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Research Article

Interpreting The Indian Legislative Approach To A Sustainable Food System

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ABSTRACT

Food security is one of today's most pressing challenges. It is one of the basic rights. We cannot meet our MDGs until we have food security. Currently, around one-third of Indians are not guaranteed adequate food. Transitioning to sustainable food systems is a complicated challenge that necessitates high-level coordination, coherence, and integration of national food policy. The findings of a scoping assessment of food policy were mapped to ministerial responsibility, expected budget allocation, and pertinent Sustainable Development Goals. Fifty-two policies were found, having relevance to six Sustainable Development Goals and overseen by ten ministries. According to content analysis, references to environmental sustainability were concentrated in policies with the lowest financial allocation. Resources and political will are required to incorporate environmental sustainability into food policy and avoid conflicts with more well-established health, social, and economic concerns. The purpose of this research is to look into how environmental sustainability is incorporated into Indian national food policy.

KEYWORDS: food system, sustainability, FSSAI, Food Security and Nutrition, Food policies

INTRODUCTION

Change is needed in how we organise our food systems since they currently do not deliver universal health, prosperity, or environmental sustainability to communities all over the world. Worldwide, two billion people are food insecure, with obesity accounting for four million deaths (FAO, IFAD, UNICEF, WFP and WHO, 2019). Climate change will exacerbate food security inequalities. Populations with a greater frequency of hunger and malnutrition are more likely to be impacted by reduced food availability (lower yields), food accessibility (higher costs), and, eventually, food utility (unclean water) caused by warmer temperatures, unpredictable rainfall, and extreme weather events. Agriculture output, which contributes to climate change, exacerbates this. Food production accounts for around one-quarter of total world greenhouse gas emissions (via energy use, rice methane, ruminant enteric fermentation etc.) Agriculture is also a major driver of changes in water and land usage (for example, from 1961 to 2017, cereal crop output rose by 240% owing to land expansion and improved yields, while irrigation water consumption nearly doubled).

Governments throughout the world have the capacity to overhaul our food systems, although this will need co-ordinated, consistent, and integrated action.

Food has an impact on many aspects of our existence, including health (nutrition), society (culture), economy (employment), and the environment (biodiversity). But, all of the regulations that regulate these sectors are still established and enforced in silos (International Council for Science ICSU, 2017). Government departments may share information about ongoing activities and, on occasion, establish policies with joint goals. Policies are seldom integrated such that it is evident how each policy fits into an overarching goal, such as moving towards sustainable food systems. This implies that policy is frequently inefficient, with priority in one area possibly conflicting with, negating, or causing unforeseen negative repercussions in another.

The Indian government is dedicated to the sustainable development agenda, having signed up to both the SDGs in 2015 and the Paris Climate Accord in 2016. (the latter pledging to limit the impact of climate change by reducing green-house gas emissions and minimising global temperature rises). The role for coordinating the national response to the SDGs has also been assigned to political infrastructure. The National Institute for Transforming India (NITI Aayog, previously the Planning Commission) enables information collecting and

sharing between states and ministries (policy coordination), with the goal of promoting policy coherence and the integration of SDGs across state and national policy. One of NITI Aayog's initial initiatives was to map policies to SDGs in order to develop appropriate objectives and indicators for assessing SDG progress. This resulted in an SDG mapping paper (Government of India, 2019a), which contained a number of national initiatives. Yet, it is unclear which of these programmes are relevant to the food system, how broad or powerful these policies are, or the extent to which environmental sustainability has already been integrated into Indian food policy. The goal of this study is to investigate the extent to which environmental sustainability is integrated into existing food policy in India by a) conducting a scoping review of policies relevant to the food system, b) investigating the infrastructure and resources (Ministries and estimated budget) responsible for delivering these policies, and c) conducting a literature review. c) Considering whether the notion of environmental sustainability is incorporated throughout the specified policies, as well as how food policies are allocated between several SDGs (which prioritise different dimensions of sustainability and priorities for sustainable development).

