

# UNITED NATIONS

## Food Systems Summit 2021



Paper Submitted by India

**National Dialogue on Action Track 4  
Advance Equitable Livelihoods**

Prepared by:

**Prof. Ramesh Chand**  
Member, NITI Aayog  
&  
National Convenor of  
Food System Summit, 2021


## **Food System Summit**

### **National Dialogue on Action Track 4 Advance Equitable Livelihoods**

Historically, India's food policy centred on ensuring food to all the sections of Indian society and maintain reasonable level of stability in prices. Around mid-1960s the primary goal of ensuring food was enlarged to ensuring food security through food self-sufficiency. The green revolution technology supported by favourable policy environment and investments in infrastructure like irrigation helped the country to achieve quick results in raising production of rice and wheat in well-endowed region and made country almost self-sufficient in an unexpectedly short period. This success was then replicated in many crops and states. As a result, India's food production increased nearly five folds in 50 years between 1970 and 2020. This resulted in increase in per capita daily food production in the country from 0.91kg in early 1970s to 1.82 kg around 2020. This is a laudable achievement, however, many other goals remained unfilled and the success also brought many challenges and problems.

The increase in per capita food production did not result in commensurate improvement in nutrition and health. One sixth population is still reported to suffer from hunger despite very large stocks of rice and wheat in India. The stress on land and water resources is rising and biodiversity suffers widespread loss. Vulnerability to climate shock is also on the rise. Small and marginal farmers are under stress to earn adequate income from agriculture. There are also issues related to inclusion of tenants and women farmers in development initiatives.

With the rising awareness and level of economic development the emphasis is shifting from dietary energy intake to "balanced and adequate nutrition". This is also throwing challenge to the production strategy which overwhelmingly focus on staple foods. The shift from hunger to balanced and adequate nutrition is an important factor for changes in dietary preference though changing life styles, rising income, and concerns for healthy diets are also affecting dietary diversification. This requires production to match with the changing pace and pattern of consumption and demand. This in turn requires widespread changes in structure of production especially in favour of fruits, vegetables, dairy products, livestock products, and fish. There is need to follow the goal of production diversification to match consumption diversification.




---

Use of agro chemicals has risen rapidly in agri-food production in pre-harvest and post-harvest stages in plant food, animal food and sea food. Strong public perception is developing against chemical residue and chemical content in food. A belief is growing that rising use of chemicals in food production, storage, preservation etc. is an important reason for many diseases and health hazards in humans.

Agriculture is the biggest user of land and water and agri production affects environment and natural resources in a significant way. According to OECD agriculture irrigation uses 70 per cent of water use world-wide. The estimate for India put the share of agriculture in total water use between 80-90 per cent. While large section of population does not have access to adequate water, this precious resource is used in agriculture very inefficiently and without concern for water scarcity. Agriculture also contributes significantly to depletion of groundwater and rising stress on water resources. Improvement in water availability for human and non-agriculture uses, addressing water stress in rainfed and dryland agriculture and ensuring sustainable use necessitates efficient and judicious use of water in agriculture. Similarly, 60 per cent of land area in the country is under agriculture. There are reports of land degradation because of intensive cultivation, certain agricultural practices and use of agro-chemicals like inorganic fertilisers and herbicides. Agriculture is also reported to contribute same share of greenhouse gas emission as its share in the GDP. This is a major cause for climate change and resulting disasters. These indicators highlight the crucial role of agriculture for sustainable use of natural resources, climate change, environment and biodiversity and also the challenge they throw to agriculture and sustainable development agenda.

India has a strong conviction that agriculture has to play vital role in socio economic transformation of developing countries and in securing sustainable future of people and the planet. Out of total 17 SDGs as many as 12 are directly dependent on agriculture. We appreciate the acknowledgement by the UN secretary general to bring agriculture to centre-stage to achieve UN sustainable development agenda 2030.

