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Case Review

Our Actions are Our Future: Healthy Diets for a Zero Hunger World

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World Food Day (WFD) is celebrated on October 16, in honor of the date of the founding of the Food and Agriculture Organization (FAO) of the United Nations in 1945. It is also the Food Engineer day and has been observed in more than 150 countries, raising awareness of the issues behind poverty and hunger. The day was established by FAO's Member Countries at the Organization's 20th General Conference in November 1979. The Hungarian Delegation, led by the former Hungarian Minister of Agriculture and Food, Dr. Pál Romány has played an active role at the 20th Session of the FAO Conference and suggested the idea of celebrating the WFD worldwide. The Day has been celebrated annually since 1981.

WFD provides a reminder of FAO's continuing search for a lasting solution to the problems of hunger and poverty in the world. WFD was created with the goal that Food for All should be a human right for present and future generations.

Growing food in a sustainable way means adopting practices that produce more with less in the same area of land and use natural resources wisely. It also means reducing food losses before the final product or retail stage through a number of initiatives including better harvesting, storage, packing, transport, infrastructure, market mechanisms, as well as institutional and legal frame works. By strengthening the resilience of smallholder farmers, we can guarantee food security for the planet's increasingly hungry global population also reduces emissions.

Climate change's negative impact on natural resources, from declining global water supplies and quality to soil degradation, underlines the increasing importance of using these resources sustainably. For example, can lead to the natural absorption of carbon dioxide, thereby decreasing greenhouse gas emissions. FAO estimates that agricultural production must rise by about 60% by 2050 in order to feed a larger population. Climate change is putting this objective at risk but FAO and its member countries are working on various solutions. Climate change hits the world's poor hardest. Over 70% of the world's poor rely on agriculture and natural resources for their livelihood.

Food Loss and waste

Over 1/3 of food produced worldwide is lost or wasted that amounts to about 1.3 billion tons per year enough to feed the 800 million hungry people in the world. Methane is emitted by rotting food and is 23 times more potent than carbon dioxide. By 2050, catches of main fish species are expected to decline by up to 40% in the tropics, where livelihoods, food and nutrition security strongly depend on the fisheries sector. Deforestation and forest degradation account for an estimated 10 - 11% of global GHG emissions. FAO provides a tool box for forest owners and other stakeholders to manage forests sustainably. Food loss and waste Over one-third of all food produced globally is lost or wasted. This is a lost opportunity to enhance food security and nutrition. The production, processing and distribution of food that is lost or wasted also accounts for a significant share of global GHG emissions. Additional GHG emissions are linked to rotting food in landfills, which releases methane – a GHG about 25 times more potent than carbon dioxide. In developing countries, a significant proportion of food spoils before it reaches markets. Investments in processing and storage facilities, especially cold storage and improved transport networks, can significantly reduce food loss and waste. In developed countries, food waste is often associated with the practice of discarding food that may be aesthetically unappealing or has passed its expiration date while still fit for consumption. Changing consumer behavior and fostering technological innovation in this area can have a considerable impact.

The world aims to achieve Zero Hunger by 2030

Climate change is a challenge that must be addressed in order to continue the fight against hunger and achieve this goal. FAO is helping countries to improve the global food system and achieve this goal. The global goal for achieving Zero Hunger is 2030, but without addressing climate change, it cannot be reached.

Reduce Rural Poverty

Climate change, other environmental threats and population growth, migration and disproportional revenue on livelihoods in rural area where poverty is already existing are main reasons to aggregate poverty in rural areas.

Forestry

The degradation of the world's forests is proceeding at an alarming rate. Each year about 13 million hectares of forest are lost or converted to other land uses. Deforestation and forest degradation has a considerable impact on the climate, accounting for 10-11% of global GHG emissions. Deforestation also has a significant effect on poor populations who earn income from forestry activity. Manage forests sustainably. Trees absorb carbon from the atmosphere and support livelihoods.

