

PA/82/2018-CPMU- Part (1)
Government of India
Ministry of Women and Child Development
POSHAN Abhiyaan

3rd Floor, Jeevan Vihar Building
Parliament Street, New Delhi - 110 001
Date: 27th March, 2019

OFFICE MEMORANDUM

Subject: Minutes of Agri-Nutrition Conference under POSHAN Abhiyaan.

Agri-Nutrition Conference under POSHAN Abhiyaan (Prime Minister's Overarching Scheme for Holistic Nourishment) was held on 15th March, 2019 at The Ashok Hotel, Chanakyapuri, New Delhi.

- 2 Minutes of Agri-Nutrition Conference are enclosed herewith for information and necessary action.


(Sanjiv Gajraj)

Executive Director, POSHAN Abhiyaan
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- 1 PS to Vice Chairman, NITI Aayog
- 2 Secretary, Ministry of Health and Family Welfare
- 3 Secretary, Ministry of Drinking Water and Sanitation
- 4 Secretary, Ministry of Rural Development
- 5 Secretary, Ministry of Panchayati Raj
- 6 Secretary, Ministry of Tribal Affairs
- 7 Secretary, Department of Food & Public Distribution
- 8 Secretary, Ministry of Consumer Affairs, Food & Public Distribution
- 9 Secretary, Department of School Education and Literacy
- 10 Secretary, Ministry of Human Resource Development
- 11 Secretary, Ministry of Housing and Urban Affairs
- 12 Secretary, Ministry of Information & Broadcasting
- 13 Secretary, Ministry of Environment, Forest & Climate Change

- 14 Secretary, Ministry of Electronics & Information Technology
- 15 Secretary, Ministry of Minority Affairs
- 16 Secretary, Ministry of AYUSH
- 17 Secretary, Ministry of New and Renewable Energy
- 18 Secretary, Department of Youth Affairs
- 19 Secretary, Ministry of Youth Affairs & Sports
- 20 Secretary, Ministry of Social Justice and Empowerment
- 21 Secretary, Department of Empowerment of Persons with Disabilities
- 22 Secretary, Ministry of Social Justice & Empowerment
- 23 Secretary, Ministry of Agriculture
- 24 Secretary, Department of Animal Husbandry
- 25 Secretary, Department of Dairy and Fisheries
- 26 Secretary, DEPARTMENT OF AGRICULTURAL RESEARCH AND EDUCATION
- 27 Joint Secretary, PMO
- 28 Chairperson, FSSAI
- 29 Country Director, World Bank
- 30 Country Director, BMGF
- 31 Shri Rajan Shankar, TATA Trusts
- 32 Country Director, UNICEF
- 33 Country Director, PCI

Copy to:

- 1 Chief Secretaries of all the States/Uts
- 2 Principal Secretaries/Secretaries of the Department of WCD/Social Welfare Department, Agriculture, Animal Husbandry, Dairy and Fisheries, Health and Family Welfare, Rural Development, Panchayati Raj of the States/Uts
- 3 DC/DMs of all Aspirational Districts of India

Copy also :

- 1 PS to Vice Chairman, NITI Aayog,
- 2 PS to Member, NITI Aayog
- 3 PPS to Secretary, MWCD



Minutes of National Conference on Agri-Nutrition

Held on 15th March, 2019

The Ashok Hotel, Convention Hall, New Delhi

1. Introduction

1.1 A day long National Conference On Agri-Nutrition was organized on 15th March,2019 at The Ashok Hotel, Convention Hall, New Delhi. Making agriculture 'nutrition-sensitive' is increasingly recognized as an important strategy to reduce under nutrition. Nutrition sensitive agriculture aims to adopt strategies and processes which can maximize the impact of nutrition outcomes, especially for the vulnerable and marginalized communities.

The National Conference on Agriculture-Nutrition aimed at building positive linkages between agriculture and nutrition, achieve the POSHAN Abhiyaan's targets, develop agriculture-nutrition convergence plan and initiate policy frameworks for inclusion in the overall scheme of POSHAN Abhiyaan after due deliberations and discourse.

1.2 The Conference was attended by various stakeholders from the Government, State Government, Multilateral Partner Organizations, Social Organizations, State/UT representatives etc. A total of 200+ delegates attended the Conference.

2. Conduct (Plenary Session)

2.1 Agenda of the Conference is attached at **Annexure -1**. The Conference was organized in three sessions with a focus on discussing the key learning from Global and in Country Exemplary Practices on Agri-Nutrition; finding pathways to increase production, empower women and enhance income and making recommendations for formulating policy document.

2.2 **Dr. Rajesh Kumar, Joint Secretary, MWCD and MD, POSHAN Abhiyaan, GOI** welcomed the dignitaries and delegates. In his opening remarks he presented the Nutrition landscape and the enormity of challenge ahead. The targets, strategies and interventions of POSHAN Abhiyaan along with the major themes requiring concerted efforts were explained in detail. He emphasized on bio-fortification and food fortification among the solutions recommended to combat malnutrition. He touched upon the linkage between Agriculture and Nutrition, the need to have nutrition-sensitive agriculture programs and interventions, shared understanding, synergized efforts and nutrition-sensitive agricultural practices towards consumption of healthy diets. The ways suggested by him for improving nutrition included increasing availability and access to diverse nutritious food, better use of income to diet, health, hygiene, and centralizing role of women in agriculture and nutrition. He also highlighted the need of generating demand, establishing programs and policies to support a broader view of nutrition. Lastly, he stressed on enhancing Inter-Ministerial Convergence and their various roles in dealing with malnutrition.

