

# Our actions are our future

## – a zero hunger world by 2030 is possible

**Habibur Rahman<sup>1</sup> and Kennady Vijayalakshmy<sup>2</sup>**

*International Livestock Research Institute, Block C, NASC Complex, New Delhi 110 012*

*Hunger, a major component which is threatening the World for past so many years. Still, the prevalence of hunger is increasing day-by-day globally. Various innovative steps and research activities have to be taken into consideration so that the fact of achieving Zero Hunger World will be possible by 2030. The major factor behind the arousal of hunger is poverty. The people below poverty line in developing countries are the most affected. Most of the people are small-scale livestock farmers who are mainly dependent on their daily production for their livelihood. Main focus of hunger challenge should be towards the small-scale livestock farmers, so that their daily production strategy in enhancing their daily income. This in turn helps to eradicate poverty and global hunger in achieving a Zero Hunger World by 2030.*

**Key words:** Health, Livestock, Malnutrition, Poverty, Zero Hunger

**G**LOBAL HUNGER (measured by the number of undernourished people) is on the rise again, after a prolonged period of decline, posing a challenge to international goals of eradicating hunger by 2030, as per United Nations Report. According to the State of Food Security and Nutrition in the World 2017 Report, the number of undernourished people in the world increased to an estimated 815 million in 2016, up from 777 million in 2015. Data from the report showed that India is home to 190.7 million of them, a 14.5% prevalence of hunger in its total population. The data further showed that 38.4% of children under five in India are stunted, while 51.4% of women in reproductive ages are anaemic. The report defined stunting as the result of long-term nutritional deprivation which may affect mental development, school performance and intellectual capacity.

The prevalence of child stunting in India is at 38.4% compares with 14.7% in Sri Lanka, and 9.4% in China. Data from the report also showed that while the number of

children in India who are stunted fell from 62 million in 2005 to 47.5 million in 2016, the number of adults who are overweight rose from 14.6 million in 2005 to 29.8 million in 2014. Globally, the prevalence of undernourishment (as a percentage of population) remains the highest in sub-Saharan Africa and needs urgent attention in eastern Africa, the report said. It added that owing to a large population, the highest number of undernourished people live in Asia, followed by 243 million in Africa and 42 million in Latin America. The report further said that the food security situation has worsened in parts of Sub-Saharan Africa, South-Eastern Asia and Western Asia, and deterioration was observed mostly in situations of conflict, and conflict combined with droughts or floods.

According to the report of FAO, global prevalence of obesity more than doubled between 1980 and 2014. More than 600 million people in 2014, or 13% of the world's adult population, were obese, it said, adding that adult obesity is a major risk factor for non-communicable diseases such as cardiovascular

ailments and diabetes.

As per Food and Agriculture Organization of the United Nations, the count of chronically hungry people in the world is about 870 million. The hunger level has declined to 842 million in 2013. That means one in every 8 people in the world is chronically hungry. The 2013 Global Hunger Index also showed this trend. The hunger index score reduced by nearly 34% since 1990, from 20.8 to 13.8. Some countries reported remarkable absolute progress in improving their scores. Between 1990 and 2013, Angola, Bangladesh, Cambodia, Ethiopia, Ghana, Malawi, Niger, Rwanda, Thailand and Vietnam performed better than many countries, reporting a 15 to 23 points drop in their score.

In Africa, south of the Sahara, only Ghana is among the 10 best performers in improving its score since 1990, while 19 countries still have hunger levels that rated either 'extremely alarming' or 'alarming'. Most of these countries are in Africa, south of the Sahara.

Swaziland is another country

where hunger levels have increased. The country is reeling under an HIV, AIDS epidemic, along with high income inequality, and has severely undermined food security despite growth in national income. Swaziland's adult HIV prevalence in 2011 was estimated at 26%, the highest in the world according to UNAIDS (2012).

## Hunger - South Asian scenario

India is ranked 97 and its hunger index has reduced from 32.6 in 1990 to 21.3. South Asia reported a high absolute decline in the hunger index scores since 1990. Between 1990 and 1995, the score reduced by four points, largely triggered by a 10% point decline in the number of underweight children. The report stated social inequality and low nutritional, educational and social status of women are the major causes of child under-nutrition in the region that has heavily impacted its rating.

## Hunger - Indian Scenario

India continues to have serious levels of widespread hunger forcing it to be ranked a lowly 97 among 118 developing countries for which the Global Hunger Index (GHI) was calculated this year. Countries worse than India include extremely poor African countries such as Niger, Chad, Ethiopia and Sierra Leone besides two of India's neighbours: Afghanistan and Pakistan. Other neighbours Sri Lanka, Bangladesh, Nepal and China are all ranked above India. The Global Hunger Index is calculated by taking into account four key parameters: shares of undernourished population, wasted and stunted children aged fewer than 5, and infant mortality rate of the same age group.