Food security is one of today's most pressing challenges[1]. It is one of the basic rights. We cannot meet our MDGs until we have food security. Currently, around one-third of Indians are not guaranteed adequate food. To ensure that basic food is available at all times, we must enhance our output, increase our purchasing power, and develop a long-term strategy in this regard. Food security is analogous to a vehicle for life enhancement with four gears: availability, approach, allocation, and absorption. In this context, it is preferable to consider the definition of food security provided by the Rome Declaration on Global Food Security at the 1996 World Food Summit. The researchers aimed to explore the influence of food security in relation to a global issue[2]. According to the Rome Declaration, "food security exists when all people have physical and economic access to enough, safe, and nutritious food to suit their dietary needs and food preferences for an active and healthy life at all times."

Half of India's population is battling to find food on their plate, contending with fierce famine and droughts on the flip side[3]. With over 200 million people, India has the world's biggest population of hungry people. According to the Global Hunger Index (GHI) 2013, India ranks 63rd out of 84 nations, with a GHI of 23.90, indicating an "alarming" food security situation. The influence of such big government food grain buying on open market pricing is one of India's major food security challenges.

Today, India need a new paradigm in which the approach to food systems becomes more holistic, with policy consistency across all sectors such as agriculture, food, health, trade, and the environment, to mention a few. To close the gap, the Food Safety and Standards Authority of India (FSSAI), the country's primary food regulator, has launched the 'Eat Right India' initiative, which aims to overhaul the country's food systems in order to assure safe, healthy, and sustainable food for all Indians. The catchphrase 'Sahi Bhojan, Behtar Jeevan' therefore serves as the movement's cornerstone.

The Eat Right India initiative envisions safe and nutritious food produced in ecologically sustainable methods for all Indians. As a result, the movement has gained widespread national and international prominence. Eat Well India was just named one of the Top Visionaries for the Food Systems Vision Prize 2050. The Rockefeller Foundation in the United States established this prize in collaboration with Second Muse and Open Ideo. Top Visionaries were revealed as the 10 finalists chosen from over 1300 candidates.

Based on the primary concepts of Eat Safe, Eat Healthy, and Eat Sustainable, the Eat Right India movement employs a careful blend of regulatory, capacity-building, collaborative, and empowering measures to guarantee that our food is beneficial for both people and the world. Furthermore, it is based on the combined activity of all stakeholders, including the government, food enterprises, civil society organisations, experts and professionals, development agencies, and the general public. The movement's action plan comprises a slew of projects aimed at increasing demand for and supply of safe and healthful food in a sustainable manner. Whereas supply-side interventions focus on increasing food enterprises' capacity to encourage self-compliance, demand-side efforts try to motivate customers to want safe and nutritious food by supporting excellent food practises and behaviours. To achieve its aim, Eat Right India has created Five Essential Activities.

The first step is to create new policies that encourage healthy eating. FSSAI has issued laws regarding labelling, the removal of trans-fats, fortification of milk, oil, and rice, and the strengthening of food testing.

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[1] Ranjan, Om. (2021). Food Security Policy in India: Challenges and Performance. https://www.researchgate.net/publication/349767066_Food_Security_Policy_in_India_Challenges_and_Performance, last visited on 12th January, 2024

[2] Narkhede, Parag & Lathi, B. (2010). Food Security in India: Concept, Realities & innovations. Global Journal of Management Science. 4. 73-81. https://www.researchgate.net/publication/228096218_Food_Security_in_India_Concept_Realities_innovations, last visited on 18th December, 2023

[3] Kumar, Pramod & Perumal, Anbukkani & Singh, Dharam & Kar, Amit. (2016). FOOD SECURITY IN INDIA: ISSUES AND CHALLENGES. https://www.researchgate.net/publication/331523537_FOOD_SECURITY_IN_INDIA_ISSUES_AND_CHALLENGES, last visited on 10th December, 2023