2.3 **Shri Rakesh Srivastava, Secretary MW&CD, GOI** gave an overview of POSHAN Abhiyaan and its various components. He highlighted the problem of malnutrition, its manifestations, consequences and impact on health of pregnant women and children ultimately resulting in losses to Gross Domestic Product (GDP). He presented the targets, components and interventions of POSHAN Abhiyaan. The link between Agriculture and Nutrition was emphasized by him. He reiterated that nutrition needs a holistic

approach with agriculture playing a major role. He recommended convergence with enhanced coordination of different ministries and departments such as Agriculture and Food Ministries at programmatic and schematic level to address the issue of persistent malnutrition in India. He further conveyed the efforts made under POSHAN Abhiyaan, Ministry of Women and Child Development in working with several different Ministries in the Government of India to synergize and build convergence of their multiple program and schemes. He stressed on Agri-nutrition convergence action plan as the need of the hour to accelerate the progress towards improving nutrition indicators.

2.4 Dr. Vinod Kumar Paul, Member, NITI Aayog, GOI appreciated the evidence based Mission POSHAN Abhiyaan and the way it is addressing malnutrition and micronutrient deficiencies. He stressed on the need to align agriculture and nutrition with emphasis on targeted interventions to deal with vulnerabilities across all sectors. He recommended agriculture to be linked with nutrition encompassing the critical pillars, vision and mission of POSHAN Abhiyaan. He conveyed that this is the apt time to hold the National Agri-Nutrition Conference while Poshan Pakhwada is also being celebrated across the nation. He expressed his desire to hear experts from fields of Agriculture, Poultry, and Fisheries etc. in order to find pathways based on research and evidence to combat malnutrition. He urged on learning from best practices of others by promoting actionable ideas with a balanced approach at the end of the conference.

2.5 Dr. S.K. Malhotra, Agriculture Commissioner, Ministry of Agriculture and Farmers Welfare, GOI gave his views on food and nutritional security efforts required for holistic nourishment. He emphasized on the need to shift focus from increasing production and food safety to nutrition sensitivity. He highlighted the efforts made by Agriculture Ministry in this direction by initiating various programs. Horticulture crops are now being more attention. He talked on use of bio-pesticides and bio-control measures in agriculture to reduce food losses, value addition and decentralized processing specially in relation to perishable crops. Therefore, it is pertinent to explore ways for enhancing investment on the farm level processing or pre-conditioning along with the expansion of cold storage capacity for perishable crops of fruits and vegetables.

2.6 Dr. Purvi Mehta, Head Agriculture Asia, Bill and Melinda Gates Foundation (BMGF) talked about the Global Discourse around Food-Agriculture-Nutrition System for realizing SDG-2. She stated the existing paradox of malnutrition being highest in India despite of country being ranked as the largest producer, consumer and exporter of grains. She urged agriculture to be affordable, available and accessible to people in the country with elements of nutrition sensitivity, biofortification and food diversification. She expressed her concern over the cost of malnutrition becoming a large economic and commerce challenge for the nation. She recommended convergence with a centralized accountability framework and suggested to follow the successful legacy of Polio eradication program.

2.7 Shri Junaid Kamal Ahmed, Country Director, India, The World Bank in his address recommended the convergence of interventions under various National Health Programs. Nutrition is multi-dimensional and women play a central role at household level. To influence the household, it is essential to bring change in food practices through behavior change communication strategy with the involvement of women and children in the family. He highlighted on the decentralized role played by Panchayat, Block and District role in bringing convergence and implementation of various schemes under nutrition. Therefore, he stressed on enhancing the capacity of states in dealing with malnutrition. He conveyed that the ultimate challenge for world is to ensure the last mile delivery of nutrition.

2.8 Dr. Howarth Bouis, 2016-World Food Prize Laureate, Founder and Director, Harvest plus in his key address through a video message congratulated the organizers for the initiative taken to hold Agri-Nutrition Conference. He expressed his concern over the dual burden of malnutrition and hidden hunger due to micronutrient deficiency. He stressed on the importance of diet diversification and food fortification to combat micronutrient deficiency. Further, he expected fruitful outcomes at the end of Conference with deliberations from eminent professionals and participants.