The 131 countries were taken into consideration for the study of Global Hunger Index. Out of which the data was available only for 118 countries. In 2018, for the first time, two measures of child hunger -wasting and stunting -have been used to give a more complete picture. Wasting refers to low weight in relation to a child's height, reflecting acute under-nutrition. Stunting refers to the deficiency in height in relation to age,

reflecting chronic under-nutrition. The International Food Policy Research Institute makes the annual calculations of Global Hunger Index. Basing its readings on the most recent data, the 2016 Global Hunger Index for India was derived from the fact that an estimated 15% population is undernourished -lacking in adequate food intake, both in quantity and quality. The share of under-5 children who are 'wasted' is about 15% while the share of children who are 'stunted' is a confounding 39%. This reflects widespread and chronic lack of balanced food. The under-5 mortality rate is 4.8% in India, partially reflecting the fatal synergy of inadequate nutrition and unhealthy environments.

## Alarming facts about global hunger

- A large population of the undernourished can be found in Southern Asia, Sub-Saharan Africa and Eastern Asia.
- According to the Global Hunger Index 2014, Iraq, Comoros, Burundi and Swaziland have seen a constant escalating trend in their global hunger index since 1990.
- Burundi and Eritrea have the 'extremely alarming' Global Hunger Index scores.
- Malnutrition remains as the biggest global concern. One in every four children, especially in developing countries, suffers from impaired physical and mental growth due to inadequate nutrition.
- Almost 45% of all deaths in children under the age of five are due to poor nutrition.
- Close to 100 million children in the developing countries are underweight.
- Bangladesh, Niger, Timor-Leste, and Yemen account for the most number of underweight children under the age of five.
- Every year there are more global deaths due to hunger than those caused by AIDS, malaria and tuberculosis combined together.

## Measures that can be taken to achieve 'a zero hunger world by 2030'

Many countries across the globe are struggling to feed a simple,

nutritious meal to their children. When Sustainable Development Goals are taken into account, transformation of the lives of below poverty line people of families at the bottom of the economic pyramid should be considered. Sustainable Development Goals are fully functional, they are not only aspirational.

Sustainable Development Goals come out with various projects and blueprint which helps in achieving prosperity and peace across the world and they are conscious in developing those types of underdeveloped families from both developing and developed countries. Sustainable Development Goals act as a preliminary step to take certain actions against hunger scenario and it can combine various partnership together, so that there will be development of various programmes which helps in eradicating historically intractable problems facing hunger.

A main challenge which is too complex, too expensive and too difficult to overcome in lifetime is hunger. The strategy of making Zero Hunger World is not an easy task. A dedicated global team should work together to achieve this goal. Achievement of 'Zero Hunger' cannot be done with the help of single organization, but working together with various organizations helps in developing and delivering innovative and sustainable solutions – so that the goal of 'Zero Hunger' is achievable by 2030.

## STRATEGIES

There are five main strategies towards achieving 'Zero Hunger':

*Put people below poverty line towards the area of priority:* All national governments must expand various development and protection schemes for the people who are considered to be the most vulnerable, so that the full potential of globalized economy can be realized. With the help of these schemes, various opportunities can be provided to the poor people for profitable economic growth. This helps in generating new jobs, creating incremental demand and there will be a great jump in local economy.