The second goal is to train and build the capacity of various stakeholders in the food ecosystem, such as food handlers, administrators, frontline health workers, and so on, in order to help food businesses succeed, ensure food safety compliance, and serve safe food to the general public.
The third step is to accredit diverse food enterprises, ranging from clusters of street food sellers to restaurants, schools, and campuses, based on food safety and cleanliness norms. Thus far, 28 Street Food Hubs have been approved, increasing customer trust in eating at local street food hubs; and over 100 schools have been certified as Eat Right Campus.
The fourth step is to encourage food companies to reformulate packaged foods into healthier alternatives and to use safe and sustainable packaging materials; minimise the use of fat, sugar, and salt in food; and donate food through one of our projects, Save Food Share Food. The ultimate goal is to spark large-scale social and behavioural change among Indians towards safe, healthy, and sustainable eating habits through initiatives such as Eat Right Fairs, mobile food testing vans known as "Food Safety on Wheels," and awareness campaigns on electronic and social media platforms.
Eat Right India is also aligned with various Government flagship programmes such as POSHAN Abhiyaan, Anemia Mukt Bharat, Ayushman Bharat, and Swacch Bharat. An inter-ministerial Steering Committee has been formed to institutionalise the Eat Right India initiative, with representatives from all relevant Ministries and Departments such as Women and Child Development, Environment, Science and Technology, Agriculture, Food Processing, Food and Public Distribution, and so on. Members of our training and audit community, development partners, and industry leaders through associations are also included. This will assure the continuity, scale-up, and real-time monitoring of Eat Right India's many projects and programmes.

Eat Right India's 'Whole Government' Approach

Eat Right India brings together diverse stakeholders from various institutions such as government departments, consumer organisations, development partners, industry associations, academia, professional associations, and so on, to work closely on pre-existing multi-stakeholder platforms or coalitions working on various food-related issues. The movement takes a "whole-of-government" approach, bringing together all food-related tasks from ministries such as agriculture, health, and the environment, among others.
Additionally, because food-borne illnesses and numerous diet-related ailments affect people of all ages and from all walks of life, Eat Well India takes a 'whole of society' approach, bringing people from all walks of life together on a single platform.
Because food systems are complex in nature, a more comprehensive and integrated approach is required. FSSAI's "whole-of-government" and "whole-of-society" methods underline its position as "enabler and reformer" (as well as "implementer") in creating a constructive, collaborative, and inclusive environment to nurture India's sustainable food system.
Although the country lacks a comprehensive strategy to promote sustainable and nutritious food systems, the Eat Right India movement is advocating multiple programmes that work in this direction at various levels, from pre-harvest through consumption. We must now accelerate progress towards more resilient and nutritious food systems in order to improve the health of our inhabitants, as well as the health of our environment and economy.

Food Policy[4] & Society (SDG 1 no poverty)

SDG 1 no poverty is addressed by five of the 52 policies and about a quarter of the budget. These encompassed rural employment (through the Mahatma Gandhi National Rural Employment Guarantee Project), social aid (via the Annapurna food security scheme), and livelihoods (via support for food production and food service livelihoods, as well improving food security of the homeless). These social policies are intended to alleviate poverty and safeguard vulnerable groups throughout the food system, including food production, retail/service, and consuming activities.

Food Policy & Health (SDG 2 zero hunger, SDG 3 good health & wellbeing, SDG 6 clean water & sanitation)

The bulk of the policies found focused on health and the SDGs of zero hunger (SDG 2), excellent health and well-being (SDG 3), and safe drinking water and sanitation (SDG 4). (SDG 6). They accounted for more than two-thirds of the 52 policies and 75% of the budget. Swachh Bharat or Clean India policies aimed at eliminating open defecation and improving waste management were identified as related to SDG 6 clean water and sanitation and added owing to its relevance to food safety. The remaining SDG 2 and SDG 3 policies were related with food security in its broadest sense: they were intended to promote food availability, access, and utility.