2.9 Concluding remarks were given by Co-chair and Chair at the end of the session. **Dr. Ramesh Chandra Panda, Former Secretary, GoI and Member, National Executive Committee, POSHAN Abhiyaan** in his remarks congratulated the speakers in relevantly putting forth the context of agriculture and nutrition. He conveyed that though Green Revolution, has changed the landscape of agriculture, optimal nutrition is not reaching the beneficiaries'. There is variation in state performances despite of POSHAN Abhiyaan being implemented in all Districts. He recommended evidence based sectoral approach to make and promote Nutrition smart villages. He also recommended actions to be taken while making policy on packaging of food items, differential pricing of food items with added nutrition and restriction on advertising for junk food. He stressed on introduction of nutrition education and counseling at an early age to avoid the dual burden of malnutrition at a later stage killing millions of people.

2.10 Dr. Vinod Kumar Paul, Member, Health and Nutrition, NITI Aayog, GOI highlighted and summarized the key points raised by co-chair and gave the actionable points. Firstly, he pointed out on the urgent need to shift the focus from food security to food sensitivity and formulate the Policy Document for the year 2030 with inputs, evidence and cooperation from all stakeholders. He stressed on the role to be played by State Government and stakeholders in creating awareness and community mobilization on nutrition sensitivity. He recommended generating research based evidence on outcomes of crop modification, diet diversification and food fortification for their wider adoption for production by farmers and consumption by consumers. He suggested adopting a balanced integrated approach by combing traditional food practices with proper counseling and clear messages on nutrition.

3. Session-1

3.1 Session -1 was about Global and in Country Exemplary Practices-the key learnings. It was chaired by **Shri Rakesh Srivastava, Secretary, MWCD, and Co-chaired by Dr. Rajesh Kumar, Joint Secretary & Mission Director, POSHAN Abhiyaan.**

3.2 At the outset of Session **Dr. P. K. Anand, Former Senior Advisor, NITI Aayog, Government of India,** shared his State experiences on Agri -Nutrition. He talked about a study they have carried out for WFP on SDG-2 to End Hunger and achieve Food Security and improved Nutrition and Promote sustainable Agriculture. He also emphasized on trust on service providers is very important. He also mentioned that the NFHS-3 to NFHS-4 and onwards we are improving on Nutrition Data, but still there are some children who are not coming under the radar of ICDS and not availing Anganwadi services due to some or other reason which needs to be improved. It is important to note that the entire community needs to be covered. He recommended that MCP Card should be available to AWC. Monitoring nutrition is important and as a pilot, Mother and Child Protection Chart (MCPC) has been introduced to capture growth of children which determines the nutrition status of the children. Based on the measurements, the children are provided food to meet the balanced requirement for better nutrition. Such charts are

placed in the Anganwadis for regular measurements. He also recommended about U5MR/ Anemia trend line should be available to the desk of all State Chief Secretaries, District Magistrate and Panchayat for regular monitoring to remain on track. Dr. Anand also suggested that States should seek permission from Centre and promote millets which are high in nutritive value compared to wheat and paddy, in Mid Day Meal scheme and Public Distribution scheme. States should be hand hold for the use of millets. Community kitchens can help in providing diversified nutritious food at the community level without incurring losses to the government and a variable cost should be recovered. He further suggested that for Suposhit Bharat (i) ICDS - cover all eligible children 0 to 6 years, Pregnant Women, Lactating Mothers and Adolescent Girls(ii) Mid Day Meal Scheme - cover all children from 6 to 14 years and any child above 5 years who comes to school from pre-school education(iii) Increased access of affordable nutritious meals to general public through better PDS, community kitchen (covering on payment of variable costs)etc(iv) Sustainable food production systems and resilient agriculture practices. (v) Swachh Bharat and Swasth Bharat focus on better quality sanitation and hygiene standards. Monitoring can be based on real-time data (which can help in day-to-day monitoring) and survey data (to understand the trend of what is happening on ground). Incentivizing modernized data collection tools such as (i) ICT based real-time data; (ii) Use of smart equipment & (iii) SMS alerts for timely action

3.3 Dr. M. Geetha, Principal Secretary WCD, Chhattisgarh shared some experience in the context of Agri Nutrition in tribal and Left Wing Extremism (LWE) affected areas of Chhattisgarh. She also talked about POSHAN Vatika, focusing on contextually suitable vegetables, were experimented in Chhattisgarh that benefitted the households in the villages. These were promoted through the SHG members in the villages to scale up the ongoing POSHAN Abhiyaan in the state. 'Narva, Guruva, Ghurva and Baadi' is a program in Chhattisgarh which is being implemented through convergence between various departments such as Horticulture, Agriculture and Livestock, Panchyati Raj and Rural Development and the Forest Department. Narva focuses on watershed management and revitalizing the existing water resources. Guruva focuses on the livestock management. Ghurva focuses on composting and creating bio-gas through the bio-waste collection by practicing stall feeding. Lastly, Baadi is an orchard with different types of perennial and semi-perennial variety of crops for home consumption.