Modern agriculture has progressed through specialisations and mono farming. This has reduced crop diversity and also adversely affected overall biodiversity. Despite so much talk of crop system and farming system approach in production, specialisation and mono farming are order of the day. There is a need to internalise



---

ecological benefits of farming system to balance the economic benefits of specialisation.

Some years back when there was shortage of food India focused its efforts on output growth to raise food production. Now the country has contemplated to move from a single goal to multiple goals like sustainability; efficiency; equity; affordable, healthy and safe food; farmers income and competitiveness in food value chain. It is realized that this enlarged set of goals cannot be accomplished through Business as Usual approach. At the same time, we recognize that many areas of concern cannot be left to market and they require strong pro-active initiative from government, public institutions, private sector and civil society. India also offers useful lessons from its experience to deal with shocks like global food price shock of 2007-2011 and more recent shock of COVID -19. Being a very large and diverse country, we have experiences, success stories from sub national level which are used to shape pathways for future development of agriculture. This document shares some flagship programmes, adoption of success stories, scaling up of innovations at state, community and grassroots level and game changing ideas which we will be using for transformation of food system and attaining goals underlying sustainable development agenda 2030 at the earliest. These ideas are well tested and result oriented.

## I

### **INDIAN EXPERIENCE RELATED TO SUSTAINABLE DEVELOPMENT AGENDA AND FOOD SYSTEM**

#### **Right to Employment as a Work Safety Net**

Agriculture is the largest employer of workforce in India. However, due to seasonal nature of agricultural activities there is shortage of work during the lean months of agri activity. This caused forced migration of workers for livelihood. In order to provide wage employment throughout the year Government of India is running National Rural Employment Guarantee Scheme which provides constitutional right to one adult member of every rural household to get work for 100 days in a year on voluntary basis. Works are identified by elected rural local body (Panchayat) and wages are paid in the bank account of NREGA worker. This is a very effective safety net for poor. This has turned out to be the largest public sector employment work in the world.

## **Safety Nets to Address Hunger and Malnutrition**

India has the world's largest food-based safety net programmes, reaching about 800 million people in 2020, including close to 120 million school children through the Mid-Day Meal (MDM) scheme. India has enacted National Food Security Act under which two third population of the country is eligible to get 5 kg grains per person per month from fair price shops in their locality. This meets about 40 percent of staple food demand at awfully subsidised price which is less than one tenth of open market price. Families which do not have any source of income are given this ration totally free.

In addition, the government is pushing forward its transformative agenda through the National Nutrition Strategy and the National Nutrition Mission (POSHAN Abhiyaan), the GOI's flagship programme to improve nutritional outcomes for children, pregnant women and lactating mothers. These ambitious schemes promote convergent approaches that reflect the multidimensional nature of food and nutrition insecurity, and help address inequalities related to gender, age, disability, income, caste and region.

## **School Health and Children**

The Integrated Child Development Services (ICDS) was introduced by the Government, with the support of UNICEF, in 1975. It is the world's largest integrated early childhood programme that aims to improve child health, nutrition, and development. While predominantly focused on child health and nutrition, the programme has a small component providing hot cooked meals to children aged 3-6 years in community Anganwadi Centres, as part of its provision of preschool education. Currently, it serves over 19 million pregnant and lactating women as well as 82 million children under 6 years old. The ICDS now has universal coverage in India through community-level Anganwadi centres (rural mother and childcare centres).

## **Direct Income Support to Farmers**

India launched a mega scheme PMKISAN in year 2019 under which each and every farmer is given some cash income (Rupees 2000) three times a year. Some states in the Country are also extending income support using various methods. An important limitation of these initiatives is that tenants, who cultivate land without formal lease, are not entitled for such assistance. The State of Odisha has started covering even

landless agricultural labour and tenant farmers/ share croppers alongwith small and marginal farmers for cash assistance for livelihood.

### **Chasing Growth in Farmers' Income**

As the country is now experiencing higher growth in food production than the growth in demand the emphasis has been laid on increasing farmers' income. Accordingly, steps like accelerated output growth, diversification towards high value enterprises, cost reduction, better price realization have been initiated for doubling farmers' income - a step also towards inclusive growth.

