people

food future foundation

Safe Food for All

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Actionable Area

More effective implementation of food safety programmes on a national scale for access to safe and nutritious food for all.

Issue

- Unsafe foods containing pathogenic microorganisms and toxic chemicals are responsible for more than 200 diseases - from diarrhoea to cancer. Food and waterborne diarrheal diseases are linked to the deaths of an estimated 2 million people annually worldwide, including many children. In India, the full burden of foodborne illnesses is unknown; most foodborne illnesses go unreported.

- Indiscriminate use of pesticides and fertilisers leads to persistent residues of these chemicals. They contaminate food, disperse in the environment and find their way into the food chain. India is struggling with the age-old problem of poor environmental sanitation, lack of access to safe water, and disease surveillance. These hazards are in addition to the menace of food adulteration.

- Economic growth, rising incomes, and urbanisation have influenced Indians' eating habits. There is increased demand for greater variety in food choices, and Indians are becoming more concerned about food quality and safety. Given these issues, India must transform its approach to food safety comprehensively.

- Inadequate water, sanitation and hygiene (WASH) services in India's health facilities contribute to the high neonatal mortality rate, currently 24 deaths per 1000 live births. Sepsis – mostly spread in health facilities – contributes to 15% of the overall neonatal mortality and 11% of maternal deaths. Lack of toilets adds to the risks.

Foodborne diseases in India lead to

120,000 deaths each year

A burden of over 8 million **disability adjusted life years**

Children under 5 are at **40% more risk** with around **30000 deaths** each year

Source: Kristkova, Z.S., Grace, D. and Kuiper, M. 2017. The economics of food safety in India – a rapid assessment. Amsterdam, Netherlands: Wageningen University & Research.

- Food can be rendered unsafe by pathogenic organisms or chemicals. Hazards are often classified as Biological for bacteria, fungi, viruses and other parasites, Chemical for heavy metals, pesticides, veterinary drug residues and other substances coming into food from equipment or packaging, and Physical for fragments of metal, glass, plastic, bone, etc. Many foodborne diseases are zoonotic - transmissible between animals and people. Some are also new and emerging diseases: novel diseases or diseases changing in their hosts, geography, or impacts. Emerging diseases have the potential to cause pandemics or widespread diseases affecting a large number of people. Other food safety related issues include food allergies and intolerances, food adulteration and food fraud, and bioterrorism.

Status

Government Initiatives

- The levels of pesticide residues in food commodities and environmental samples are measured in the "Monitoring of Pesticide Residues at National Level" scheme. From 2008 to 2018, a total of 181,656 samples of the various food commodities and environmental samples like soil and water were analysed. Of which 3,844 (2.1%) samples were found above Maximum Residue Limits (MRL) prescribed by the Food Safety Standard Authority of India (FSSAI).

- The Food Safety and Standards Act (FSSA) 2006 was designed to improve the overall food safety and the food trade within and outside the country. The FSSA consolidated responsibility for food safety to FSSAI. Since it was set up in 2008, FSSAI has been working to create a regulatory environment different from other countries yet fit India's nuances as compromised quality, growing adulteration trend, and instances of product integrity issues pose serious challenges to food safety. They also can cause irreparable damage to the reputation of brands.

- FSSAI has been conducting following activities to ensure food safety and nutritious food to all -

a. Through its enforcement mechanism, it conducts the surveillance of foods to ensure access to affordable, nutritious foods for all. It has notified 263 primary food testing labs across the country, and state food testing labs under a Central Sector Scheme, including Mobile Food Testing Labs (SoFTeL), thus strengthening the food testing system in the country.

b. It has also released a booklet, 'Detect Adulteration with Rapid Test (DART)', describing over 50 common quick tests conducted by the people themselves at home to detect food adulterants.

c. It has introduced a policy to adopt Rapid Analytical Food Testing (RAFT) Kit/Equipment/Method for regulatory purposes.

d. Lays down science-based standards for food articles and regulates their manufacture, storage, distribution, sale and import to ensure the availability of safe and wholesome food.

e. Enforces the provisions of the FSS Act, 2006, Rules and Regulations made thereunder through states/UTs.

f. Trains Food Safety Supervisor FoSTaC (Food Safety Training and Certification scheme) for every 25 food handlers in each premise across the food value chain.

g. Initiated the Food Safety Training & Certification (FoSTaC) for food business operators across the food chain towards capacity building, thus ensuring training of food handlers on food safety.

- There are training programmes under the Ministry of Food Processing Industries (MoFPI) on processing, packaging, storage commodity-specific training under the National Horticulture Board on product protocols and under the Ministry of Integrated Development of Horticulture (MIDH) for storage and marketing. MoFPI has initiated schemes and grants to aid the food processing industry in adopting food safety & quality assurance mechanisms such as TQM, including ISO 9000, ISO 22000, HACCP, GMP, and GHP.