3.4 Shri Ranglal Jamuda, Chairperson, Odisha State Food Commission, Government of Odisha, thank MWCD for giving him the opportunity. Shri Jamuda, gave details on Best Practices from Odisha State Food Commission and Millet mission. He stated that Nutrition Security is possible only by ensuring Food Security and Health Security. Shri Jamuda stated that as part of National Food Security Act (NFSA 2013) mainly 3 schemes like TPDS, MDM, and ICDS are regularly monitored by the Commission. PMMVY / MAMATA and Pension are also monitored by the Commission. He also informed that, Odisha Millets Mission(OMM) which was set up in April 2017, aims to improve productivity, promote household level consumption, set up decentralized Processing facilities, promoting Farmer Collectives and Marketing and inclusion of millets in Nutrition Programmes (SNP to begin with). OMM is the first project of Agriculture Department that focuses on consumption. Odisha is the 1st State in the country to develop the standard specifications for the minor millet machinery, to complete the exercise for benchmarking price for little millet and foxtail millet, to declare a production incentive for farmers for 3 yrs and is also a recipient of award for best government initiative from Indian Institute of Food Processing Technology. Commission is closely associated with State Millets Mission - now being implemented in 72 Blocks of 14 Districts covering 29,000 farmers and 12,334.6 Hectares. Total 40 NGOs and 53 CBOs are involved in the Mission. There has been a significant focus on millets for the reduction of malnutrition

in the country. In some states, millets are being promoted in the PDS and are included in the ICDS menu as well. (For instance, the Odisha Millets Mission is promoting production and improving marketing of millets). However, procurement of millets is a difficult process and a change in the procurement system for millets is required. At present, the state must take permission from the central government to procure millets and the burden of disposal is on the State. This restricts the procurement of millets at PDS level. There is a need for developing a resilient food system and a diversified food in the PDS. Alongside, price differences of different crops under PDS should be taken into consideration and states should be given ample freedom on procurement quantity. Other best practices of State of Odisha are (i) Extensive field visits to Districts by State Government(ii) Intensive review meetings with concerned Departments to ensure convergence at the District and State level(iii) Commission has been dealing with complaint petitions directly as and when received and directing the concerned authorities to dispose of such matters on merit under intimation to the Commission(iv) Monitoring Nutrition sensitive schemes like Swachha Bharat Mission (Grameen), Pension schemes of SSEPD Department, MGNREGS, Forest Rights Act, 2006(v) UNICEF sponsored 'Jeevan Sampark' project to improve the health and nutrition status of Children, Adolescents and Women among PVTG communities in 17 micro projects using SBCC and demand generation approach.

3.5 Dr. Bhaskar Mitra, Associate Director, Tata-Cornell Institute(TCI) for Agriculture and Nutrition, talked about Diversified Food Systems Approach for Improving Nutritional outcomes. Dr. Mitra introduced that Tata Cornell Institute is working towards creating a nutrition-sensitive food-system in India by addressing the issues at all levels of food systems (input-production-market-consumption-nutrition), including the improvement of markets and value chains for income and nutrition. He started with the trends in Agriculture crop diversity has been high in the central, south and western regions of the country since last approx. 50 years and so the diets have also changed.The conceptual framework of TCI focuses on four interlocking areas for nutritional outcomes in the country which are improved food supply and enhanced incomes at the household level, improved access to micronutrients through diversified diets, equitable allocation of food to all individuals through positive behavior change within the household (especially to women and children) and complete nutrient absorption and biological utilisations through WASH. TARINA, a flagship program of TCI, is working towards –(i) increasing demand for nutritious food and enhancing production system diversity (ii) conducting need-based research for evidence generation and developing nutrition sensitive metrics for agriculture and (iii) using experiences and evidences to influence policy on a range of issues like agri-budgets, food systems diversification in states and food safety net programs. TCI-TARINA is also providing technical assistance, generating evidence and building capacities of various stakeholders for the designing and implementation of nutrition-sensitive agriculture in India. Dr. Mitra also emphasized on understanding Market. There is a need to understand the functioning of the agriculture markets in terms of what goes in, what goes out and at what price. It is ,therefore, imperative to build evidence and introduce metrics around aspects such as diet diversity, market diversity, women's empowerment to measure the change on account of agri-nutrition programs.

3.6 Ms. Laura Birx, Deputy Director – Strategy Planning, BMGF, discussed about integrated agriculture-nutrition strategy: The Need of the Hour to Tackle Malnutrition through a Multi- pronged Approach. It is important to recognize the non-linear pathways for strengthening the agi-nutrition linkages and leverage upon the existing global evidence on what works for a strengthened agriculture-nutrition linkage required. A multi-sectoral approach is needed to improve nutrition including food sector, social sector and the health sector. Consumption pathway should go along with the income pathway-focusing on incomes for health and women’s empowerment. At the beginning, Ms. Laura, explained that how the multi-sectoral causes and consequences of under nutrition, multi sectoral approaches to improve nutrition are needed. These approaches span food, health and social protection sectors. She also talked about sustainable Nutrition Food Systems and its main Pillars and interventions in India like Production of nutritious food-pulses, livestock, horticulture and bio-fortified crops, access to nutritious food, seasonality, affordability and demand-increasing market access to small holder farms and increasing demand for nutritious food through agriculture and health sector, Women’s empowerment in agriculture-leveraging the platforms of SHGs and FPOs under national and state rural livelihoods mission policy, data and evidence generation- technical assistance in ag-nutrition and impact evaluation. (All these are being done with a complementary effort on IYCF and fortification of staple crops already there in the food habits)