### **Enabling Regulatory Environment**

Food system approach involves the entire range of actors (e.g. producers, service and input suppliers, agri workers, private sector, retailers, processors, consumers) and their interlinked value-adding activities involved in the production, aggregation, processing, distribution, consumption and disposal of food products. Economic sustainability of such a system requires it to be viable on one hand and beneficial for each participant and stakeholders on the other hand. Such goal is better achieved if there are partnerships, integration, efficiency and mutual interest. This require facilitating regulatory environment and institutions instead of each actor independently maximizing his/her gain. India is adjusting its regulatory framework from time to time to create synergy and reduce frictions among various actors and subsystems. This include liberalization of agriculture marketing, creating one nation one market, facilitating partnership between farmers and private business and model land lease laws. We are of the view that these regulatory changes will pave the way for transformation of agriculture towards sustainable development path.

### **Bio fortified Crops and Millet Mission**

Undernutrition and malnutrition remain a major challenge for India. Alongwith diversified diet we are emphasising development of biofortified crops for quicker solution to improve health of women and children.

As it is well known traditional diets included significant amount of millets (nutra cereals) which have much better nutrition and health effects. However, rice and wheat have replaced these millets in the diet. The Millet Mission has been started to reverse this trend. Following India's proposal to the Food and Agriculture

Organization of the United Nations the year 2023 will be observed as the International Year of Millets. The government decided to declare the Year 2018 as “National Year of Millets.” The mission is likely to be under the overarching umbrella of the National Nutrition Mission (POSHAN Abhiyaan) that focuses on intense monitoring and convergence of initiatives focused on improved nutrition through different state line departments. The State of Odisha has implemented Millet Mission very successfully which offers critical learnings as a model for other states.

### **Agri Nutri Gardens under Livelihood Mission**

An initiative was launched under National Rural Livelihoods Mission (DAY-NRLM) in the year 2011-12 with the aim of mobilizing rural poor into functionally effective institutions of women and to diversify and strengthen their livelihoods to come out of poverty. Under this ‘Agri Nutri Garden’ activity is being promoted to ensure availability of the balanced nutrition at household level. It includes growing fruits and vegetables in such a way that all the food elements; proteins, carbohydrates, minerals, vitamins and fats are available throughout the year. Pulses, leafy vegetables, guava, tubers are basic crops grown in the garden. These are designed in such a way that while ensuring food for the house, it provides some additional income also. Livestock rearing has also been integrated in it to ensure supply of required animal protein. Till now 5.9 million households have established Agri Nutri Gardens across the country. The target is to reach 10 million households by the year 2024.

### **Women Self Help Groups**

India has a rich tradition of women organizations helping women acquire economic empowerment on their own by embracing suitable economic activities. Such organizations provide some cash/capital assistance and help members by providing handholding, skilling and institutional help and linkages on input and output side. One such organization with a network of 2.6 million women small holders is Self Employed Women Association (SEWA) with Head quarters at Ahmedabad in state of Gujarat. This organization has equipped their members with agri-business skills which enabled many of them to operate economically viable agri-business activities. One such initiative is RUDI (Rural Distribution) Network, an agricultural cooperative business where its members, called RUDIbens, procure raw agricultural produce from marginal farmers at market prices, add value to that stock by cleaning and processing it before packaging and selling it at affordable prices through a

network of over RUDIbens. SEWA initiatives are transforming lives of large number of women. Suh Initiatives need to be helped and promoted all over the country.

