene**

NFHS 4 (2015-16) shows that families are now more inclined to use improved water and sanitation facilities. Over two-thirds of households in every State/UT (except Manipur) have access to an improved source of drinking water, and more than 90% of households have access to an improved source of drinking water in 19 States/Union Territories. More than 50% of households have access to improved sanitation facilities in 26 States/Union Territories. Similarly, in 20 States/ UTs, more than 50% households use clean cooking fuel, which reduces the risk of respiratory illness and pollution.

## **3.2 Mountain States**

The prevalence of stunting, wasting and under-weight in children in the mountain states of India is slightly lower than in the plains areas but still very high at close to 43%, 16% and 35%, respectively, with marked differences between states (Table3). Among the mountain states, the level of prevalence of under-weight, stunting, and wasting is highest in Meghalaya; the incidence of stunting is very high in Uttaranchal, Arunachal Pradesh, and Assam; high numbers of wasting in Himachal Pradesh, Uttaranchal, and Tripura; high numbers of under-weight in Himachal Pradesh, Uttaranchal, Assam, and Tripura. In Meghalaya, almost half of the children under the age of 5 years are under-weight, while in

Tripura almost a quarter of children under 5 years of age exhibit wasting. The prevalence of under-weight women is slightly less in the mountain states overall (30%) than in the plains (36%), although higher in Assam and Tripura (37%). The average body mass index (BMI) is similar in both mountain and plains states and falls within the normal range.

State	Stunting (%)	Wasting (%)	Underweight (%)
Himachal Pradesh	38.6	19.3	36.5
Jammu & Kashmir	35.0	14.8	25.6
Uttaranchal	44.4	18.8	38.0
Arunachal Pradesh	43.3	15.3	32.5
Assam	46.5	13.7	36.4
Manipur	35.6	9.0	22.1
Meghalaya	55.1	30.7	48.8
Mizoram	39.8	9.0	19.9
Nagaland	38.8	13.3	25.2
Sikkim	38.3	9.7	19.7
Tripura	35.7	24.6	39.6
Average of mountainous and hilly states	41.0	16.2	31.3

The rapid socio-economic changes occurring in the Indian Himalayan Region (IHR) region caused by various factors historically are influencing changes in agricultural practices, cropping systems, choice of crop varieties, and land use, as well as food consumption

patterns. Historically, nutritious crops like amaranth, buckwheat, minor millet, finger millet, pros millet, foxtail millet, sorghum, barley, and sweet potatoes were traditionally harvested in the hills and mountains. This practice played a key role in mountain agriculture and food and nutrition security. However, production of these crops is dropping rapidly. High-yielding varieties (HYVs) of rice and wheat have replaced the afore-mentioned crops. These traditional crops are gradually disappearing due to factors including lack of awareness with regard to nutritional value among farming communities and lack of local market prospects for the produce. The impact of colonisation reflected in the aftermath of the green revolution and the onset of capitalism in India is an important factor which has influenced farming behaviours and markets. Thus, contributing to the prevalence of malnourishment, under-nutrition and wasting in mountainous regions of Northern India.

Food habits and diet in the region continue to undergo changes affected by socio-economic developments such as increasing access to roads, schools and markets. Access to media through radio, television and periodicals have also impacted the socio-economic realities of the region. There has been a shift from home grown to purchased food and drink; from 'coarse' grain (such as the various millets, buckwheat, and amaranth) to 'fine' grain (white rice and white flour); and from traditional snacks and beverages to packaged food such as potato chips, instant noodles, and soft drinks. These changes are more prominent in middle and lower elevation villages, where road connections are better and market connections has been established. The consumption of traditional coarse grains are often considered to be 'backward' in the new socio-cultural value system. While total calorie intakes in these areas have increased over the years, nutritional status has deteriorated. Reduced consumption of

traditional nutritious foods and decreasing physical activity levels lay the ground for obesity and other related chronic diseases. An additional risk factor for chronic diseases are poverty. Poverty influences the shift to low quality, high-calorie, low-cost, mass-produced food. Foods pertaining from indigenous crops, wild vegetables and fruit species, and animal sources are important sources of micronutrients.

## Chapter 4. Results

### 4.1 Nutrition in Policies

The commitment levels of the Government in solving our food and nutrition challenge is high. The Government has taken bold steps by making investments in water, sanitation, food availability alongwith maternal and childcare to influence the health and nutrition status of the country. Through “Janani Suraksha Yojana” (Mother Security Scheme) institutional childbirths have increased since 2005-06 and have even doubled in few states. Mothers have received at least 4 ante natal care visits and immunization rates have gone up in neo natal stages. Sanitation has witnessed renewed focus since the launch of Swachh Bharat Mission in 2014 and more than 6 million toilets have been constructed in over 300,000 villages.

The Government’s commitment towards improving the nutrition challenge is unquestionable. But **why is India experiencing restrained acceleration in improving its nutrition situation even with the plethora of food and nutrition initiatives and schemes?** Nutrition has been classically dealt with by the Ministry of Health and the Ministry of Women and Child Development. These dealings had focussed mostly in resolving immediate causes and symptoms of malnutrition through interventions around food allocation and improving undernourishment among children. In the process, key underlying causes like inequity, disempowerment, inadequate access to complementary sectoral resources remained untouched. There had been a nutrition policy, however it is not clubbed well with an implementation strategy. Realising the fact, it is only during 2017, the National Nutrition Mission, the first ever of its kind, was released by the National Institution for Transforming India, NITI Ayog envisioning ages a “Kuposhan Mukh Bharat 2022” (Malnutrition Free India 2022).

#### 4.1.1 National Nutrition Mission

The goals of NNM are to achieve improvement in nutritional status of children from 0-6 years, Adolescent Girls, pregnant women and lactating mothers in a time bound manner during the next three years beginning 2017-18. The National Nutrition Mission (NNM) has been set up with a three-year budget of Rs.9046.17 crore commencing from 2017-18. The NNM is a comprehensive approach towards raising nutrition levels in the country on a war footing. The mission will comprise mapping of various schemes which contribute towards addressing malnutrition, These include a very robust convergence mechanism, ICT based Real Time Monitoring system, incentivizing States/UTs for meeting the targets, incentivizing Anganwadi Workers (AWWs) for using IT based tools, eliminating registers used by AWWs, introducing measurement of height of children at the Anganwadi Centres (AWCs), Social Audits, setting-up Nutrition Resource Centres, involving masses through Jan Andolan/Mass Movement for their participation on nutrition through various activities, among others.