3.7 Dr. Archana Sarkar, Advisor, Research, Monitoring and Evaluation, GIZ, shared experiences of Improving Dietary Diversity through Participatory Learning Action and Kitchen Garden in Madhya Pradesh. Dr. Archana talked about BMZ Special Initiative “One World - No Hunger”. Food and Nutrition Security, Enhanced Resilience (FaNS). FaNS is a project of GIZ which is going on in two districts of Madhya Pradesh (Sheopur and Chhatarpur) The three pillars of the FaNS project consist of PDS reforms in partnership with food and civil supplies department- improve social audits, build research in the state In partnership with WCD, using PLA tools, improve performance of AWWs on awareness generation around diet diversity and kitchen gardens WASH: Repairing already existing water resources and rain water harvesting Dr. Archana explained that how through Participatory Learning Action (PLA) beneficiaries were guided on diet diversity and use of variety of food in different recipes. She also shared that they have used e-learning platform and videos to reach to women to improve kitchen garden activities. At the national level too, there are several initiatives that are seeking to strengthen income pathways in the rural areas. NRLM is one such large scale program.

3.8 Ms. Leena Johari, Joint Secretary (Rural Livelihoods) National Rural Livelihood Mission (NRLM), Ministry of Rural Development, GoI, discussed about Ensuring availability of nutrition food in every targeted households: Food and Nutritional Security Interventions under NRLM. Ms. Johari stated the goal of Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM) which is Poverty elimination through organising and building strong institutions of poor (women), enabling them to access financial resources at affordable terms, and, to have a portfolio of sustainable livelihoods. The strategies adopted, so far, are universal mobilization, promotion of SHG federation and no subsidies to the beneficiaries. NRLM also has interventions for reducing malnutrition through the promotion of kitchen gardens, provisioning vulnerability reduction fund (VRF) which is around a lakh to the village level federations. NRLM has also

developed a cadre of community resource persons for the extension services and monitoring the implementation. For agriculture (farm and off-farm), over 17,000 Krishi Sakhis and over 14,000 PashuSakhis are working in the field. Along with such interventions, Custom Hiring Centers (CHC) and small tools shed has been developed under NRLM for providing modern farm machines to the farmers and increasing their farm productivity. The CHCs are being managed by SHGs and being used for rental services for income generation. The most important is Convergence with line departments.

4. Session- II

4.1 Session 2: Agri-nutrition Pathways to increase Production, empower Women and Enhance Income was chaired by **Shri Ajay Tirkey, Additional Secretary ,MW&CD ,GOI and co-chaired by Dr.Rajesh Kumar, Joint Secretary,MW&CD and MD,POSHAN Abhiyaan, GOI.**

4.2 In his Opening remarks, **Shri Ajay Tirkey, Additional Secretary,MW&CD ,GOI**, briefed on the relevance, concerns and contradictions with respect to increasing production, empowering women and enhancing income in context of Agri-nutrition to the experts of panel group for them to respond and give their views. The experts were asked to respond on methods to bring change in existing agricultural policy which presently emphasizes on increasing production for food security to policy stressing more on nutrition sensitivity. He pointed out the huge task of diet diversification and convincing farmers to grow nutrition sensitive crops requiring IEC and concerted efforts. With respect to women empowerment, he expected a response on how Agri-Nutrition initiatives would ultimately empower women if she is made to work in fields belonging to her father, husband or son as a daughter, wife or mother unless her autonomy getting ensured. Lastly he raised his concern over measures so far not taken in making millet as more income generating crop for the farmers despite of Year 2018, being the year of millets.

4.3 **Dr. D.K Yadav, ADG (Seeds), Indian Council of Agriculture Research** gave a presentation on Bio-Fortification: A Sustainable Strategy towards Agri nutrition Outcomes. In the introductory slides he pointed out the losses occurring in GDP due to malnutrition and the commitment made under SDGs by global community to eliminate extreme poverty, hunger, and malnutrition while 12 of the 17 goal-indicators are related to nutrition. He stressed on the concept of Dietary diversification by inclusion of vegetables, fruits and animal products along with cereals and pulses to serve meals as Nutri Thali. He emphasized on the promotion of naturally bio fortified crops and underutilized leafy vegetables rich in vitamins, minerals, protein and iron to tackle specific deficiency related malnutrition problem in India. Various initiatives in the field of biofortification by introducing bio-fortified sweet potato and pomegranate were conveyed in the presentation. He conveyed that bio-fortification is a cost effective, sustainable, pure and transparent tool to nutrition sensitivity. In total so far, there are 35 crops in which bio-fortification has added nutritional factors and decreased anti-nutrition factors. Under Indian scenario, 6 major crops for biofortification mentioned by him are Rice, Wheat, and Maize, Pearl millet, Sorghum and small millets coming as DRR Dhan 49 (Rice), Puja Tejas (wheat) and high iron pearl millet as Dhanashakti. He talked about the role played by Nutri-sensitive Agricultural Resources and Innovation (NARI) and Value Addition and Technology Incubation Centres in Agriculture (VATICA) in Creation of Awareness on Nutri Sensitive Agriculture among farming community through capacity development and different level of interfaces by promotion of biofortified crop varieties for nutritional security among Women and Children, promotion of Nutri-Garden, Nutri-Thaali, and Nutri-Villages, development of entrepreneurship among youth by producing nutritional products and by promoting Nutri-Sensitive innovative practices and value chain development. The way forward given by him begins with

production of bio fortified crops, making nutritive grains and lastly by creating markets for the consumers to purchase them