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[4] Kumar, Anjani & Bantilan, Cynthia & Kumar, P. & Kumar, Sant & Jee, S.. (2012). Food security in India: Trends, patterns and determinants. Indian Journal of Agricultural Economics. 67. 445-463. https://www.researchgate.net/publication/288046176_Food_security_in_India_Trends_patterns_and_determinants, last visited on 26th January, 2024

SDG 2 zero hunger was mapped to five policy budget categories, 23/52 unique policies, and 52% of the budget. These included food subsidy policies (such as the Public Distribution System), agricultural production policies (such as the National Horticulture Mission), school meal policies (such as the Mid-Day Meal Scheme), dairy policies (such as the National Livestock Mission), and crop insurance policies (Pradhan Mantri Fasal Bima Yojana). The later crop insurance plan was mapped to SDG 2 in the NITI Aayog Government of India mapping exercise (Government of India, 2019a), although it is acknowledged that this policy is equally important to SDG 1 no poverty, as farmer livelihoods clearly link SDGs 1 and 2. Food subsidies received the most funding. The Ministry of Consumer Affairs, Food and Public Distribution received 38% of the budget evaluated (1,15,570 crores/US$15 billion), which was comparable to 4% of the overall expected budget for 2020-2021 by the Government of India (including all policies, food and non-food).

Policies relating to SDG 3 excellent health and well-being accounted for a significant portion of the food system relevant policies found. Healthcare initiatives (for example, the National Health Mission) and policies for women and children (including the National Nutrition Mission) got 20% of the budget (62,662 crores/US$8.2 billion). These two policies referred to a wide range of food and health-related programmes, as well as the necessity for coordination across various (government and non-government) sectors. One of the National Health Mission's guiding principles, for example, was to "ensure coordinated inter-sectoral effort to address food security and nutrition challenges" (Government of India, 2014a).

Food Policy & the Environment (SDG 12 responsible production & consumption, SDG 13 climate action)

A small number of food system policies focused primarily on the environment or the SDGs 12, responsible production and consumption, and 13, climate action. Just 0.7% of the budget was allotted to almost a quarter of the initiatives examined (12/52) (1994 crores/US$251 million). These 12 policies were linked to the manually created climate budget area (National Action Plan on Climate Change) in the Ministry of Environment, Forests, and Climate Change, as well as the agricultural processing budget area (Pradhan Mantri Kisan SAMPADA Yojana[5]) in the Ministry of Food Processing Industries. These two ministries earned the fewest funding of the food system policies examined.

SAMPADA was one of the few policies examined that focused on food distribution and processing operations (food processing was also referenced, to a small degree, in the dairy policies). In the mapping exercise conducted by the Government of India's NITI Aayog, this policy was linked to SDG 12 responsible production and consumption (Government of India, 2019a). The SAMPADA, Mega Food Parks strategy aims to boost efficiency, reduce waste, and maximise profit along the food supply chain by providing "modern infrastructural facilities" such as refrigerated food warehouses to assist food production and delivery. Waste reduction is important for the environment, but the efficiency savings associated with this strategy are also important for farmer livelihoods (farmer prosperity). If SAMPADA is included in section 3.1, two fewer food system policies and 1081 crores (US$142 million) are considered environmentally relevant.

The 10 identified policies linked to SDG 13 climate action totalled 913 crores/US$120 million, accounting for 0.3% of the budget evaluated. This is much less than the money allocated to food system policies related to SDGs 1 (24%), 2 (51%), 3 (21%), and 6 (3%). The National Action Plan on Climate Change and its sub-policies were included in this review because they highlight the impact of climate change on food production, citing predicted rising temperatures and variability in seasonal rains, as well as competition between biofuels and food production for future arable land and irrigation resources. Yet, renewable energy programmes receive two-thirds of the National Action Plan money (e.g., the National Solar Mission). They are tangentially related to the food system, but they were removed from our assessment since there was no mention of food in the policy texts. Three programmes in the National Action Plan on Climate Change (National Bamboo Mission, National Project on Agro-forestry, and National Project on Soil Health and Fertility Management) were initially linked to the agricultural output budget. These three policies and their corresponding budgets were manually added to the climate budget as sub-policies of the National Mission on Sustainable Agriculture, which is a sub-mission of the National Action Plan on Climate Change. If these policies were reallocated to the agricultural budget, seven food system policies would be relevant to SDG 13 climate action, accounting for less than 0.2% of the budget and 452 crores/US$59 million.