## Major expected impact

NNM targets to reduce stunting, under-nutrition, anaemia (among young children, women and adolescent girls) and reduce low birth weight by 2%, 2%, 3% and 2% per annum respectively. Although the target to reduce Stunting is at least 2% p.a., Mission would strive to achieve reduction in Stunting from 38.4% (NFHS-4) to 25% by 2022 (Mission 25 by 2022). It also aims to prevent and reduce undernutrition (underweight prevalence) in children (0- 3 years) by 3 percentage points per annum from NFHS 4 levels by 2022 and reduce the prevalence of anaemia among young children, adolescent girls and women in the reproductive age group (15- 49 years) by one third of NFHS 4 levels by 2022. This shall create synergy, ensure better monitoring, issue alerts for timely action, and encourage States/UT s to perform, guide and supervise the line Ministries and States/UT s to achieve the targeted goals.

## Benefits & Coverage

More than 10 crore people shall be benefit from this programme. All the States and districts will be covered in a phased manner i.e. 315 districts in 2017-18, 235 districts in 2018-19 and remaining districts in 2019-20 will be covered gradually.

## Guiding principles

The implementation of the National Nutrition Strategy will be guided by the following key principles of action.

- 1. A life cycle approach** - A life cycle approach will be adopted, with a focus on critical periods of nutritional vulnerability and opportunity for enhancing human development potential.
- 2. Early preventive action** - emphasise on preventing under nutrition, as early as possible in the life cycle.
- 3. Inclusive and gender sensitive** - It will be rooted in a rights-based framework that seeks to promote the rights of women and children for survival, development, protection and participation without discrimination.
- 4. Community empowerment and ownership** - Families and communities shall be equipped for improved care behaviour and nutrition of children and women, demand quality services, contribute to increased service utilization and participate in community-based monitoring.
- 5. Local systems** - Valuing, recognising and enhancing contribution of Anganwadi workers, helpers and ASHAs
- 6. Decentralisation and flexibility** - Contextually relevant, decentralized approaches shall be promoted, with greater flexibility at State, district and local levels for greater and sustained programme effectiveness and impact, in harmony with the approach of cooperative federalism.
- 7. Accountability and responsibility** - Panchayati Raj institutions and urban local bodies

8. Foster innovation
9. Informed by science and evidence
10. Ensure that there is no conflict of interest

#### 4.1.2 Current Projects/Programmes Addressing Nutrition

National Nutrition Mission is a flagship programme of the Ministry of Women and Child Development (MWCD), Government of India, which ensures convergence with various programmes i.e., Anganwadi Services, Pradhan Mantri Matru Vandana Yojana (PMMVY), Scheme for Adolescent Girls (SAG) of MWCD Janani Suraksha Yojana (JSY), National Health Mission (NHM), Swachh-Bharat Mission, Public Distribution System (PDS), Department Food & Public Distribution, Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and Ministry of Drinking Water & Sanitation.

**Infant and Young Child Care and Nutrition** - These interventions focus on children under 3 years, through the promotion of

- Promotion of universal early initiation (within 1 hour of birth) and exclusive breastfeeding for the first six months of life.
- Promotion of universal timely and appropriate complementary feeding after six months, along with continued breastfeeding for two years or beyond.
- Universal growth monitoring and promotion of young children-using WHO CGS with counselling of mothers/families using the Mother Child Protection Card.
- Universal access to infant and young child care (including ICDS, crèches, linkages with MGNREGA), with improved supplementary nutritional support/THR through ICDS.
- Enhanced care, improved feeding during and after illness, nutritional support, referrals and management of severely and acutely undernourished and/or sick children.

#### **Infant and Young Child Health**

- Improved new born care and care of low birth weight babies under health and family welfare scheme.
- Bi annual vitamin A supplementation for children 9-59 months
- Universal, timely and complete immunization of infants against vaccine preventable diseases (and subsequent booster doses) with quality assurance.
- Ensuring that young children receive micronutrient supplementation and bi annual deworming as per MHFW guidelines. This includes- IFA supplementation for children 6-59 months and Bi annual deworming for children Over 1 year-59 months (linked to bi annual VAS rounds).
- Prevention and management of common neonatal and childhood illnesses such as diarrhoea (with ORS and zinc supplementation) and Acute Respiratory Infections (ARI) and severe acute malnutrition, at community and facility level.

### **Maternal Care, Nutrition and Health**

- Improved supplementary nutritional support during pregnancy and lactation (ICDS).
- Improved antenatal care - including health and nutrition counselling (also family support for extra diet and rest to ensure adequate weight gain), IFA supplementation, consumption of adequately iodized salt and screening /management of severe anaemia.
- Enhanced maternity protection (through the effective implementation of PMMVY)
- Institutional deliveries, lactation management, improved post-natal and new born care (ICDS and ASHA).
- Promoting marriage at the right age, first pregnancy at the right age, inter pregnancy recouplement/ birth spacing and shared care/ parenting responsibilities.
- Promoting Women's Literacy and Empowerment

### **Adolescent Care, Nutrition and Health**

- Equal care of the girl child at different stages of the life cycle- linked to the "Beti Bachao Beti Padhao" initiative.
- Improved access to health care, counselling support through school health programmes, ARSH and deworming as per MHFW National Deworming Initiative.
- Improved access to nutritional support through Mid-Day Meals in schools (MHRD) and through SABLA for out of school girls.
- Universal access of girls in school and girls out of school to IFA supplementation.
- Girls' education, skill development and female literacy.
- Changing gender constructs -Gender sensitization and life skills for adolescents.
- No Child Marriage- Marriage of young women after the age of 18 years.

### **Community Nutrition (Interventions addressing the community)**

- Ensuring universal access to safe drinking water, sanitation and hygiene, in an open defecation free environment, through Swachh Bharat/Clean India Mission.
- Prevention and treatment for malaria through the Use of bed-nets and/or intermittent preventive therapy for malaria (as per MHFW protocols) in malaria-endemic areas; Facilitating mosquito control measures; Other relevant health /disease control measures specific for the state/district, relevant for improving nutrition at community levels - such as JE, kala azar etc.
- Ensuring access to household food security, social protection systems and safety nets like Antyoday Yojana.
- Nutrition Education to ensure that optimal feeding and caring practices, dietary diversity nutritious foods; sanitation and hygiene and healthy lifestyles are promoted-addressing undernutrition and also the dual burden of malnutrition. (This includes Nutrition Education in the school curriculum and in colleges).
- Focused Interventions to reaching the most nutritionally vulnerable community groups (such as SC, STs, minorities, others) and address multiple nutritional