- Ministry of Agriculture and Farmers Welfare conducts specific advisory and awareness programmes through State Agricultural Universities and the Department of Agriculture/ Horticulture of States to manage chemical residues in primary production.

- The Directorate of Plant Protection, Quarantine and Storage under the Ministry publishes a list of pesticides banned in India from time to time due to their harmful properties to ecology, soil, plant and human health.

Private sector interventions

- The private sector partners working in an effective food safety system are primarily responsible for ensuring food safety. To be most effective in this task, the private sector has been working closely with its stakeholders like the consumers, supply chain and regulator.

- Voluntary FSSAI Schemes like Hygiene rating, applicable to food businesses supplying food directly to consumers, allows FBOs to showcase their level of compliance and excellent food hygiene quality and enable consumers to make informed choices about the foods and the places where they would like to eat.

- As part of the public-private partnerships, state of the art, world-class laboratory for skill development of food analysts and other research was developed by Merck and FSSAI through the launch of the centre for Microbiological Analysis Training (C-MAT). Thermo Fisher Scientific India Ltd. has developed the Food Safety Solution Centre at FSSAIs premises at Ghaziabad to further research and provide demonstration and training in food safety. The International Training Center for Food Safety and Applied Nutrition (ITC-FSAN) was launched in Mumbai. It is a state-of-the-art training facility established through a public-private alliance between FSSAI and EIC and the Global Food Safety Partnership of the World Bank.

- Industry initiatives in partnership with FSSAI like CHIFSS (Capability Harnessing Initiative on Food Safety Sciences) was established to drive activities related to science-based food safety in the country in high-risk areas like meat, poultry, novel foods and additives, allergens on microbiological risk assessment, sampling and others to strengthen protection of consumers and create an innovative environment for the industry.

- With the aim of enhancing the Food Safety Excellence culture in the country, the food chain in India has seen a paradigm shift through the CII Food Safety Awards Program. The program comprehensively covers training and development of food safety professionals and assessment of the unique 'Food Safety Maturity' annually. It aims to enhance competitiveness through excellence, benchmarking to world-class standards, and identifying role models in the food chain. This voluntary award program is aimed at an ongoing capacity building of the Indian Food Chain Industry which has seen significant growth over the past 12 years ever since its inception in 2010.

- All stakeholders must play a pivotal role in building a community that shares common goals and responsibilities to achieve food safety. This partnership should encompass consumer and school education, science and research, agriculture and fishery, tourism, trade, the industry, and regulatory authorities. One of the biggest challenges facing food industries seeking to conform to food safety regulations is the lack of appropriate awareness and communication. To address this challenge, FSSAI's FoSTaC (Food Safety Training and Certification Scheme) is playing a key role in sensitizing, training and updating Food Business Operators, especially in the MSME Sector, in regional languages, as well, through an effective ecosystem of countrywide approved training partners, national resource persons and training of trainers involving the regulator and relevant domain experts.

Vision 2030

- **Achieve a one-third reduction in premature mortality from non-communicable diseases.**

- **Reduce the number of foodborne illness cases and related deaths from an estimated 100 million and 120,000 respectively to less than 50 million illness cases and less than 40,000 related deaths respectively by 2030.**

- **Reduce non-compliance of MRLs in fresh produce from 2.1% in 2018 to less than 1% by 2030.**

The India Picture

61%
of the deaths in India are from non-communicable diseases

58.17 lakh
Total number of NCD deaths in India

23%
Indians are at risk of premature death from NCDs

Cancer, diabetes and heart diseases account for 55% of the premature mortality in India in the age group of 30-69 years

Pathways

IMPLEMENTATION

Significantly improve surveillance and monitoring mechanisms for foodborne illness and augment capabilities for managing food safety risks. To comprehensively cover all stakeholders through structured risk alerts and communication systems, this will play an important role in sharing objective and factual information about food safety risks.

Promote the use of approved and validated rapid test kits for both FBOs and the surveillance process.

Develop Train-the-Trainers (TOT) programs and conducting state-level training programs on food safety risk assessment and risk communications throughout the country.

Target enforcement efforts better precede them by surveillance efforts to identify hotspots and problem areas.

Launch capacity building initiatives and food safety management systems for micro, small and medium scale Food Business Operators on regulations and standards.

Develop approaches for bringing all stakeholders together in applying new technologies and approaches thus, increasing knowledge.

Enhance consumer awareness on better labelling, safety and traceability.

Pathways

POLICY

Expand availability and accessibility of food labs, augmenting these in regions that need strengthening and develop schemes to utilise private food testing labs.

Undertake an initiative to build a team of 100 food safety experts of global repute in view of the paucity of talented specialists and experts in food safety.

Develop mechanisms to ensure wider engagement of relevant institutional and human resources needed to monitor food safety more effectively.

Include food safety & hygiene concepts in school & college curriculum and involve academic institutions in food safety.