Integration of Environmental Sustainability in Indian Food Policy

Environmental sustainability was included into around one-third of the food system policies examined: Environmental sustainability was incorporated into the formulation of 18/52 food policies. This amounted to around one-quarter of the overall budget examined ($79,943 crores/US$10.5 billion). Seven of these programmes were included in the climate budget, while seven were included in the agricultural production budget. The remaining initiatives were spread among the budget categories of rural employment, dairy, and clean India. There was no mention of environmental sustainability in any of the policies linked with food

[5] https://sampada-mofpi.gov.in/#:~:text=The%20scheme%20aims%20at%20development,supply%20chain%20with%20modern%20infrastructure.

consumption in the food subsidy, school meal, or social assistance budget categories. In all three budget cycles, the bulk of measures involving environmental sustainability saw an increase in funding (2018–2019, 2019–2020, 2020–2021). This was mostly driven by increased financing for healthcare, rural jobs, and agricultural production strategies, and was not necessarily tied to an environmental sustainability objective. During all three budget cycles, funding for directly applicable environmental sustainability initiatives (under the climate budget area) remained constant and consistently low.

Thirty-nine policies used the term "sustain," however 21 of them referred solely to the sustainability (continuation) of initiatives rather than citing environmental actions or results. Thirteen policies did not include any mention to sustainability. The agricultural processing budget section does not include environmental sustainability, lending credence to the assumption that this strategy is primarily focused on cost-cutting and does not currently incorporate environmental sustainability into its policy design.

The key policy adopted to integrate sustainability into food policy was the National Mission on Sustainable Agriculture[6]. This is a cross-ministerial policy that is part of the Ministry of Environment, Forests, and Climate Change's National Action Plan on Climate Change and is mostly executed through a number of minor policies in the Ministry of Agriculture and Farmer's Welfare. This objective was frequently mentioned in both ministries' policies, demonstrating a degree of sustainable integration.

"The Mission on Integrated Development of Horticulture will collaborate closely with the National Mission on Sustainable Agriculture to create Micro-Irrigation for all horticulture crops as well as protected cultivation on farmers' fields."

Government of India Agricultural Production Policy 2014[7]

"For this aim, National Mission for Sustainable Agriculture has been created for boosting agricultural production notably in rain-fed areas emphasising on integrated farming, water usage efficiency, soil health management and synergizing resource conservation.

The sustainable use of water and irrigation methods were frequently mentioned. Eight of the 18 policies promoting a sustainable food system emphasised agricultural irrigation methods and the need to manage strained water supplies. These allusions did not always make it obvious if the management of sensitive environmental resources was only to safeguard future agricultural productivity and rural lives, or whether there was a larger purpose of environmental gain.

"The Himalayan ecosystem is critical to the ecological security of the Indian landmass because it provides forest cover, feeds perennial rivers that provide drinking water, irrigation, and hydropower, conserves biodiversity, and provides a rich base for high-value agriculture and spectacular landscapes for sustainable tourism."

Government of India Climate Policy 2008

“For sustainability of the high productivity areas, special projects such as reclamation of problematic soils, development of waterlogged areas and mitigation of adverse effect of climate change would be funded under the Mission for the promotion of National Food Security Mission crops of the district.”

Government of India Agricultural Production Policy 2018[8]

"Systematic project identification and implementation is highly recommended since it leads to the establishment of long-term and productive assets for the community."