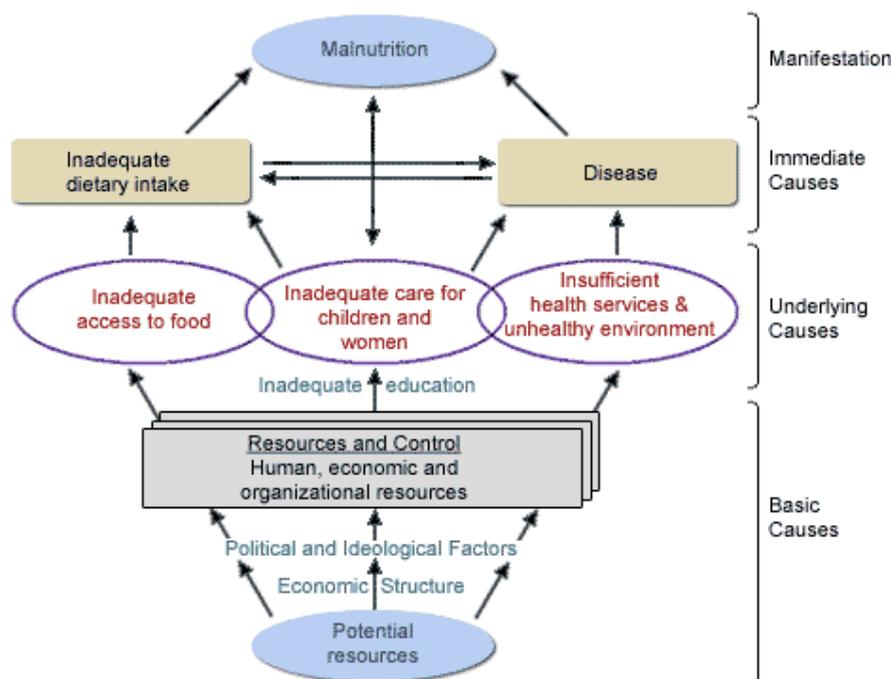
vulnerabilities such as those related to seasonal distress, disease outbreaks, natural disasters (such as floods, drought, earthquakes) and other situations.

- Flexible responses to other State/district specific needs for improving nutrition at community levels.

## 4.2 Multisector approach to nutrition

Nutrition-specific interventions or programmes address the immediate determinants of foetal and child nutrition and development, adequate food and nutrient intake, feeding, caregiving and parenting practices, and burdens of infectious diseases. Nutrition-sensitive interventions, on the other hand, draw on complementary sectors like agriculture, child and maternal care, public health, social protection, early child development, education, and water & sanitation to affect the basic and underlying determinants of nutrition - including poverty, food and nutrition insecurity, lack of knowledge and awareness, scarcity of access to adequate health and care resources, unavailability of clean water and sanitation services. Nutrition-sensitive interventions can serve as delivery platforms for Nutrition-specific programs and reach out to large segments of the population potentially improving their scale, coverage, and effectiveness.

Over the years, through a continued and dense focus on provisions of food, health and care, the Government of India has developed robust nutrition-specific interventions. These have certainly strengthened India's nutrition situation and improved key nutrition indicators over the last couple of decades. However, the advancements have lacked pace. There is an opportunity to engage complementary sectors like agriculture, natural resource management, water and sanitation, social protection, etc. with nutrition to improve the



uptake and pace of the existing Government programmes. It is increasingly recognized that addressing under-nutrition needs a multi-pronged strategy, which address the immediate and underlying causes, and other social determinants. Different determinants that

affect nutritional status include food security at household level, access to food within

household, living conditions and morbidity, home care practices and access to quality health care. Gender, education, economic condition, political situation are significant factors that determine how the other determinants play out. An approach encompassing complementary sectors like agriculture, education, livelihood, water and sanitation, social security nets, early childhood development and health care is needed for addressing the situation of malnutrition. While results of interventions of impacting nutrition through different pathways of home production, general development or market processes have been mixed and inconclusive due to insufficient research, women empowerment has been identified as a critical component for improving nutritional status.

Plan documents and agricultural policies, particularly in earlier periods, do not address nutrition. The first National Agricultural Policy, in 2000, did not mention nutrition at all. Similarly, the 11th Five-Year Plan in 2007 has no mention of nutrition. The Plan's chapter on agriculture focuses on generating surplus and presents strategies to accelerate annual agricultural growth to 4 percent during the plan period. There was no mention of nutrition under these strategies. However, in 12<sup>th</sup> 5 year plan, nutrition was mentioned, but with focus on nutrition specific interventions like ICDS. It was mentioned that the Ministries which deal with Health, Drinking Water Supply and Sanitation, School Education, Agriculture and Food and will bring strong nutrition focus to their programmes, This was not followed with an implementation plan.

#### **4.2.1 Convergence in agriculture-nutrition**

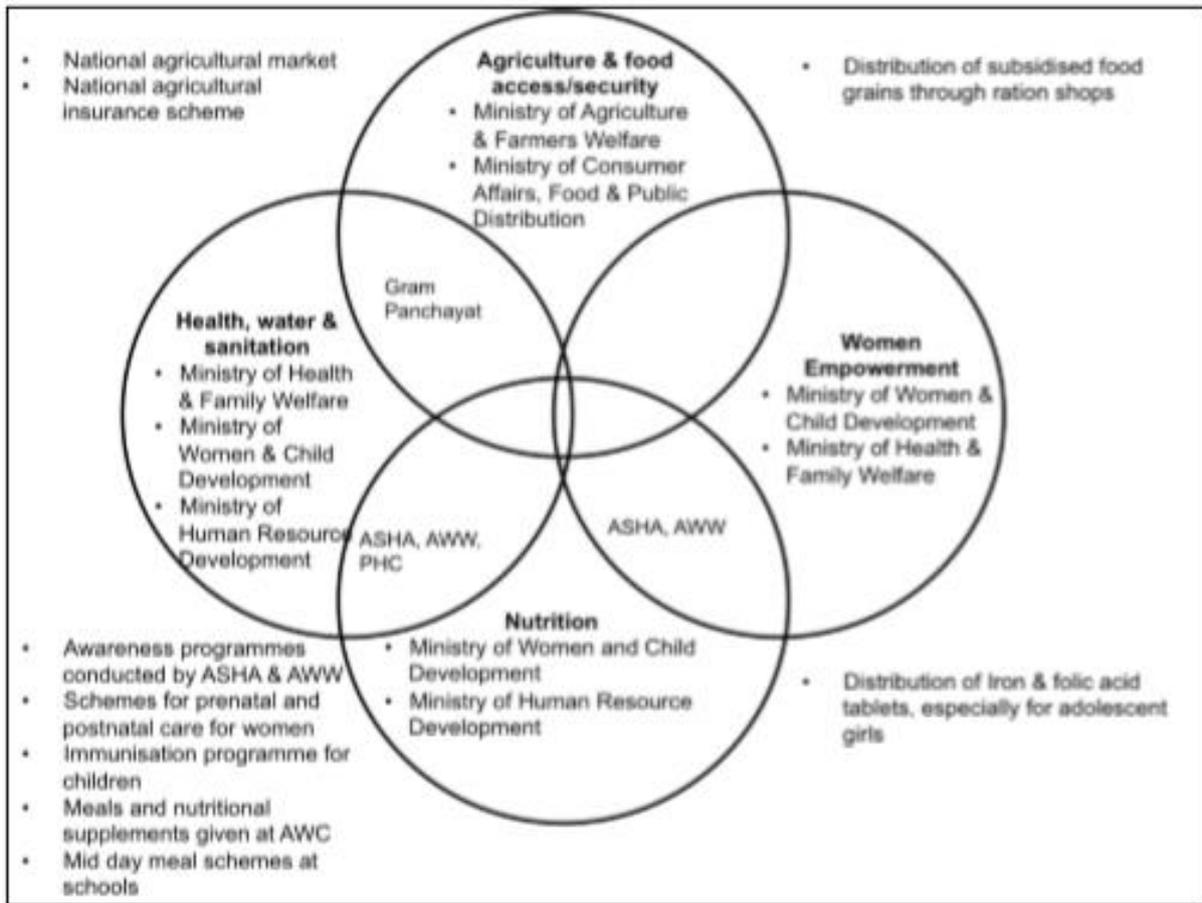
Acceleration of progress in nutrition will require effective, large-scale nutrition-sensitive programmes that address key underlying determinants of nutrition and enhance the coverage and effectiveness of nutrition-specific interventions.