Agriculture

FAO estimates that agricultural production (crops, livestock, fisheries and aquaculture) will have to increase by about 60% by 2050 to feed a growing global population. In parallel, climate change is expected to reduce the yields of key staples. Without urgent and concerted action to tackle climate change, estimates suggest that by 2100 maize yields could decline by 20-45%, wheat yields by 5-50%, rice yields by 20- 30%; and soybean yields by 30-60%. To feed a growing global population in a changing climate, the world must transition to more productive, resilient and sustainable forms of agricultural development. FAO is among the world's leading sources of expertise on CSA and has distilled this expertise into its comprehensive Climate-Smart Agriculture Sourcebook. FAO has also launched a CSA project to support farmers in Guatemala and Honduras to implement climate-resilient agro forestry systems.. The Climate-Smart Agriculture (CSA) approach offers one promising avenue for doing so. CSA aims to achieve three main objectives: sustainably increase agricultural productivity and incomes, adapt and build resilience to climate change, and reduce and/or remove greenhouse gas emissions, where possible.

Livestock

The livestock sector produces about 14.5% of human-induced GHG emissions, which are responsible for climate change. Beef and cattle milk production account for the majority of these emissions (41% and 20% respectively). The demand for livestock products will rise in the coming years as incomes and populations continue to grow, underlining the clear need to reduce the level of livestock production emissions. There is significant scope to reduce GHG emissions from livestock. The use of better quality feed can lower emissions from enteric fermentation and manure. Better animal health and husbandry practices improve productivity and reduce emissions from 'unproductive' herds, thereby contributing to food security and poverty alleviation, while reducing environmental footprints. Manure management practices that recover and recycle nutrients can also make an important contribution. In most cases, such practices will also result in improved productivity.

Reduce greenhouse gas emissions with better livestock management

Tackling climate change and fostering sustainable development

- Climate change is already affecting public health, food and water security. Climate change, left unchecked, will reverse development gains made over the last decades and make further gains impossible.
- Investments in sustainable development will help to address climate change by reducing greenhouse gas emissions and building climate resilience.
- Action on climate change will simultaneously drive sustainable development.
- Tackling climate change and fostering sustainable development are two sides of the same coin. Sustainable development cannot be achieved without climate action and many sustainable agricultural practices address the core drivers of climate change.

Natural resources

Natural resources Current patterns of agricultural development are over-exploiting and degrading the world's natural resources. Agriculture is responsible for about 70% of global water use, but about 33% of land used for agriculture is moderately or severely affected by soil degradation. This undermines farmers' productivity and resilience as well as the long-term health of ecosystems on which rural populations depend. More sustainable agricultural

practices are essential to address these challenges. Sustainable soil management approaches are particularly important, as they improve agricultural productivity, incomes and resilience while simultaneously restoring the health of watersheds and land. Healthy soils form the basis for farming and long-term food security, and also provide an important contribution to sequestering carbon. Nurture resources for future generations.

Fisheries

Oceans and wetlands are critical to global food security and are key to regulating the world's climate. Oceans store about 50 times more carbon dioxide than the atmosphere, and are home to about 80% of all life on the planet. Oceans, wetlands and inland water bodies also support the livelihoods of about 12% of the world's inhabitants, many of whom earn a meagre income and are extremely vulnerable to climate change. Despite these vital contributions, the world's aquatic resources are under extreme stress from over-exploitation, pollution and climate change. FAO estimates that catches of key fish species in the tropics could decline by up to 40% by 2050. Make fisheries and aquaculture more resilient and efficient to feed the future.