4.4 Shri Arabinda K. Padhee , IAS, Director –Country Relations and Business Affairs,International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) gave an elaborated presentation on connecting crops in semi-arid tropics for Nutrition Security. He emphasized on the important role played by Agriculture-Nutrition nexus in combating the challenge of rising number of undernourished people in the world. He expressed that this is the most conducive time to talk about Agri nutrition policy in view of the many new initiatives and schemes such as DFI by 2022, National Nutrition Mission (POSHAN Abhiyaan), NFSM sub-mission on Nutri-cereals, State-specific agri-food interventions, Enhanced MSP, National Year of Millets-2018 and with focus of Agri-research systems (NARS; CGIAR) on Nutrition. Also, there is a recent change in trend of urban food moving towards traditional staple and inclusion of super foods, ancient grains, gluten free low glycaemic index and weight losing diets was pointed out by him. He said that food security now has to be combined with nutrition security leading to sustainable diets and smart food, good for farmers, community and the planet. He gave names of 6 specialised crops of ICRISAT as sorghum, finger, pearl millet, ground nut, chick pea and pigeon pea suitable for the dry lands. He talked of upstream research being undertaken for desirable traits in mandated crops and breeding Solutions to Malnutrition and Food Safety. He shared the success story of water shed and its scaling up from village level to the national level by ICRISAT. A 5 model approach to build Climate –Smart villages was suggested which included watershed management, futuristic model, combining agriculture with technology, meteorological advisory and climate crop modeling approach. He recommended compression of time by integrating design, development and delivery. He finished his deliberation by recommending integration of National Nutrition Mission (POSHAN) with DFI and other Agri R&D initiatives to create consumer awareness and to diversify diets and farms. He also suggested incentivizing farmers for producing better nutrition to fuel the minds of children and thereby supporting an innovation economy.

4.5 Dr.Girish Chandel, Professor, Department of Plant Molecular Biology & Biotechnology, Indira Gandhi Krishi Vishwavidyalaya Raipur, Chhattisgarh highlighted the importance of linking development of new rice varieties with Nutrition. He began his presentations with cycle of hunger wherein lack of food and hunger is stated to be intergenerational and inherent in each stage of life. He cited the Global Hunger Index report which clearly states that India has a “serious” hunger problem with 15.2% of its citizens undernourished and 38.7% of under-five children stunted and therefore calls upon the urgent need of fortification to deal with hidden hunger. He gave a broad picture of malnutrition prevalent in state of Chhattisgarh in context of the current status of Bio-fortified Rice with Iron and Zinc. The delivery of bio- fortified crops to the consumers depends on farmer acceptance, consumer acceptance, Public Private Partnership, nutritional literacy, policy Interventions and impact assessment and therefore he made his recommendations for building partnerships with private seed companies, sensitization of administrators, consumers and farmers based on evidence generated through integration of research and technology. He gave an account of the positive impact made by bio fortified crops on the health of children and women in Philippines, Latin America, Africa and Mexico. The findings of case study on development of Low GI and Sugar Balance White Rice CGZR-1 and the business and entrepreneur opportunities created by its production were narrated in detail.He ended his presentation by quoting that “To keep health intact, it is not to eat less but important to eat right”.

4.6 Shri Binu Cherian, Country Manager, Harvest Plus gave a detailed description on how Bio-fortification is improving human nutrition and the way Harvest Plus leads a global effort in Asia, Africa and Latin America to develop and disseminate biofortified staple food crops rich in mineral and vitamins to reduce micronutrient deficiency among the malnourished populations. As per the deliberation, it is an interdisciplinary program, works with academic and research institutions, civil society organizations, Governments, private sector and is part of the CGIAR Research Program on Agriculture for Nutrition and Health (A4NH) which helps realize the potential of agricultural development to deliver gender-equitable health and nutritional benefits to people. He explained the process of bio-fortification, the research done before and after the development of biofortified crops and its impact on health of consumers as evidenced by data available on studies done in Asia and Africa. Further he suggested creating awareness and demand among consumers, and farmers, integrate biofortification into Public and Private Policies, Programs, Investments and Institutional leadership, establish standards and lastly mainstream bio-fortification traits into the public plant breeding programs.