## II

### GAME CHANGING IDEAS AT REGIONAL LEVEL

#### **Reviving Rich Forgotten Crop in Madhya Pradesh**

The state of Madhya Pradesh Promoted a forgotten crop, Kodo Kutki, under Tejaswini project which is climate resilient crop and more remunerative crop. It helped in addressing multiple goals namely better production, better income and better nutrition for women farmers in the Dindori district of MP. Led by Federation of Self Help Group women in one Block of the district this initiative motivated women farmers to adopt the crop and supported them with better planting material, training, advisories and market linkage. In 2017 the Department of Women and Child, Govt of MP, signed an Agreement with the Federation to convert the crops into Kodo bars and supply to Anganwadi (Child Care Centres) serving Kodo bars to over 57,000 children across 1,913 Centres in the state. Starting with 1500 farmers in 2013-14 who grew kodo and kutki in Dindori by 2019-20 the number of farmers who adopted the crop grew to 14,300. The area under the crop grew from 749 acres in 2013-14 to over 14,875 acres by 2019-20 and farmers income from the crop increased more than 5 times in 3 years. More importantly while earlier 100% produce went to market, now 17-20% is consumed by farmers and their families in the form of kodo bars and kodo rice. The Federation of Self Help Group today has a turnover of over INR 10 million per year and the model is highly replicable across the country.

#### **An Innovative Income Support Scheme for Farmers and Labourers**

The State Government of Odisha started to provide financial assistance of Rs.25,000/- per farm family over five seasons beginning 2018-19 to small and marginal farmers so that they can purchase inputs like seeds, fertilizers, pesticides and use assistance towards labour and other investments. Similarly , Financial Assistance of Rs.12,500/-will be provided to each landless Agricultural Household for Agricultural allied activities like for small goat rearing unit, mini-layer unit, duckery units, fishery kits for fisherman, mushroom cultivation and bee-keeping, etc. This will particularly benefit to deprived social class of population of the State.



Vulnerable cultivators/landless agricultural laborers will get financial assistance of Rs. 10,000/- per family per year to enable them to take care of their sustenance.

Vulnerable landless laborers, cultivators, share croppers and agricultural families identified by Gram Panchayats will be provided with crop loans up to Rs 50,000 made available at 0% interest rate. A direct attack at poverty, this all-inclusive efficient scheme passionately believes in responsibly lending relevant borrowers ensuring development and growth in agriculture.

Some other sub important national innovative initiatives are as under:

- a. Chhattisgarh, recently took initiatives to promote rural livelihoods along with organic farming.
- b. Odisha introduced an organic farming policy in 2018 ,It also started a special programme to promote millets in tribal areas in 2017. Millets are procured by the state government and linked with the Public Distribution System (PDS). Also ragi laddus have been upscaled under Integrated Child Development Services (ICDS).
- c. Uttarakhand is the first state to have an organic farming policy in 2000. Uttarakhand passed the Organic Agriculture Act, 2019, and declared 10 of its blocks fully organic.
- d. In 2017, Karnataka brought a new organic farming policy. The new policy focuses on providing value-chain linkages between producers and consumers along with promoting sustainable organic production systems. Policy aims to convert at least 10 per cent of the cultivable area into organic by 2022. Karnataka launched the Raitha Siri Scheme, under which all millet growers would get cash incentives worth Rs 10,000 per hectare.
- e. Punjab have been supporting organic farmers by purchasing their crops through Punjab Agri Export Corporation and selling it abroad.

### III

## PATHWAYS AND IDEAS FOR FOOD SYSTEM TRANSFORMATION

### Irrigation Expansion and Efficiency

In India about half of land is rainfed and another half has access to irrigation. Irrigated areas provide stable and two times productivity compared to the rainfed areas. Thus irrigation is used as an important source of growth and stable income. The Government of India has structured Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) with the vision to extend the coverage of irrigation and improving water use efficiency in a focused manner. PMKSY focuses end to end solution on source creation, distribution, management, field application and extension activities.

PMKSY has been formulated amalgamating ongoing schemes viz. Accelerated Irrigation Benefit Programme (AIBP) of the Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR,RD&GR), Integrated Watershed Management Programme (IWMP) of Department of Land Resources (DoLR) and the On Farm Water Management (OFWM) of Department of Agriculture and Cooperation (DAC). GoI approved Rs. 500 billion for five years for the implementation of the flagship irrigation scheme across India. PMKSY not only focuses on creating sources for assured irrigation, but also creating protective irrigation by harnessing rain water at micro level. Micro irrigation (MI) is an integral component of PMKSY to maximise water use efficiency at field level and ensuring 'Per Drop-More Crop' (PMKSY- PDMC).