Environmental sustainability was included into the food policies studied, particularly those aimed at food production. Policy priorities that prioritised environmental sustainability received the least investment. This suggests that the incorporation of environmental sustainability into food policy in India is still in its infancy. These findings are consistent with earlier research, which indicates that low- and middle-income nations are less likely to prioritise environmental measures above those aimed at economic growth or poverty alleviation (Forestier and Kim, 2020). It is not unexpected, however, that the majority of food policies assessed in this study were connected with SDGs, which are long-standing policy goals in India (e.g., rural employment under SDG 1 no poverty; agricultural production growth and food and nutrition security under SDG 2 zero hunger & SDG 3 good health and well-being).

Disparate Food Policies

The study's findings indicate food's diversified importance across a wide variety of policy. Food policy was seen to be heterogeneous and fragmented, focusing on different aspects of the food system and engaging a variety of government ministries and agencies. Several of these policies were directly related to the food supply chain, offering tools to influence food production, distribution, consumption, or disposal (e. g., the Public Distribution

[6] Department of Agriculture & Cooperation, Ministry of Agriculture Government of India, National Mission for Sustainable Agriculture (NSMA), https://mpkrishi.mp.gov.in/hindisite_New/pdfs/NMSA.pdf last visited on 5th January, 2024

[7] Press Information Bureau, Government of India, Ministry of Agriculture & Farmers Welfare (2014-15) https://pib.gov.in/newsite/printrelease.aspx?relid=113870

[8] https://agriwelfare.gov.in/en/PolicyDiv

System). Additional initiatives, like as the Annapurna social assistance scheme's food security targets, were linked to the larger food system. This is not limited to India. A recent study, for example, discovered that food policy in England and South Africa is still being formulated and implemented in various Ministries with a range of distinct intents and objectives (Parsons et al., 2020; Pereira et al., 2020). The variety of food policies found in this study is a good beginning point for establishing a comprehensive approach to food policy (Parsons and Hawkes, 2019b). Policies can only be coordinated, cohesive, and integrated after the spectrum of relevant food policies is known and their complex interdependence or direct conflict in priority is determined.

National and international societies are increasingly recognising the false dichotomy of choosing between human and planetary needs, with the realisation that population growth throughout the world is dependent on environmental health. The FAO Committee on Global Food Security's High Level Panel of Experts on Food Security and Nutrition has issued a consultation document that incorporates environmental sustainability into the definition of food security (FAO High Level Panel of Experts on Food Security & Nutrition, 2020b). This is to recognise the environment's critical role in supporting health for future generations. Similarly, the European Commission recently published a paper titled 'Moving from food as a commodity to food as more of a common good,' with the fundamental purpose of developing and assessing policy in light of food sustainability in all its forms.

The policies examined in this study demonstrate a desire for sustainable food systems. As a sub-policy of the National Action Plan on Climate Change[9], the National Mission on Sustainable Agriculture, in particular, provides a route to establish cross-ministerial coordination and a degree of coherence and integration. The influence of the food system on the environment, as well as the impact of the environment on the food system, is recognised by including sustainable food production into the formulation of different policies. There is also evidence of political infrastructure to support sustainable policies in the assignment of NITI Aayog, as a cabinet level entity, to function as a conduit for attaining the SDGs and a method to assess unintended repercussions across SDG objectives and universal goals.

There are two major policy approaches that will enable the transition of sustainable food systems. But, subcomponents within these two main themes must be devised and implemented to fit various settings in a big country like India.

Crop Diversification

Diversifying existing farming systems (predominantly rice and wheat) to more nutritional and environmentally friendly crops has long been proposed as a way to address the twin concerns of climate change and hunger[10]. Nevertheless, such a transformation entails navigating a turbulent political economy, in addition to the government's role (and obligation) in preserving farmers' revenue bases. Crop diversification to sorghum and millets has been demonstrated in research to have potential benefits, particularly in tracts where rice yields are poor. A few states' promotion of natural and organic agricultural techniques accords with diversification aims. Haryana recently announced a financial incentive of Rs 7,000 per acre for farmers who switch from water-guzzling paddy to millets, pulses, vegetables, maize, cotton, and other crops. This may be considered a positive initiative for the interim period, until farmers stabilise harvests with the new crop portfolio, which is intended to provide them with an income comparable to the former cropping pattern. A strong value chain with components such as processing facilities closer to the farm gate; and collectivising small farms to counter scale disadvantages through cooperatives, FPOs, and so on. With increased private sector engagement, digital agriculture instruments will play a significant role.