Convergence in agriculture-nutrition is a new element of policy design in India. The agriculture and food security sectors are mainly oriented toward ensuring availability and access; they deal essentially with production (supply) and livelihoods, although in discussions of food security, nutrition is mentioned.

As agriculture is a concern of the states, there needs to be convergence of programs at state level. Some states do have nutrition missions (for example, Karnataka and Maharashtra), which involve agricultural departments as well.

Government has introduced several agricultural programs, such as the National Food Security Mission (NFSM), National Horticulture Mission (NHM), and Rashtriya Krishi Vikas Yojana (RKVY). Other programs, like the Mahatma Gandhi National Rural Employment Guarantee Act (NREGA), also have an impact on nutrition of women and children.

The diagram demonstrates the possible convergence and linkages of some of these actors and programs with nutrition.



## Chapter 5. Discussion

### 5.1 Agriculture and Nutrition

India's policy has long been focused on self-sufficiency in food grains, because of rampant hunger and famine prior to the Green Revolution. India's policymakers have taken a *two-pronged approach* to this view of food security. On one side, they have focused on supporting producers by attempting to stabilize farm prices through assured minimum support prices (MSP); on the other hand, they have provided subsidized food to poor consumers through the Public Distribution System (PDS), which purchases food from MSP-supported farmers.

However, the implemented policies have led to unintended consequences. The focus on grains has limited farmers' ability and incentives to diversify into other crops. In addition, research has suggested that open-ended procurement of the PDS system from the MSP-supported farmers has given undue political influence to larger grain-producing states. The PDS system mainly provides subsidized grain products, and this has impacted the nutrition focus and the food provided through other social safety net programs that utilize PDS-provided food, such as the Integrated Child Development Scheme and the Mid-Day Meal Scheme. All of these policies have worked together to keep the focus strongly on staple grains rather than more nutrient-dense crops, including pulses, fruits and vegetables.

In 2013, India's Parliament passed the National Food Security Act (NFSA), which allowed 75 percent of the country's rural population and 50 percent of the urban population to receive at least 5 kg of food grains per month at a subsidized price. The Act also includes nutritional support for pregnant women and lactating mothers, as well as for children from the ages of six months to 14 years. According to the report, the NFSA program currently reaches 884 million beneficiaries. However, the program has maintained the traditional focus on basic calorie sufficiency and staple grains and has thus far not been successful at addressing India's deeper problem of *"hidden malnutrition"*.

First, policymakers need to expand their focus to look beyond calories. One can think of promoting the consumption of nutrient-rich millets and pulses through including these crops in the PDS and other social safety net programs. In addition to improving consumers' nutrition outcomes, these crops also tend to be more resilient to climate change than traditional staple grains, making them a potential channel through which to increase farmers' adoption of climate-smart agriculture.

Second, policies need to take into account how malnutrition impacts people during different stages of the life cycle. While programs like the NFSA have nominally provided for key nutrition interventions in important stages of life, such as pregnancy or early childhood. Many of these programs lack the operational capacity and coordination to truly support a

life-cycle approach. Such factors as access to family planning, improved child care and feeding practices, increased women's empowerment in household decision-making, and access to clean water and sanitation facilities all play a role in ensuring that nutrition and food security programs take into account the total life cycle. This shift will require better coordination among government agencies and other actors to create multi-sectoral nutrition goals and plans.

Third, agricultural policies should shift toward a "crop-neutral" lens that does not incentivize staple crops over other crops. The report suggests that this would allow farmers to respond to market signals and demand for non-staple crops like fruits and vegetables and meat and fish products.

Fourth, smallholders need to be better connected with high-value markets for products like fruits and vegetables and meat and fish. Helping smallholders to diversify their agricultural production has been found to positively impact both poverty reduction and dietary diversity. Increasing smallholders' access to horticultural and livestock value chains will require increasing investments, from both the public and the private sector, in transportation, storage, and market development to reduce transportation and transaction costs for smallholder producers. In addition, policymakers should focus on investing in market information technologies, food product standardization, and food safety regulations in order to build consumer trust as well as identify and fill new market demands.

Fifth, India's government needs to decouple its consumer welfare targets from its producer welfare targets in order to limit the power of the farm lobby and shift the policy focus away from the sole promotion of staple grains. While the study emphasizes that staple grains continue to play an important role in nutrition and food security, dietary diversity and improved nutrition outcomes may be better promoted through expanding the PDS to include crops like pulses.

## 5.2 Nutrition

Connecting this to an enabling policy environment for nutrition, it can be suggested that in many ways the overall government strategy and best practices for nutrition are aligned. For example, the focus on cleanliness and sanitation is important for nutrition. Likewise, through the Swachh Bharat Mission, the government has shown that it can be effective in creating a buzz around a particular need when top-level support is provided. The use of direct cash transfers to enable more targeted support for citizens is something that Brazil has used successfully in its fight to improve nutritional outcome and food security. The focus on market economy and business suggests that public-private partnerships are likely to become more common in implementation of nutrition policies. Lastly, in Niti Aayog, the government may have a body that can take on a coordinating role across Ministries to enable the cross-sectoral policies required for a systemic approach to nutrition.

Since the underlying factors of nutrition cut across a number of sectors, there are several different Ministries that are, or should be, involved in creating an enabling policy environment for nutrition. At the national and state levels, those involved are the Ministry of Human Resource Development (HRD), Ministry of Health and Family Welfare (H&FW) and Ministry of Agriculture and Farmer's Welfare, Ministry of Water and Sanitation and the Ministry of Women and Child Development (W&CD).

India has had many of the NNM building blocks in place for some time, from robust policies in line with global best practices to a committed battalion of 2.5 million front line workers, including Anganwadi workers (AWWs), Accredited Social Health Activists (ASHAs) and Auxiliary Nurse Midwives (ANMs). There are strong self-help groups working towards empowering women, and new energy to ensure programmes in sectors like agriculture and food processing to ensure programs are helping to improve nutrition. In addition, the NNM has created further scopes.