### Sustainable Growth

Though, India has not specifically committed the carbon emission from agriculture in the Paris Agreement protocols, there is lot of emphasis on sustainable and regenerative agriculture practices such as laser levelling, direct seeded rice, zero tillage, residue management, conservation agriculture, organic farming, micro-irrigation etc, for mitigation of GHGs. Therefore, incentivizing farmers for adoption of such carbon positive regenerative agriculture practices would not only benefit farmers but a win-win for environment, civil society (health) and public investments through carbon markets. This will also create a pull factor for adoption of regenerative agriculture practices for much needed agricultural sustainability mediated by creation of business models and private investments. In addition, will also provide employment opportunities and improved health and wellbeing of

---

---

vulnerable population. The carbon farming is a new focus now which can be tapped in towards sustainable development objectives.

### **Healthy and Safe Food**

The strong connect between quality and nutritive food and good health is well established. The concern is also rising about safety of food as affected by unscientific and indiscriminate use of agro chemicals in production and preservation. India is encouraging and incentivising alternative system of farming like Organic farming , Indian natural farming, ecological farming to reverse the impact of indiscriminate use of agro chemicals on food quality, soil, environment and human and livestock health.

Sustainable food systems will be achieved if there is active participation of the producers not only in the productions ecosystem but also in the surrounding ecosystems which influence them at decision making and policy formulation level.

### **Agro Climatic Based Crop Planning**

Market prices and incentive structure often results in mismatch between what is ideally suited for production and what is actually produced in different types of agro climatic conditions. This not only lower inefficiency but also contribute towards unsustainability. Our research institutes have prepared optimal crop planning to tailor crops/varieties to soil type, rainfall, temperature, irrigation and other natural endowments for various agro climatic regions. This will contribute towards sustainability goal.

### **Contingency Planning**

Agriculture is subject to vagaries of nature and arrival and quantity of rainfall, which determine choice of crops and time of planting are uncertain. Many a times farmers go for sowing of particular crop but there is long dry spell and crop fails. This kind pf incidents are quite common in rainfed agriculture. We have prepared district wise and agro ecology zone wise data bases on crops and varieties suitable for sowing under varying time, moisture and temperature regimes. We have developed a strong system of advisory for farmers to adapt crop plan to vagaries of nature. This is backed by supply of inputs for alternative crop sowing. Countries and regions facing

---

weather uncertainties and risk can use this experience for risk mitigation and addressing supply shocks.

### **Farm Producers Organizations and Cooperatives**

India has a long history of farmers cooperatives playing active role in supplying credit and farm inputs and organizing marketing. Experience of dairy cooperatives especially the farmers owned and operated AMUL (Anand Milk Union Limited) model in mobilising milk surplus from millions of small holders is known world over and is considered a great success story. The need was felt to have other models of farmers producers organizations (FPOs) in all segments of agriculture. The Country changed its law to register FPOs as farmers producers companies under the Company law and many FPCs are doing a roaring business and benefiting small holders. The country has launched an initiative to create 10 thousand more FPOs in next five years to replicate the experience of successful Farmers Producers Companies.

Realizing the value and need for cooperation among various actors in all economic activities including food and agriculture Government of India has created a New Ministry of Cooperation at Federal level. This will give big boost to unhindered supply of credit and inputs to small and other farmers on easy terms, aggregation of output for scale benefit and on farm value addition accruing to farmers.