Food systems

Climate change is undermining food production, while existing agricultural practices and patterns of agricultural development threaten the natural resources on which farming depends. Against this backdrop, we are trying to eradicate hunger among almost 800 million people who are chronically food insecure. The status quo will no longer suffice. Production, distribution and consumption patterns have to change to address these complex challenges. There is a need to shift to sustainable food systems. Consumers have a particularly important role to play by purchasing food produced in a sustainable way. This means better management of natural resources, improved environmental stewardship and respect for key International Labour Standards. The cumulative effect of such consumer decisions can shape entire food value chains. A variety of labeling schemes and instruments already exist that can inform such decisions. For example, many countries have created sustainable seafood guides that consumers can use to inform their purchases. Make food systems sustainable for a Zero Hunger Generation.

Food habits

In recent times we have changed our diets and eating habits due to globalization, urbanization and income growth. Less time is spent in cooking at home rely on Super Markets, fast Food outlets, Street food venders and take away Restaurants. Unhealthy diets and sedentary lifestyles increasing obesity not only in developing Countries, but also low income countries. At p[resent over 670 million adults and 120 millions of boys and girls (5-19 years) are obese, over 40 million children under 5 are overweight, and over 800 million people suffer from hunger. An unhealthy diet is the leading risk factor for deaths from non-communicable diseases (NCDs), including cardiovascular diseases, diabetes and certain cancers. Linked with one fifth of deaths worldwide, unhealthy eating habits are also taking a toll on national health budgets costing up to USD 2 trillion per year.

Obesity and other forms of malnutrition affect nearly one in three people. Projections indicate that the number will be one in two by 2025. The good news is that affordable solutions exist to reduce all forms of malnutrition, but they require greater global commitment and action. It is also important to note that millions go hungry, 672 million people suffer from obesity and 1.3 are overweight.

What is a healthy diet?

A healthy diet is one that meets the nutritional needs of individuals by providing sufficient, safe, nutritious and diverse foods to lead an active life and reduce the risk of disease. It includes, among others, fruits, vegetables, legumes, nuts, seeds and whole grains, and foods that are low in fats (especially saturated fats), sugar and salt. Nutritious foods that constitute a healthy diet are not available or affordable for many people.

Nutritional status

Over 70 percent of India's population - livelihood from land resources (includes 84% of the economically-active women). Gender disparities in nutrition from infancy to adulthood. As per the National and Regional Survey, Prevalence of anemia 85% in pregnant mothers, 90% among adolescents' girls. India's maternal mortality rate in rural areas highest in the world. Antenatal care- 40-50% of women, pregnancy related deaths- one-quarter of all fatalities. Gynecological disorder-92 percent suffered from one or more. Most vulnerable sections are Adolescent girls, Pregnant and lactating mothers, underweight children under five. Working conditions result in premature and stillbirths, Impact of air and water pollution and lack of sanitation. Sex-selective abortion, 96 percent of female fetuses was aborted. Indian women in the poverty group

spend about 5 hr/day more than the Indian men in work. Taking the economy as a whole, women perform two-thirds of the work, but earn only one-tenth of the income. More than 250 million children in developing countries are at risk of Vitamin A deficiency, More than 2000 million women and children are at the risk of iron deficiency, and More than 1500 million people in the World are at risk of iodine deficiency. Cost of Treating Malnutrition is 27 Times More Than the Investment required for its prevention.

Child nutrition

According to India's 3rd National family health survey Child Nutrition Below 5 years Age: 48% - Stunted; 20% - Wasted; 43% - Under weight; 70% - Anemia; 50% - Vitamin A deficiency and 75% - Iodine deficiency. India has not achieved acceptable child nutrition levels. People in 33 countries consume less calories than required. Food insecurity is due to lack of access and mal distribution. WHO and World Economic Forum reviled India will incur an accumulated loss of $236.6 billion on account of unhealthy life style and faulty diet.

Nutrition security

The term nutrition security goes beyond food security and implies, "Physical, Economic and social axis to an age and physiological status – appropriate diet balance safe drinking water, environmental hygiene and primary health care for all". Thus for nutrition security there has to be Awareness and Axis at Affordable cost, not only food security but also safe drinking water, disease free environment and health care outreach, to ensure Absorption.