First is the level of political attention and support for the National Nutrition Mission. This alone represents a huge opportunity to make real change in nutrition outcomes for women and children. Second is convergence. The framework facilitates ministries, departments, donors, non-profits and ground workers to come together. This streamlining will reduce the amount of time and resources spent. The focus on convergence will also mean utilising existing opportunities. Starting when a woman goes to a clinic to confirm her pregnancy up until her child's second birthday, her family will have multiple touch points with the health system. Antenatal care, institutional delivery, immunisation sessions, home visits, First Rice Eating ceremony are all opportunities to counsel families on good nutrition and provide services. Yet in the past, these programmes have not been well-coordinated and nutrition has been neglected. In Bihar, for instance, 90 percent of women get a tetanus shot through the antenatal clinic platform but less than 10 percent of mothers consume the recommended dose of Iron Folic Acid (IFA) that is critical for the health of the mother and the child she is carrying. Prioritising nutrition would mean mothers receive IFA tablets and counselling on good nutrition when they visit a clinic to get their tetanus vaccination.

Breastfeeding, which is one of the most vital ways to save children's lives and ensure their future development, is another example. 65 percent of women give birth in clinical facilities in Bihar, but only about 35 percent of women initiate breastfeeding within the first hour. If all women who delivered in a health facility were supported to initiate breastfeeding immediately, this opportunity gap would be closed.

However, this was not to be an executive mission, which would have the authority to draw up a work plan by integrating all intersectoral, nutrition related interventions under one roof; identify programme gaps and include them in any plans; initiate a strong education and awareness campaign; and, importantly, assign responsibility for achieving targets. Instead, it would merely be an apex body to supervise and monitor the reduction of stunting, undernutrition, and anaemia among children, adolescent girls, and women, and

low birth weight babies. It would do this through, among other things, target setting, mapping schemes, creating more collaborations and convergence, a real time monitoring system, and digitalisation of Anganwadi centres, which provide care and support to mothers and children in rural areas. No further nutrition or nutrition related interventions were required, according to the government's press release.

The NNM could have inspired greater confidence, had it gone a bit deeper to identify and analyse the root, fundamental causes of why India's nutritional indicators are not improving at a faster pace, and by giving the mission the powers to try and address this. Why has child underweight dropped by only 6.8% between 2006 and 2016 when per capita income has almost quadrupled during the same period? Why has wasting/severe wasting in children increased by 1.2% during that same period, and why do more than 50% of women and children continue to be anaemic? Why do only 9.6% of children between 6-23 months (11.6% urban and 8.8% rural) receive an adequate diet?

Ensuring that infants have an adequate diet is the mandate of the government's Integrated Child Development Services, which currently works towards this either through distributing protein-calorie-micronutrient enriched supplementary food at AWCs or through creating behaviour change in the household by educating caregivers about timely and adequate complementary food for infants. Clearly, on both counts, these interventions have failed to tackle India's problem of malnutrition, resulting in children's loss of potential cognitive and physical growth—a burden carried for life. It is unlikely that the current deficiencies in infants' diets will be solved by target setting and providing tablet computers to AWCs. This can only be improved by ensuring infants receive adequate and timely complementary feeding, which the existing interventions have failed to achieve, and the NNM suggests nothing new.

The mission also makes no attempt to acknowledge, analyse, or address the substantial dietary deficit that afflicts at least 50% of our population of all age groups and both sexes. The "Popularisation of Low Cost Nutritious Foods" intervention, which was mandated by the 1993 National Nutrition Policy, would have provided market access to low cost energy foods for children, women, adolescents, as well as sick and older people. This would have helped to bridge this dietary gap, and could have brought about a sustained reduction of India's malnutrition over time. But even today, this remains an orphan subject, which is not the responsibility of any one ministry.

It is precisely because no low cost nutritious foods are available in the market that the poor of all age groups, but particularly the most vulnerable, are unable to overcome their calorie-protein-micronutrient deficit, leading to morbidity, lower productivity and incomes, and perpetuating the cycle of poverty. It's good that the NNM will monitor the problem and try to get various bodies to work more collaboratively, but it cannot substitute for the hard macro and micronutrient deficit that affects about 50% of India's population.

This dietary deficit is compounded by a lack of accessible information for the public about basic dietary practices for children, adolescents, and mothers. For example, what is a balanced diet on a limited budget, the age at which an infant should be given complementary feeding, the proper growth of adolescent girls and boys, adequate pregnancy weight gain, and why is sanitation so important. This information deficit is often highest among the most vulnerable, for example, among families who work in agriculture/construction labour, where almost all wasted children are found.

The scale of malnutrition in India would have been best addressed by the NNM working out a strategy for bridging both the dietary and information deficit in households—perhaps through an effective education campaign reaching the most vulnerable households. Unfortunately, the NNM has ignored both.

The success of the National Nutrition Mission, like any policy, will lie in implementation. Ultimately, the deciding factor on how effectively Jan Andolan/Mass Movement can be implemented across the country is up to the people the programme is looking to reach – adolescent girls, their mothers, pregnant and lactating women. But this change will not happen in a vacuum. Families, frontline health workers, community members, panchayat members, religious leaders, and teachers are all critical. Only with their support can the fight against malnutrition be won.

### **5.3 SUN Membership and India**

The Scaling Up Nutrition (SUN), launched in 2010, is a movement led by countries and supported by multiple stakeholders. 61 countries and 3 Indian states (Jharkhand, Maharashtra, Uttar Pradesh) has been part of it. This Strategy and its accompanying Road Map (2016-2020) underscores that there are few challenges facing the global community today that match the scale of malnutrition, a condition that directly affects one in three people. There has been progress, but much more needs to be done. The SUN Movement has brought together governments, United Nations agencies, businesses, donors, civil society organizations and individuals in a collective mission to uphold the right to good food and nutrition. It has also focused importance of nutrition in achieving the Sustainable Development Goals (SDGs) and ensure good nutrition during the first 1,000 days of life.

India as a country is not part of the movement as of yet, as various civil society groups including paediatricians, nutritionists and public health activists fearing the entry of businesses into the policy space. Not only India, many countries that did not join the SUN network have raised the issue of conflict of interest in the SUN Business Network (SBN), which includes multinational food corporations like Pepsi, Cargill, Nutriset, Britannia, Unilever, Edesia, General Mills, Glaxo SKB, Mars, Indofood, Nutrifood, DSM and Valid Nutrition. Of the 61 countries in the SUN network, over 40 are from Africa. Though SUN -- started in 2010 -- claims to be a global movement, it has only aided

recipient countries.