*Spotlight the products from farm to market:* Producing wide varieties and

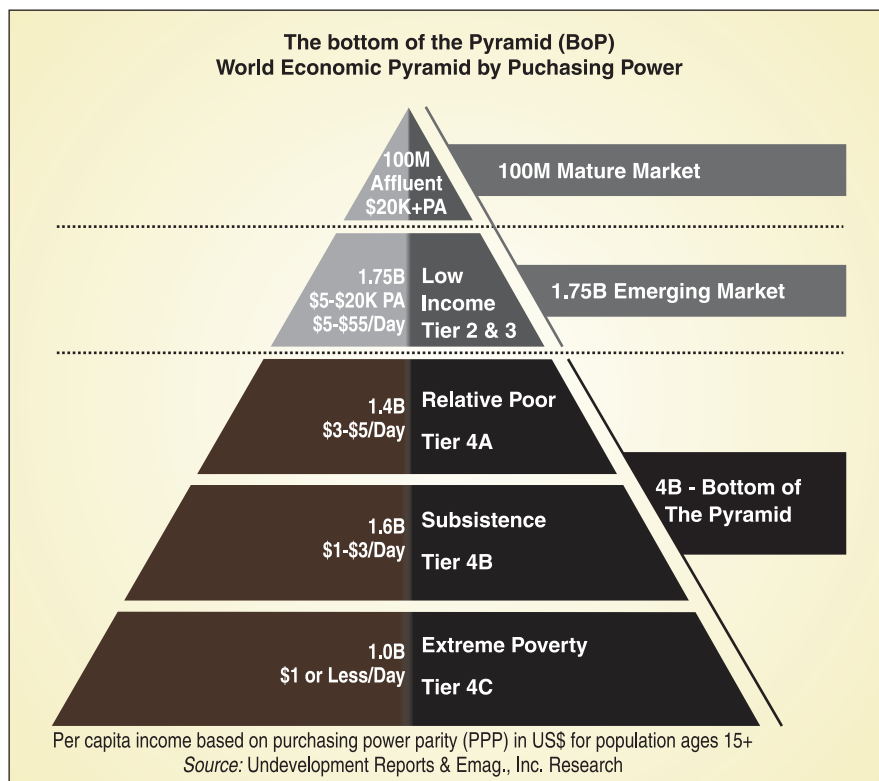


Fig. 1. World economy primary by purchasing power  
Source: Emerging Market Access Group

large quantities of food is not an important thing. But making all this nutritious food affordable to everyone is a vital task. Various innovative initiations and investments should be taken to develop various efficient supply chains by developing supportable durable markets. Rural infrastructure which includes road facility, electrification and storage has to be improved to ensure farmers' ability to reach wide range of consumer.

**Reduce wastage of food:** Of the total food which is produced in a year, one-third of the food is getting wasted. Food is often wasted while eating in developed countries and it is lost during production in developed countries. Crops get wasted mainly because of non-processing mainly due to poor storage facility, because of which farmers cannot get their goods to market.

**Reassure crop varieties which are sustainable:** Across the World, four main crops include rice, wheat, corn and soy represent 60% of all calories consumed. To address the present climate change scenario, exploring and identifying most diverse range of crops helps in making excess food

availability and food accessibility. For a healthy growth and active life-style, nutrient requirements are provided by the community with agricultural crop diversity. To achieve this, proper education to farmers in cultivating crops has to be taken of and also ensure access to requisite tools and skills. Consumer market should be built which helps in educating communities about the nutritional importance of consuming wide variety of foods.

**Nutrition priority to children at least for first 1,000 days:** For proper growth and development of the child, good health and nutrition is more important for first 1,000 days i.e. from conception up to the age of two. The prevention of stunting growth and the promotion of development of healthy individuals, access to nutritious food is of prior importance for the nursing mothers and children.

## Sustainable development goals- Zero Hunger

United Nations member-states planned a cohesive, inclusive and universal renovation with the 2030 Agenda for Sustainable

Development. This Agenda is mainly concentrated towards the well-being of the people and social justice and human rights. There is no meaning in achieving Sustainable Development Goals without putting an end to hunger and malnutrition. A sustainable and robust climate – adjustive agriculture and food systems are to be in place to achieve this goal. This entails continuous efforts so that every individual in the universe tends to have their access to adequate food. To achieve this, the focus should be mainly shifted towards responding to the crisis and pre-emptive strategies which helps in delivering food for individual people. When the political leadership and policies are uniting in a proper way and lead their role in an enhanced way, there will be a definite end to hunger and malnutrition.

United Nations Secretary- General Ban Ki-moon launched the Zero Hunger Challenge in 2012. Sustainable development goals got five major elements taken together into consideration and they will not only help in eliminating hunger, and all form of malnutrition but also build supportable and comprehensive food systems. Zero Hunger Challenge inspired people both at national and global level to ensure nutritional security and environmental agriculture which remains as an essential agenda for global development. Zero Hunger Challenge also encouraged people to fight against hunger and poverty.

## SUSTAINABLE DEVELOPMENT GOALS

Main aim of implementation of 2030 agenda is towards ending hunger, elimination of poverty and to create sustainable food systems. Main five elements of Sustainable development goals, if incorporated into nationally planned Sustainable development goals, there will be a definite decline in poverty to end up in achieving Zero Hunger.