Family farming included all families depend on Agricultural Activities, and is linked to several areas of rural development mainly Agriculture, Forestry, Fisheries and Aquaculture. Family farming preserves traditional, while contributing to a balanced diet and safe guarding the worlds Agro-Biodiversity and the sustainable use of natural resources.

Food technology

Food Technology is the need of the hour. The Annual wastage of Agricultural Produce in India due to inadequate storage and processing facilities is almost 30% which is equivalent to about 580 million Rupees. The wasted food could feed about 232 million people. Apart from preventing wastage, generates employment, making food available off-season which indirectly helps Food Security. Food Technology can directly contribute to Food Security through enhancement of nutrient Density, increases protein density of cereal foods by fortifying with protein concentrates, Cereal – pulse – based ready to cook (RTC) or ready to eat (RTE) foods contribute drudgery reduction and eases access. Establishment of tiny and cottage – scale for processing industry in rural areas would help to empower rural women through skill development and livelihood. The food and Agro processing Industry in India is poised for rapid growth and expansion because the country has moved from a phase of shortages to surpluses. Marketable surpluses are produced in almost all types of farm produces in every region of the country. The stress in future will be processing, Marketing and export of farm produce for increased profits.

The Green Revolution in the1960s has made India a food surplus country. National Nutrition Policy (1993), National Nutrition Plan of Action (1995) and National Nutrition Mission (2001) have not at achieved nutrition goals. The reason is nutrition is a poor cousin even in health and agriculture planning and execution. Nutrition improvement is not a stated goal with measurable parameters in National Food Security Mission, National Horticulture Mission and National Rural Health Mission.

Key Facts to be considered

1. **Hunger and Obesity:** Over 820 million suffer from hunger, even more people suffer for overweight and obesity.
2. **Rising Obesity:** Over 670 million adults and 120 million boys and girls (Age 5-19 years) are obese and over 40 million children over weight.
3. **Death by Diet:** Unhealthy diets combined with sedentary life style, have over taken smoking as the World number 1 risk factor for disabling and death worldwide.
4. **The Cost of Obesity:** An estimated 2 trillion dollars is spent each year to treat health problems caused by obesity.
5. **Hidden Hunger:** Billions of the people lack the essential vitamins and Minerals, their body's need to lead an active and healthy life.
6. **Unhealthy for the Olanet:** Environmental damage caused by the food system could increase 50-90% due to the increase consumption of processed foods, meat and other animal source products in low and middle income countries.

7. **A Vicious Cycle**: Different forms of malnutrition can co exist within the same household and even the same individual during their life and can be passed one generation to the next.
8. **Loosing Diversity**: Some 6,000 plant species have been cultivated for food throughout human history, today only 8 of them supply more than 50% of our dietary calories.
9. **Climate Threats**: Climate change threatens to reduce not only the quality of crops, lowering yields, but also the quality of nutritional value.
10. **Functional Foods:** Functional Foods may improve the general conditions of the body (e.g.pre and probiotics), decrease the risk of some diseases (e.g. cholesterol lowering products), and could even be used for curing some illnesses. Functional foods include baby foods, bakery and cereals, confectionery, dairy foods, ready to eat meals, snacks, soft drinks such as energy and sport drinks, meat products and spreads.
11. **Traditional/Ethnic Foods**: Ethnic foods are known by various names like Cultural foods, Vintage foods, Indigenous foods. Traditional foods and so on, which have countless delicious, mouth watering, items developed over the centuries. The food and cuisine differ from Community to Community to Region to Region, State to State, and Person to Person and so on, which make variety of dishes. These foods have been evolved from local agricultural materials grown under a variety of agro - climatic condition.

The promotion of agriculture, small scale rural industry, the rural economy gets a big boost and also corrects the rural- urban imbalance and prevents migration. This world food day we hope will contribute to improve the quality of life of every one.

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