Investments in research and innovation will be critical in reaching the objective of sustainable and healthy food systems by developing crop varieties with desirable attributes such as yield, climate resistance, and nutritional properties. Breeding bio-fortified crop varieties is a viable and cost-effective strategy for addressing vitamin A, iron, zinc, and other deficiencies. To popularise crop varieties that fit certain agro-ecologies, seed systems must be reinforced through both public and private channels of quality seed supply.

Consumer Behaviour

To be successful in agricultural diversification (from primary staples to alternative nutritional and climate-resilient crops), healthy and diverse meals must be introduced and promoted in the menus of Indian consumers. Consumers are already becoming more interested in 'nutritious' meals. This beneficial trend towards healthier eating is predicted to continue post-Covid-19.

Public distribution systems (PDS), Mid-Day Meal (MDM), and Integrated Child Development Services (ICDS) may be the greatest delivery routes for leveraging better and nutritious food products to reach a wide range of disadvantaged populations. Efforts in several states to construct nutrition gardens in schools, Anganwadi

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[9] Press Information Bureau (Research Unit), Ministry of Information and Broadcasting, Government of India, Ministry of Environment, Forest and Climate Change, National Action Plan on Climate Change (2021) https://static.pib.gov.in/WriteReadData/specificdocs/documents/2021/dec/doc202112101.pdf

[10] Dwivedi, Sangam L. et al. (2017) Diversifying Food Systems in the Pursuit of Sustainable Food Production and Healthy Diets, https://www.sciencedirect.com/science/article/pii/S1360138517301346 Trends in Plant Science, Volume 22, Issue 10, 842 – 856, last visited on 23rd December, 2023

centres, and individual houses, among other places, are projected to increase nutritional diversity and combat malnutrition. Recent evidence on relevant aspects of dietary guidelines (simple, front-of-the-box labelling, for example) would influence consumer behaviour and should be widely adopted.
Food waste reduction must be internalised by everybody; this will cut GHG emissions from the sector.
Awareness campaigns and consumer education are required to make these interventions successful, albeit these alone may not be adequate. Culture, taste, affordability, lifestyle, convenience, and other factors would all play a part. Empowering and engaging women, both individually and in groups, through appropriate policies can result in beneficial consequences.
Only when key ministries and stakeholders collaborate can sustainable food systems be realised. Local self-government (Panchayats and Urban Bodies) will also play an important role in coordinating communal efforts. The UN Food Systems Conference presents a significant opportunity for India to take the lead in ensuring the sustainability of food systems[11]. Because agriculture is a state topic, state governments' execution of specific projects will be critical. Tackling such a complicated problem in a varied country like India would be difficult, but not impossible. To ensure the sustainability of food production and consumption, an integrated and stable policy framework with enough and continuous financial support would be required.

Conclusion

The Indian government's dedication to global goals and the implementation of facilitative infrastructure is significant. Yet, like with many nations, a complex problem such as sustainable food systems is unlikely to be handled with insufficient budgetary funding or a lack of coordinated strategy. According to the findings of this study, the policies that included sustainability received the least financing, while a lot of significant food consumption regulations made no mention of environmental sustainability. The findings indicate a potential to assist the integration of sustainability into policy across the whole food supply chain. This does not imply aspire to one sustainable diet, one sustainable agricultural technique, or one model of a sustainable food system in a country as geographically and socio-culturally varied as India. It does, however, provide a mechanism for effective policy formation and risk management by allowing ministries to share data, identify where current policies may hinder or support each other, and adjust policy to changing (health, social, economic, political, and environmental) goals.

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