4.7 Shri Basant Kumar Kar, Country Director, Project Concern International /India presented the Impact of Dietary Diversification, a qualitative measure of food consumption, household access to variety foods and serving as proxy for nutrient adequacy of the diet of individuals. he National Food Security Act, 2013 follows a Life Cycle approach with provisions of supplementary meals with recommended proteins and calories for children from 6 months to 6 years, school going children, Pregnant Women and Lactating Mothers. Nutrition intake related findings of NFHS-4 data from States of Bihar, Orissa, Jharkhand, West Bengal, Assam and Uttarakhand were presented followed by evidences generated and impacts observed by dietary diversification models piloted in asian countries. According to him the success depended inclusion of strong nutrition education component, women centric approach, training on agricultural techniques, animal husbandry and activities focused on food storage and preparation. Lastly he suggested measures to be taken at district level for dietary diversification such as home contacts for behavior change communication, introduction of soil health cards, using technology and empowering girls and women as health guards of the family. He also recommended promoting kitchen garden and naturally bio-fortified crops in government-owned land and linking it with social safety net programs like MGNREGA and organizing dietary diversification summits in future.

4.8 Dr. Rajan Shankar, Programme Director-Nutrition, TATA Trusts supported the presentation and findings presented by Dr. Basant Kar and urged to generate more evidence on why and how diet diversification can be made more acceptable and available to various age groups in public domain.

4.9 Shri K.M.S Khalsa, Deputy Secretary, Department of Food and Public Distribution, Ministry of Consumer Affairs, Food & Public Distribution, GOI presented the outline of Pilot Scheme of Rice Fortification in Public Distribution System planned in 15 districts of 8 States. He said that enough evidence is available to state that food fortification is a known strategy to address anemia & micronutrient malnutrition. Country has an experience available on integrating rice fortification with food based safety net programs as MDM and ICDS. Odisha, Karnataka and Chandigarh are distributing fortified rice through MDM & ICDS in collaboration with World Food Program, Tata Trust, PATH, etc. Some pilots in states of Andhra Pradesh, U.P., Maharashtra & Tamil Nadu are in operation / pipeline therefore now Department of Food and Public Distribution has initiated action to support the ongoing efforts of promoting nutritional security in the country and accordingly proposed Pilot Scheme on – Fortification of Rice & its Distribution under Public Distribution System of selected districts. The components of ‘Scheme’ would include Blending at the milling stage, capacity building & training,

Information, Education & Communication, Quality Control & Quality Assurance, Monitoring & Evaluation for 3 years from 2019-22 with a total Budget Outlay of the Scheme as Rs. 147 Crore.

4.10 Shri Balamurugan D, IAS, Chief Executive Officer cum Mission Director, JEEVIKA gave presentation on role of SHGs in integration on Agri nutrition strategies. He talked about JEEVIKA, its Objectives, institutional architecture and Agri-Nutri linkages. In response to the dire need of targeted intervention for poverty alleviation, Government of Bihar with financial assistance from World Bank & MoRD constituted BRLPS JEEVIKA in 2005 with the objectives of, improving rural livelihoods and enhancing social and economic empowerment of the rural poor, developing organizations of the rural women to access and better negotiate services, credit and assets from public and private sector agencies and financial institutions and now playing a catalytic role in promoting development of microfinance, agribusiness sectors and health nutrition and sanitation services. Agri- Nutri Linkages gives thrust on behavior change communication and improving availability of foods by including target group from SHGs HHs, especially children (6-24 M), pregnant and lactating women. He talked about **Nutrition Sensitive Integrated Farming System**, a Unique Model to improve diet diversity piloted in Purnea block of Bihar. He also talked about the special food security fund and convergence strategy adopted for availability of food.

4.11 Dr. Jyoti Misri, Principle Scientist (Animal Science),ICAR,Ministry of Agriculture and Farmers Welfare,GOI made a detailed presentation on role of Livestock, Dairying & Fisheries towards Nutrition. Livestock plays an important role in Indian economy. About 20.5 million people depend upon livestock for their livelihood. Livestock provides livelihood to two-thirds of rural community. It also provides employment to about 8.8 % of the population in India. India has vast livestock resources and Livestock sector contributes 4.11% GDP and 25.6% of total Agriculture GDP. As per the data shown by her India ranks at top positions as livestock owner. Livestock supply 13% of energy to the world's diet.Livestock directly contributes to nutrition security. Milk, meat and eggs, though expensive sources of energy, are one of the best sources of high quality protein and micronutrients that are essential for normal development and good health but poor people tend to sell rather consume the animal source foods that they produce which now requires changed perspective. She explained in detail about the nutritional contributes of animal source foods. She also illustrated the various initiatives and schemes implemented to promote Livestock. She conveyed that presently 18 Central Livestock Organizations and allied institutions are involved in production and distribution of superior germ plasma to the State Governments for cross-breeding and genetic up gradation of the stocks. As per her deliberation, In India, even though livestock production is largely in the hands of women considerable gender inequalities exist in Indian villages for which efforts are needed to increase the capacity of women to negotiate with confidence and meet their strategic needs. The way forward demands carefully designed, empirical research, including environmental and social considerations, combined with a system modeling approach to fill delivery gaps by following a cross-sectoral approach in integrating veterinary and public health.