The specific criticism in India includes the fact that this might result in to members sidelining sustainable strategies for prevention of malnutrition and instead promotes ready to use foods as a solution. Activists also warned the agenda was to get India to sign up as it would add to SUN's profile to get India into its network, but this would bring little for India while facilitating business for multinational food corporations selling processed foods, especially those with high sugar, salt and fat content. Research in India has shown that commercially produced fortified, energy-dense food is not effective in treating children suffering from severe acute malnutrition.

On this line, The International Baby Food Action Network (IBFAN) has been concerned about the Scaling Up Nutrition (SUN) initiative. It recognises that SUN accpets that malnutrition has multiple causes and that actions to mitigate it must be multi-sectoral. However, one of the major concern remains SUN's 'model' for tackling malnutrition centres around multi-'stakeholder' arrangements that include profit businesses.

SUN is structured around five networks of equal weight: from the countries, organizations of the civil society, the UN agencies, the business sector, and the donors. In 2012 SUN has produced a Conflicts of Interest (COI) guidance (funded by a \$1m grant from the Gates

**6 fundamental problems in SUN's Strategy according to IFBAN**

**1 PROMOTION of PLATFORMS WITH BUSINESS**

SUN encourages governments – especially the world's most poorly resourced – to set up multi-stakeholder 'platforms' with the SUN Business Network.

**2 ASSISTING business' top strategic priority:** SUN's promotion of business 'partnerships' in the conquest of child malnutrition inadvertently helps companies as they seek to influence national, regional and global policies in their favour. Malnutrition is now a profitable 'business.'

**3 LACK of clarity on conflicts of interest**

**4 SUN allows GAIN and businesses to be members of its Lead Group:** In practice GAIN representatives lobby to weaken regulations to help its partner companies such as Danone (the world's second largest baby food company), Mars, Pepsi and Coca Cola, to create markets for processed foods in low-income countries.

**5 SUN's FOCUS ON 'exclusive breastfeeding in the first 6 months' only.**

**6 EMPHASIS ON MICRONUTRIENTS RATHER THAN FOOD LEADS TO FUNDING BIAS** Analyses by ACF and the Institute of Development Studies (IDS) show a clear funding bias towards micronutrient product interventions.

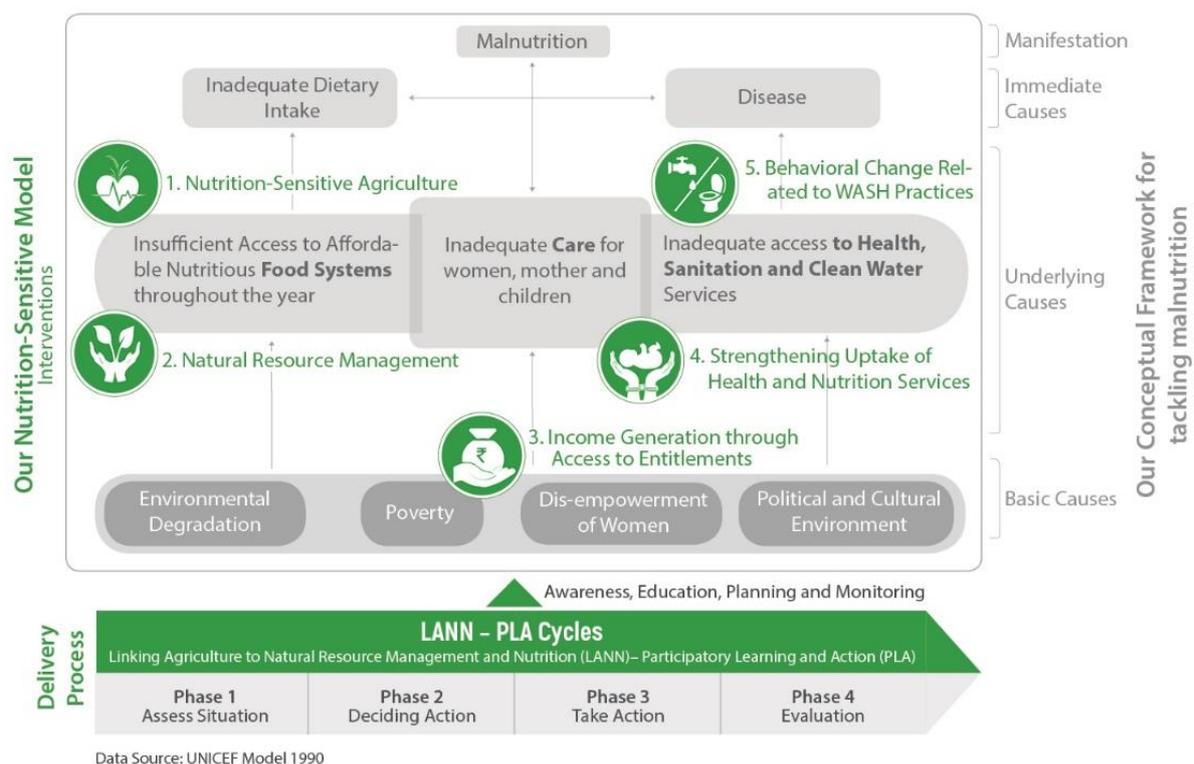
Foundation) that is managed by the Global Social Observatory (GSO). GSO is a body that is not independent of commercial interests. While SUN claims that these platforms should be ‘government-led’, it does not have in place adequate safeguards to stop corporations and their front groups gaining unprecedented opportunities to influence nutrition policy shaping and setting and promoting unsustainable market-driven policies.

Though, some aspects of SUN have been changed in response to these concerns (for example it now refers to continued breastfeeding – not just exclusive breastfeeding for six months and SUN claims it to be ‘government led’).

## 5.4 Relevant existing models

### 5.4.1 LANN +

This model connects the dots in tackling the underlying and basic causes of malnutrition with a LANN+ approach delivered through Participatory Learning and Action (PLA) cycles



Linking Agriculture and Natural Resource Management towards Nutrition Security (LANN+) is Welthungerhilfe’s inclusive approach to tackle malnutrition by designing a nutrition sensitive multisectoral model which aims at addressing the underlying causes of malnutrition. It is modelled to address nutrition security by making specific interventions in complementary sectors like agriculture, natural resource management, water, sanitation

and hygiene (WASH) and access to resources to solve the basic and underlying causes of malnutrition.

This approach has been developed through experience of closely working with the community for 6 years in Nutrition Sensitive Interventions which reached out to 182,000 direct beneficiaries across 5 states and 303 villages in the last 3 years. The outcomes of our efforts make us confident to recommend adoption and scaling up the model. The model has been able to reduce hunger period in the project areas by 1 to 2 months on an average. There has been a remarkable reduction of 19% in stunting among the children of 6 months to 3 years in our project areas. Today, 68% of the women in reproductive age in our project areas consume 5 food crops at minimum. Our model is currently being scaled up by the Government and prominent organizations.