**All food systems are sustainable-from production to consumption:** Social, environmental and economic bases required generating nutritious food, and food security for upcoming generations should not be

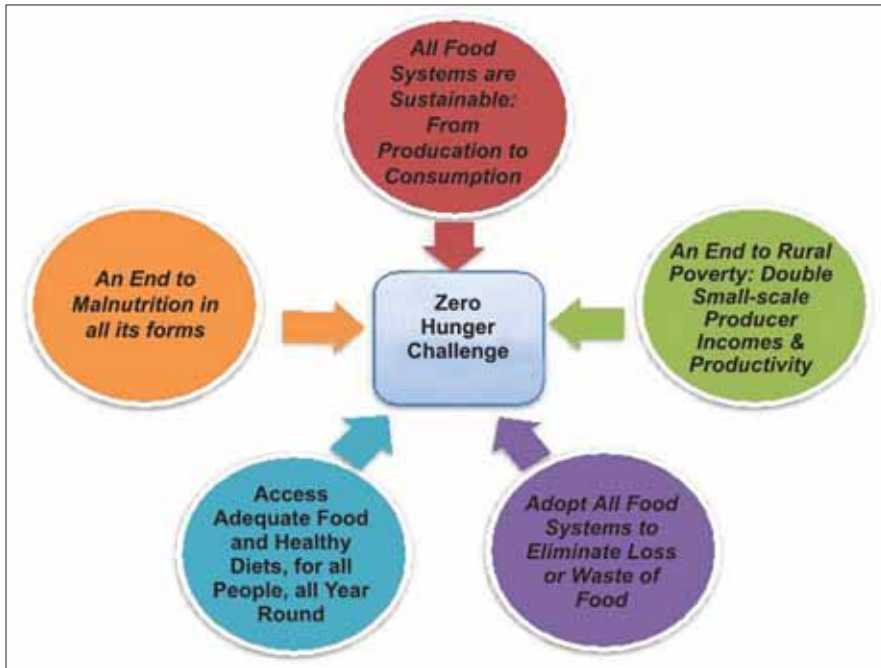


Fig. 2. Zero hunger challenge

compromized. This is the principle hypothesis that is taken into consideration with sustainable food systems. A drastic change in the climatic scenario requires more diversified and climate- adjusted agricultural systems or practices to achieve zero hunger challenge with sufficient production.

*An end to rural poverty: double small-scale producer incomes and productivity:* Income generation of small-scale farmers has to be taken into consideration so that there will be a definite end to the rural poverty and hunger. For a tremendously increasing global population, small-scale producers act as key producers to sufficiently feed the above mentioned growing population. Increasing the income of small-scale farmers through sustainable livelihoods helps them to increase their income and productivity, which ultimately end up in the creation of rural employment.

*Adapt all food systems to eliminate loss or waste of food:* Minimizing loss of food through various ways, which includes food loss during production, transportation and storage. The food wastage by consumers and retailers should also be reduced. Consumer choice should be taken into consideration; also commitments by producers, consumers and retailers should be taken care.

*Access adequate food and healthy diets, for all people, all year round:* Care or consideration has to be taken towards inequality, poverty and peoples' pliability towards various stresses and shocks. Rights toward equity and women's rights and resilience are intimately linked to food which forms the basis of assorted and wholesome foods.

*An end to malnutrition in all its forms:* Malnutrition is a principle factor behind the arousal of inequality and poverty. Malnutrition tends to cause various irreversible changes or damages to both society and individuals, which includes wasting and stunting. There is another rising issue of obesity is noticed throughout the world. Adequate energy or nutrient support has to be given to children up to 1,000 days from the initiation of pregnancy; this helps to avoid stunting and malnutrition. It should be supported by a multi-factorial approach, which comprises of sanitation, education, social protection, nutrition- sensitive health care and agriculture, which is coupled with plans that enable women empowerment.

#### ILRI - fight against global hunger

The International Livestock Research Institute (ILRI) is working actively at grass root level in various

research and development activities in fighting against the Global Hunger and poverty in case of both agriculture and livestock farmers. Agriculture is an essential component in generation of food, and food is the principal source for the existence of lives and livelihoods, income generation and for environment. When it comes to agriculture, food system includes various activities like production, processing, transport, consumption and food disposal.

In developing countries like India, food system operation takes place in largely unregulated spaces and they are rapidly escalating and expanding with a response to global demands. This is the key determining factor which brings about various opportunities and research challenges. ILRI acts as a global partnership institute which unites various Indian and International organizations and institutes engaged in various research activities associated with health enhancement, livestock management, agriculture and food production.