### **Better Infrastructure and Markets**

Reforms and increased competition in agriculture marketing has very strong effect on improving price realization for the farm produce and in turn raising farmers income. Value addition and micro processing have to be stepped up through public and private investments to improve profitability. Farm gate infrastructure has to be made world class so that post-harvest losses are minimized. GOI has created large AIF (Agriculture Infrastructure Fund) financing facility to improve farm infrastructure and easy access to farms. This will pave the way for better connectivity, transport, packaging, grading, storage, processing, cold chains and other infrastructure to upgrade the level of supply and value chains for the benefits of producers as well as consumers. Government of India is making required changes in regulatory environment to attract private investments in agriculture for promoting food processing, enabling farmers to access better knowledge and technology, and

---

shared risk and price assurance by private sponsors; and alternate means of selling their produce for better price realization.

### **Women Empowerment for Gender Equality**

More than 70 percent of female workforce in India is engaged in crop production, livestock rearing and other allied activities. However, women are deprived of land rights and hardly participate in marketing of crops where production is translated into income. Development agencies, extension work, and credit institutions also focus primarily on male members of farm households. The main reason for this discrimination is that ownership title of land and other assets is legally and de facto in the name of male members of the households. Though modern law of inheritance in most of the countries give equal access to women/girls in the parental property the social customs and pressure act as resistance to transfer of ownership title on agricultural land to women. A way out seems to be to recognise women as tiller/cultivator in the revenue record where-ever they are undertaking agricultural work on their family farms.

### **Improved Access and Better Nutrition**

A large number of workers keep moving away from their native place for work at distant places often outside their state. Such workers were not able to avail supply of subsidised food as their ration card was restricted to given fair price shop. More recently in 2020, government announced One Nation One Ration Card (ONORC) scheme that provides an option to all eligible ration card holders/beneficiaries covered under PDS to access their entitled food grains from anywhere in the country.

On the Independence Day of the country on 15th August the Prime Minister has announced that all rice supplied through PDS and other nutrition interventions like mid day meal will be compulsorily fortified by iron. This will specifically address problem of anaemia among children and women. Similarly, under National Rural Livelihood Mission rural women are supported to start nutri-garden, kitchen garden and backyard poultry and livestock rearing for improving livelihood and nutrition of family.

## **Market Liberalisation and e-Commerce in Agri**

To bring integration in agri markets a pan-India electronic trading portal (e-National Agricultural Market) has been set up which networks the existing agri markets to create a unified national market for agricultural commodities. The platform involves electronic auctioning of produce across the integrated markets, removing information asymmetry between buyers and sellers and promoting real time price discovery based on actual demand and supply. It is being expanded to cover all the states and markets.

Several regulatory changes are contemplated to provide a barrier-free national market, an improved market access, alternative marketing channels, use of negotiable warehouse receipt, direct sales/purchase by producers and various users, contract farming and Public-Private -Producer partnership.

## **Alternative Farming System**

A feeling is emerging in the society that chemical based agri farming is causing adverse effect on human health, other fauna and flora, soil, environment and ecology. Scientific community at large on the other hand contend that adverse effects are the result of indiscriminate and unregulated use of agro- chemicals, policy distortions and neglect of scientific advice by the farmers for balanced use of chemical and bio inputs. There is also pressure to put a check on unsustainable use of natural resources. This has led to search for alternative farming system and many systems are gaining popularity in limited pockets. On the other hand there is apprehension of significant yield penalty due to shift from chemical based farming to organic farming and other types of non-chemical farming. High tech farming, precision farming and sensor based farming are emerging as various options for producing large quantity from small area under controlled conditions and for improving efficiency. Future food system has to reckon all these changes.

## **Technology and R&D**

Technology is very critical for food systems transformation. There are whole gamut of technologies like seed technologies, water-saving, energy-conserving technologies, soil health, post-harvest technologies, market-linkage technologies etc which come into play for building sustainable food systems.