UNICEF India is scaling up the good practices of this programme in Bihar, Odisha and Chhattisgarh through WHH India Partners. Government of Madhya Pradesh and GiZ have directly partnered with Welthungerhilfe India to upscale the model across 8 blocks impacting 1,26,210 adolescent girls and women between 15 to 49 years. With support from Azim Premji Philanthropic Initiatives and Odisha Livelihood Mission is upscaling the model in Odisha across 314 blocks and planning to outreach around 0.9 million families.

#### **5.4.2 Sustainable Integrated Farming Systems (SIFS)**

The concept of SIFS has developed from the idea of imitating nature through collaboration, multilayer arrangements and energy recycling, by carefully combining different elements. In SIFS, overall production, income and nutrition (food and fodder) are enhanced and diversified both in terms of quantity and quality. The incidence of risk is reduced and the system becomes energy efficient as a whole. It also integrates various techniques like soil water conservation, energy security, rainwater harvesting, cropping sequence management and multitier arrangement for better management of space and utilization of time by increasing cropping intensity and decreasing fallow periods.

SIFS involves following three main principles.

##### **(1) Cropping sequence**

An appropriate cropping methodology has to be followed so that there is:

- *Less competition for food:* This is achieved by a combination of low, medium (e.g. herbs) and heavy feeding crops (e.g. cereals, fruits) as well as soil building plants (legumes).
- *Space available for proper root system:* The roots of different plants attain different depths, so a proper combination of plants with different root depths helps minimise inter-crop competition for soil sap.
- *Longer duration of cropping season:* One of the main aims of SIFS is to minimise the lean period in the field. The intercropping should be done in such a way that the field never remains vacant or unproductive.
- *Pest control:* Companion crops are sometimes helpful in pest control. Proper selection of some trap or pest repellent crops as part of the mixed cropping can reduce pest attacks considerably.

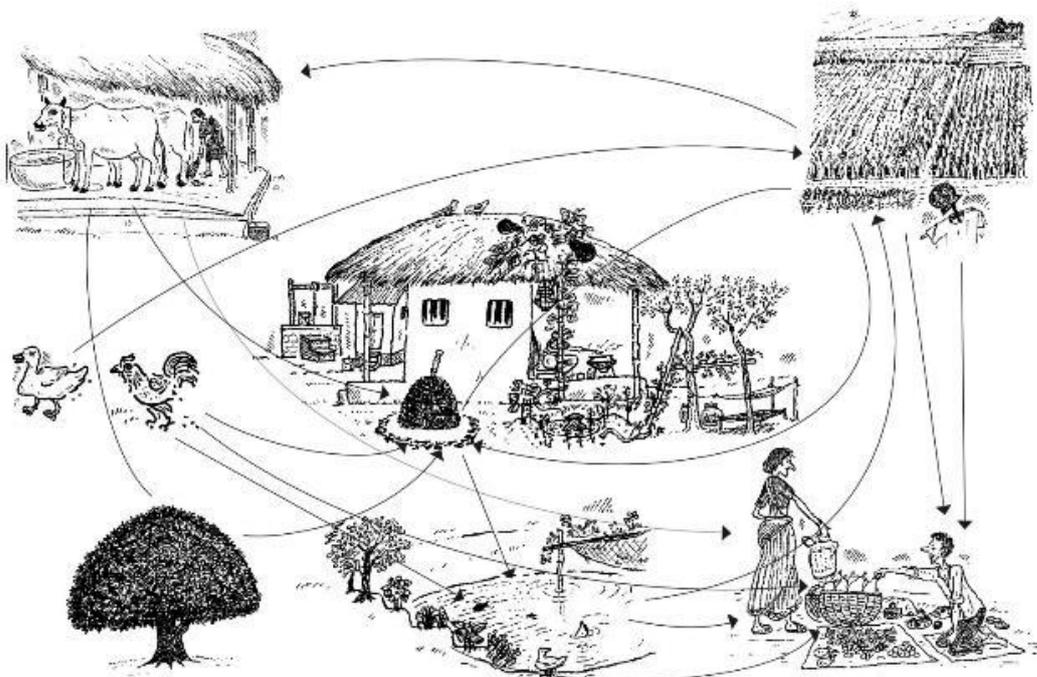
## (2) Multi-storey arrangement

Most natural ecosystems in tropical regions are multi-level arrangements. High levels of interaction between biotic and abiotic components and multiple energy exchange routes make a natural ecosystem resilient, self-maintaining and highly productive. Moreover, productivity improves over time, unlike, agro-ecosystems. If farms and gardens are redesigned to mimic the structures and functions of natural ecosystems, they will be more practicable and sustainable. The three rules regarding multistorey farming are:

- The crops should be planted in ascending order of height from east to west, so that each plant gets equal sunlight.
- The roots of the planted vegetables should be of different types and draw water and nutrients from different layers of soil.
- The vegetables should be identified in such a manner that the food security of family is effectively maintained, i.e. combination of leafy vegetables, cereals, legumes, etc. so that:
  - The total available area is effectively used.
  - The cultivated crops get adequate soil sap.
  - The plants get the sunlight they require.
  - The plants cooperate with each other during growth.
  - Soil fertility remains intact.

## (3) Integrating subsystems and various components

Next to diversification, integration is the most important aspect of sustainable resource management. In ecologically integrated farming systems, closer integration is attempted within each farm/garden/pond etc. at the level of nutrient exchange as well as at the functional level. Therefore, inter and intra subsystem linkages are established.



Animals such as pigs, rabbits, goats, cows, chicken and ducks can be introduced to obtain waste products as a source of nutrients and other functional inputs. It is very important to carefully select the different components so that they interact positively; e.g. chickens can be destructive in a vegetable garden, but in a fruit orchard, they can keep the pests/weeds under control. In a garden some plants/birds/animals etc. are deliberately introduced, while other living things grow by themselves or come to the garden if a suitable environment is created or food/water/shelter is provided. The focus is on integrating the following elements into the production system:

- Birds and animals (wild and domestic)
- Perennial plants (wild and domestic)
- Aquatic plants and organisms (wild and domestic)
- Micro flora and fauna (mushrooms etc.)
- Insects (wild and domestic)
- Seasonal and annual plants (wild and domestic)

## Chapter 6. Key Issues and strategies for policy advocacy

A good policy environment would be expected to include 1) nutrition-specific policies focussing particularly on malnutrition; 2) nutrition-sensitive policies, which grapple with the underlying factors that form pathways to improved nutritional status; and 3) a broadly enabling environment (including the socio-economic and cultural context) at the basic level. Some of the broader expectations are also the coordination of administration (across departments) and reduction of corruption with an increase in transparency. Policy instruments can broadly increase access (to health facilities, clean water or healthy food) or change behaviour (e.g., improved cooking, feeding, sanitation and hygiene practices).

The recognition that nutrition is cross-sectoral, in the NNM is a major policy achievement but,

- Cross-departmental committees with participation from a range of state and non-state actors
- Commitment from the top levels of government and
- Good monitoring and data collection systems for programme tracking

can the only prove the political will and effective implementation.