ILRI works with various institutes to bring about an innovative and perspective research methodologies with the relation between nutrition, health and agriculture through research that strengthens the basic knowledge and new partnerships which lead to araisal of real outcomes. ILRI has got various research programmes, especially in collaboration with CGIAR (Consultative Group for International Agricultural Research) such as Research Programme on Agriculture for Nutrition and Health (ANH), can bring about various innovative perspective on the relation between nutrition, health and agriculture through various research which can strengthen the global populations to fight against hunger.

ILRI has organized various international conferences to understand and enhance the impact of antimicrobial use in agriculture system. One of them includes 'Intensifying Food Sysytems and Health: Emphasis on Antimicrobial Use in Agricultural Sysytems' was organized to create a joint network between CGIAR, Indian and other

# Our Actions are our Future.

Asian Institutes which are working on agriculture and health.

Livestock sector has got the largest impact in enhancing the livelihood of the farmers, which has to be taken into account in eradication of hunger. Even though when livestock farmers were able to produce more, because of poor marketing facilities and middle marketing men, they are not getting an expected profit. International Livestock Research Institute (ILRI), based in Nairobi, Kenya understood the fact that if proper education and enhancement are given to the small-scale livestock farmers, it can act as a predominant key factor in eradicating poverty. With the help of ILRI, the mission is to explore various livestock policies which favour the poor people in effectively lifting their economic status.

Small-scale livestock farmers are the major contributors of milk, egg and meat rather than a commercialized producers. So, consideration has to be taken towards small-scale livestock holders to enhance their livestock producing ability. In many rural areas, small-scale livestock farming is an essential component in creating individual household income and it is a major source of livelihood for their survival. Daily selling of milk and eggs will be the primary source of income for the small-scale livestock farmers and it can also be the readily available source of protein for them, which helps them in fight against malnutrition.

In case, if we want to achieve zero hunger world, care should be taken from the base level which includes the small-scale livestock farmers in developing countries and we have to support them by enhancing or arriving at various research proposals or projects which can guide small-

scale livestock farmers to increase their daily income which in turn increases the per-caput availability. Also, Livestock acts as secondary asset for a small-scale livestock farmers which helps the farmer during extreme financial crisis and also during various natural calamities.

Rearing livestock rather than creating a source of income for the small-scale livestock farmers, it can also help in creating various employment opportunities in the same rural area. For example, if the owner is having more than 3 to 5 animals, they need one person to take care of the animals. By this way, employment opportunities for local people can also be created. If proper education is given to the farmers regarding a clear market chains, income generation will be more with the small-scale livestock farmers, because they can be able to sell their own goods to the consumers directly. Also, enhancing and educating small-scale livestock farmers help in enhancing the economic status of the country. Because of the increased awareness regarding the production strategy, the overall economic status of the country can be enabled. When there is an increase in the production of surplus products, there will be the greater opening in the market area. This in turn, increases the per-caput income and per-caput availability of food. Thus, enhancing the ideas of small-scale livestock farmers helps in generating greater income for a poor farmers, which helps them to eradicate poverty and hunger.

The contribution of ILRI towards enhancing the livelihood of small-scale livestock farmers is appreciable. ILRI has undertaken various research projects in collaboration with various international, central and state universities. Also, various reports suggested that continuous

investments in enhancing livestock productivity and efficiency will help in the reduction of methane (CH<sub>4</sub>) emission. ILRI has undertaken various research projects associated with livestock production and Greenhouse Gas (GHG) emission. When all these agenda are taken into consideration, there will be a tremendous growth in the livestock sector by means of enhanced productivity and at the same time, income generation by poor farmers will be increased which the small-scale livestock farmers to fight against poverty.

## SUMMARY

The main objective of ILRI is to create awareness among poor livestock farmers regarding various activities and methodologies which can be done to enhance the productivity. Hunger is an essential key factor which has to be taken into consideration when it comes to Global development. To eradicate hunger, the primary factor which has to be taken care is poverty. Eradication of poverty helps in the easy achievement of Zero Hunger. When it comes to poverty, small-scale livestock farmers are the ones which are most affected. Hence, various extension and research activities have to be taken care off in educating the small-scale livestock farmers regarding the enhancement of productivity. This helps them to gain more income and to eliminate poverty, which further helps them to have an access to highly nutritious food. If all these factors are taken care off, achievement of Zero Hunger by 2030 is highly possible.

<sup>1</sup>Regional Representative for South Asia,  
<sup>2</sup>Scientific Officer, Corresponding authors'  
e mail: r.habibar@cgiar.org

## Pradhan Mantri Krishi Sinchai Yojana

This Yojana brings

- Per Drop More Crop.
- Inputs from MoWR and DOLR received.
- Increase in agricultural production and productivity and enhance farm income.