4.12 Dr. N.K Patle , Deputy Commissioner (Horticulture),Department of Agriculture ,Cooperation & Farmers Welfare, Ministry of Agriculture &Farmers Welfare, GOI gave an insight to Contribution of horticulture sector towards nutritional security. He presented the Indian scenario of horticulture with only 16% of arable land under Horticulture contributing 30% to Gross Net Value of Agriculture with India being the 2nd largest Producer of Fruits & Vegetables globally. He also talked about the journey, aims, objectives activities, funding pattern and interventions made by Mission for Integrated Development of

Horticulture, started with CDB in 1981, by GOI. Cold chain plays an integral role in Horticulture by enhancing marketability of the perishable produce & reducing food loss in the supply chain. It also helps in doubling farmer's income by improving saleability of the produce and bringing more production to markets. He conveyed the role being played by ministry in formation of SHGs, farmer's clubs by collaborating with women Organizations, NGOs, FPOs etc. to establish community value addition Programme and community processing units.

4.13 The Chair and Co-Chair thanked all the experts for their valuable suggestions and recommendations.

5. Concluding (**Plenary Session**) was chaired by **Shri Ranglal Jamuda, Chairperson, Odisha State Food Commission, Government of India.**

5.1 Dr. B. Dayakar Rao, Principal Scientist & CEO, Nutrihub, ICAR- Indian Institute of Millets Research, Hyderabad gave an illustration on Inclusion of millets in supplementary feeding programs for children. Millets are Nutricereals which due to absence of the convenient technologies in millets led to decline in their consumption. Indian Institute of Millets Research (IIMR) has pioneered in diversification of processing technologies in millet in order to provide extensive options to consumers with development of value added ready to cook/ready to eat products to meet the consumer requirements. He narrated the health benefits of Millets, the lack of adequate and safe complementary foods in many countries where less than a fourth of infants 6–23 months of age meet the criteria of dietary diversity and feeding frequency that are appropriate for their age. The presentation gave standpoint of Millets as supplementary food for children in the form of Bajra, Ragi, Jowar, foxtail and Proso as some of the variants rich in essential nutrients. He talked about processing interventions to enhance suitability of Millets in children's diet. He ended his presentation by saying that Improved Germplasm is a way forward to move in this direction.

5.2 Mr.P. Pravin, Assistant Director General (Marine Fisheries), ICAR presented significance of nutrients in fish. Fish is a rich source of various nutrients like proteins, Long chain omega 3 fats, iodine, Vitamin D, Ca, minerals and is therefore highly recommended by American Heart Association to be included at least twice a week in the diet. He also talked about the fortified fish soup powder developed at ICAR-Central Institute of Fisheries Technology with the objective of improving mineral status (of calcium and iron) and hemoglobin content of anemic adolescent girls.

5.3 Dr. Ajay Khera, Deputy Commissioner, MoHFW, appreciated the efforts of MWCD for organizing this much needed conference on Agri nutrition as this is the time for convergence of all efforts aiming towards improving the nutrition in the country.

5.4 Mr. Mihir Kumar, Joint Secretary, Ministry of Animal Husbandry and Dairy addressed the gathering by emphasizing on increasing the purchasing power of consumers, stressed on state specific need based cultural sensitive action plans in line with the available resources and the most needed convergence of ministries and departments at all levels.

5.5 In his Concluding remarks, **Dr.Rajesh Kumar, Joint Secretary, Ministry of Women and Child Development (MW&CD) and Mission Director, POSHAN Abhiyaan, GOI** congratulated the participants and representatives from various organizations and partners in coming forward and expressing their views for Agri –Nutrition Convergence. He reiterated the significance and aim envisaged in organizing

the National Agri-Nutrition Conference to bring out a vision for year 2030 and formulate a Policy document for release by June 2019.

6. Way Forward

6.1 The Conference more than achieved its aim and provided an ideating platform for different Ministries, NGOs (Both national and international), Agriculture Livestock , Dairy ,Fisheries, Health, Nutrition ,Academia to exchange initiatives,best practices and to brainstorm and come up with thoughts and ideas on establishing linkages between Agriculture and Nutrition.

6.2 There is an urgent need to create enabling environments for diet diversification, bio fortification and mandatory food fortification to make micronutrient rich food accessible to population .Also, diversified and fortified diets are to be made available in food safety programs like ICDS, MDM and PDS.

6.3 Concerted efforts are needed to bring change in behavior of people while making food choices. It is imperative to encourage consumption of nutritious food by bringing positive change in behavior and adoption of better food choices. The programs should target women and children to catalyze the process change within the households.

6.4 It was unanimously agreed that time now is to change the focus of Agriculture from food security to Food and Nutrition Security,POSHAN Abhiyaan provides a common platform and opportunity for Convergence of Agriculture with Nutrition across Ministries, Departments, Industries ,social sector and academia handling Agriculture and food related issues for improvement of nutrition indicators of the country. The outcome of Conference envisaged showcasing the exemplary work from diverse field of agriculture, developing vision and formulating the Policy Document for the year 2030 with inputs, evidence and cooperation from all stakeholders.

Conference ended with Vote of thanks to all participants by Mr. Sanjiv Gajaraj, Executive Director, CPMU,POSHAN Abhiyaan, MWCD.