- Modern biotechnologies like genome-editing can play a significant role in development of environment-friendly biotech products.
- Technologies like conservation agriculture should not be ignored; rather they are more meaningful today. There is a need to promote minor neglected crops by putting in more research, more technologies to increase their productivity and market access.
- There has been an immense growth of digital technologies in agricultural sector in India in the last five years. Digital tools or apps based on AI for providing better farm management practices are gaining currency in India.
- Public-private partnerships have gone up. Many Agri Tech Companies and start-ups have come up in the agricultural sector.
- Farmers need access to the latest agricultural technologies in an equitable and affordable manner. Earlier, there has been free access and exchange of germplasms and plant genetic resources and scientists and producers had access to the better high-yielding varieties quite easily. The success of Green Revolution was largely due to the free exchange of germplasms. But today, it is highly regulated and controlled through IPR regimes. CGIAR (Consortium of International Agricultural Research Centers) system was largely developed so that they become custodians of germplasms and technologies which are for public good. But over the years, that's not the case anymore. There are many regulations that impact free exchange of germplasms.
- CGIAR germplasm and varieties have been the backbone of green revolution and played vital role in reducing hunger and poverty. However, the balance of technology is now tilting in favour of private sector and CGIAR is suffering from resource crunch and issues related to organization structure. Today technologies are held by few large MNCs. There is a need to place the idea of “international public goods” in the domain of agricultural technologies under the IPR regime.
- Small and resource poor farmers heavily depend upon technology which are delivered as public good by national and international public research system (CGIAR). Poor farmers cannot access technologies if the cost is very high. IP-led, controlled and proprietary regime would not be conducive for sustainable food systems particularly in terms of access to technologies. Global community should pay special attention to strengthening of CGIAR in all respects to maintain seamless flow of technology that is treated as public good.

## Trade Related Issues

International trade and rules of trade and WTO rules related to domestic support determines domestic prices and income from farming. Uruguay Round which was supposed to address the disadvantages and create a pathway of development for developing countries turned out to be a more formalised channel of getting inequalities into the international relationships. Three issues require special attention. First, is the issue of inequality and domestic support provided by developed countries and what developing countries can offer to their farmers. There are huge support measures provided by developed countries and these inequalities are formalised through provisions under AMS, De-Minis. There are formulations in trade systems that are archaic and have no relevance in the present time such as calculation of external reference price based on market prices of 1986 on which the entire edifice of food security rests. Such formulations only aggravate the already existing inequities in the system. Other important issues related to international trade and WTO which have bearing on transformation of food system are briefly mentioned below.

- Most developing countries support their farmers through high import tariff but provide extend low support and subsidies. On the other hand developed countries have low tariff but very high subsidies and apply non tariff technical barriers to trade (imports). Since different countries use different policy measures, it is iniquitous to say that tariffs in developing countries constitute a barrier to free trade in agriculture.
- The non-tariff system in terms of SPS and other ways of controlling international trade processes have come up. These are strong challenges that agriculture faces in achieving international market access. Developed countries maintain stringent SPS standards and are well beyond international standards. Protecting health has degenerated into sheer protectionism and this needs urgent redressal.
- The COVID experience of the past year has shown that the availability of substantial food stock are essential to prevent food crisis in a large sized country like India. The public stockholding system ensures risk-mitigation, ensuring access at affordable prices, and creating purchasing power to access foodstuff, etc. This must not be allowed to be frowned upon as a trade-distorting measure since it affects the food security of other countries.



- The inequities and asymmetries in the system of agriculture subsidies are pervasive. The issue of fisheries subsidies is important in the case of inter-linkage between trade and the food system. The ocean supports 3 billion people for their livelihood and conservation of fishery resources is critical for ensuring livelihood and nutrition. Sustainable fisheries is therefore a global concern and addressing subsidies that promote illegal, unreported, unregulated fishing, and overcapacity is important. SDG 14 talked about the issue of life underwater. There are 10 subcategories under this goal, one of which is WTO developing disciplines to give subsidies. The focus on the singular agenda on fisheries subsidies have eclipsed other issues that SDG 14 talks about. They include marine pollution, sustainable management of marine and coastal ecosystem, effective regulation and harvesting, addressing overfishing and overcapacity and illegal and unregulated and unreported fishing.

**It is concluded that the food systems transformation should be anchored around the small and medium-scale production, family farmers, indigenous peoples, women and workers in food value chains to advance equitable livelihood.**

=====