Nutrition Sensitive Agriculture aims to reduce nutrition inadequacy by improving dietary diversity and household food security by diversification of food crops and revival of traditional agricultural practices, chemical-less farming and integration of crop, livestock, poultry, tree and aquaculture within farm systems. Through specific interventions like seed preservation, integrated farming, kitchen gardens, improved cropping sequence – nutrition sensitive agriculture ensures steady inflow of nutritious food along with increased savings on bought food items. Which is particularly essential in mountain areas where market access is an issue. We see an opportunity of scaling up nutrition-sensitive agriculture model through Government organic farming schemes like Paramparik Krishi Vikas under the Ministry of Agriculture and the Mahila Kishan Sashakti Pariyojna (MKSP) under the NRLM. Nutrition Sensitive Agriculture can be further strengthened with specific nutrition outcome indicators under the Ministry of Agriculture.

Communities, particularly in mountain areas, traditionally used to preserve and collect uncultivated food forms like mushrooms, leafy greens, roots, tubers, wild vegetables, varieties of fruits etc. from forests, water bodies and farmland. Due to environmental degradation, changes in farming pattern and shift in eating habits these customs have faded with time. We strongly recommend promoting these lost traditions and preserving and collecting these uncultivated food systems as an alternate channel for nutrition.

We have shaped our following recommendations from the observations and understanding the existing nutrition policies and schemes in India.

- We believe malnutrition should be made the outcome indicator for all poverty alleviation schemes and severe malnutrition can help us identify families living in poverty.
- For that, India needs an overarching community-led delivery process of nutrition-sensitive interventions. Sincere effort for training up mainstreaming mechanism on how to make behaviour change of the community is a necessity – because only political will is not sufficient. The community has to take charge of it.
- We strongly feel the role of agriculture in accelerating our nutrition status should come to the forefront. We propose Nutrition Sensitive Agriculture as a key recommendation for addressing insufficient access to nutritious food systems. This can be further strengthened with inclusion of nutrition related outcome indicators under the Ministry of Agriculture and cascading them to block levels.
- Agricultural policies should shift toward a “crop-neutral” lens that does not incentivize staple crops over other crops, including MSPs for other crops. Diversified and integrated agriculture can be promoted through various stakeholders like network.
- In addition to that to improve nutrition security during lean periods and creating an alternate channel of nutritious food we strongly recommend preservation of forests, water bodies, and restoration of biodiversity by promotion of ingenious crops, fishes, poultry and fruits.
- The Indian part of Himalayas is covering an area about 5 lakh km<sup>2</sup> (about 16.2% of country’s total geographical area) and forms the northern boundary of the country. IHR is spreading on 10 states namely, Jammu & Kashmir, Himachal Pradesh, Uttaranchal, Sikkim, Arunachal Pradesh, Meghalaya, Nagaland, Manipur, Mizoram, Tripura, and hill regions of 2 states viz. Assam and West Bengal of Indian Republic. Unfortunately, there is no specific planning focus on agriculture development for mountain region which can be developed through the experience of the project.

The following strategy can be adopted within the scope of the project to address the gaps for achieving better nutrition outcome in mountain areas

1. Inculcating ideas of LANN+ and SIFS to the RSPs during CDP so that it get multiplied in mountain region.
2. Prepare a series of stories on NSA and Nutrition sensitive interventions promoted by the RSPs and engage with appropriate policy advocacy networks and media to communicate the interventions.
3. Develop a policy document based on experience and literature review on NSA in mountain area and organise a consultation with relevant authorities.

Challenges:

1. LANN+ interlinks government schemes and the project. In such cases, political will can pose a challenge to the successful implementation of the project.

2. Sufficient time needs to be allocated for sustainable change to occur. Re-spawning traditional knowledge with regard to traditional farming mechanisms may be a time-consuming factor.
3. Access to water is a major challenge in hilly areas with scattered land fields. Thus, lack of irrigation facilities could pose as a challenge. Water harvesting mechanisms for minor irrigation could be a major intervention.
4. The target society is inherently stratified in terms of gender, caste, class, geography, religion etc. Thus, breaking constraining social boundaries could pose as a major challenge.
5. Behaviours and understandings of water and sanitation is deeply influenced by culture which can pose as one of the challenges to promoting behavioural changes.

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## 8. Annexes

### Annex 1 Major Programmes and concerned department/Ministries

Major Programmes & Concerned Departments			
Sr. No	Determinants of Nutrition	Ministry	Major Programmes
1	Access to Maternal and Child Care	MWCD	<ul style="list-style-type: none"> <li>- Integrated Child Development Services (ICDS)</li> <li>- Pradhan Mantri Matru Vandana Yojana (PMMVY)</li> <li>- Creches</li> <li>- Rajiv Gandhi Scheme for the Empowerment of Adolescent Girls- SABLA</li> </ul>
2	Access to Healthcare	MHFW	<ul style="list-style-type: none"> <li>- National Health Mission</li> <li>- Includes RMNCH+A encompassing programmes for the control of Micronutrient Deficiencies (VAD, Nutritional Anemia, IDD)</li> </ul>
3	Access to Drinking Water	MWDS	<ul style="list-style-type: none"> <li>- Swachh Bharat Mission</li> <li>- National Rural Drinking Water Programme</li> </ul>
4	Access to Household Food Security (& food supplementation)	MCAFPD MA MHRD	<ul style="list-style-type: none"> <li>- Targeted Public Distribution System</li> <li>- National Food Security Mission</li> <li>- Agriculture</li> <li>- Mid Day Meals Scheme (Food Supplementation)</li> </ul>
5	Access to Livelihoods Security and Poverty Alleviation	MSD MRD	<ul style="list-style-type: none"> <li>- Skill Development</li> <li>- NRLM</li> <li>- MGNREGA</li> </ul>
6	Girls' Education, Literacy & Empowerment	MHRD MWCD	<ul style="list-style-type: none"> <li>- Sarva Shiksha Abhiyan</li> <li>- Sakshar Bharat</li> <li>- Beti Bachao Beti Padhao</li> </ul>
7	Information Communication & Social Mobilization	MI&B MPR MUD MYAS	<ul style="list-style-type: none"> <li>- Information Campaigns</li> <li>- Training of PRIs</li> <li>- Training of Urban Local Bodies</li> <li>- Youth Initiatives</li> </ul>
8	Interventions for Vulnerable Community Groups	MTA MSJE MMA	<ul style="list-style-type: none"> <li>- Focussed Interventions for vulnerable community groups (Scheduled Tribes, Scheduled Castes)</li> <li>- Multi Sectoral Development Programme (Minorities)</li> </ul>
9	Key Determinants	MWCD	<ul style="list-style-type: none"> <li>- NNM/ Nutrition Programme in High Burden Districts</li> </ul>