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Policies nourishing sustainability: China's path to sustainable agri-food development

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ABSTRACT

Over the past two decades, China's remarkable economic growth has brought forth opportunities and challenges, including unsustainable food systems. Policies are pivotal in driving sustainable development, facilitating a balance between food supply, consumer demands, and environmental goals, thereby promoting a more sustainable food system. This study delves into the role of national policies from 2000 to 2022 in addressing these challenges, intending to reveal policy characteristics and potential impacts on agriculture and food. The research employs heat-map analysis, neural networks analysis, and topic analysis to explore policy concepts and themes, with findings underscoring the significance of rural development and food safety within agri-food policies. The presence of policy duplication and complementarity across different ministries provides valuable insights into the intricate dynamics of policy and their implications for sustainable agri-food systems in China and global sustainability endeavors.

***Keywords**: Sustainable food; agriculture; policy dynamics; food; sustainability.*

1 Introduction

Over the past few decades, the rapid urbanization in China has presented significant challenges (Laing and Wang, 2019). The continuous expansion of urban areas and shifting consumption patterns have placed immense pressure on the agricultural sector, raising concerns about food production systems' long-term sustainability and environmental impact (Ma et al., 2019). In response to these pressing challenges, China has embarked on a transformative journey toward sustainable food development (Farooque et al., 2019). The "Clear your plate" campaign in China is central to these efforts, a pivotal government-led initiative to curb food waste. This campaign promotes moderation in food ordering, discourages wastage during meals, and encourages packaging leftover food for later use (Filimonau et al., 2020). The campaign seeks to heighten public awareness about the conservation of food resources.

Moreover, the Chinese government has strengthened regulations and enforcement against food waste while actively encouraging environmentally friendly farming practices and fertilization methods to reduce waste (Van Wesenbeeck et al., 2021). Enterprises, institutions, and individuals are actively encouraged to participate in food loss reduction initiatives to enhance food resource efficiency, as Li et al. (2019) indicated.

The literature has seen a growing body of research investigating the role of policy perspective in sustainable food development. For instance, He et al. (2020) have delved into the impact of policy interventions on adopting sustainable food alternatives. Eyhorn et al. (2019) have scrutinized government-implemented organic farming certification and its impact on organic market development. McAdams et al. (2019) have examined policy measures to reduce restaurant food waste. Concurrently, other scholars have explored how government-adopted sustainable standards and certification systems influence consumer food purchasing decisions, as studied by Kittipanya-Ngam and Tan (2020). However, a notable gap in the literature persists regarding the effectiveness of integrated, cross-sectoral policy approaches. Existing studies have focused on specific policies' impacts on sustainable food systems, but there is limited research on the synergistic effects of coordinated policy frameworks. This gap underscores the need for further investigation into comprehensive policy strategies that nourish sustainability in China's agri-food development.

This study aims to address two primary objectives: firstly, to explore the conceptual network relationships within China's policies on food, agriculture, and the environment over the past two decades, and secondly, to investigate the thematic emphases of these policies by different policymakers during the same period. Additionally, it aims to provide insights for future policy formulation in food, agriculture, and environment domains. This study employs heat map analysis and neural network analysis to uncover the hidden conceptual relationships and networks within policy texts. Furthermore, topic analysis is utilized to discern implicit themes within policies. The overarching goal of this study is to provide policy insights into China's pursuit of sustainable agriculture and food development while endeavoring to contribute to the global discourse on food and environmental sustainability policies.

2 Methodology

2.1 Collect and prepare samples

Previous studies have supported the data sources for the present study: national-level policies. Weaver-Hightower (2008) analyzed the conceptualization of education policy and the potential for change. Béland and Howlett (2016) examined national and institutional multi-stream frameworks and other approaches to policy development. Kavaliunas et al. (2020) analyzed national policy responses to pandemic diseases. Galli et al. (2020) assessed the impact and gap of policies on sustainable food transition.

Therefore, national-level policies were selected for this study. This study used a variety of methods to screen national-level policy documents and to analyze and evaluate these policy documents. First, this study conducted an extensive literature review covering academic papers, research reports, and policy documents in relevant fields to obtain background information and prior research findings in China. Secondly, this study visited official Chinese open-access policy websites, paying particular attention to the websites of ministries and agencies related to agriculture, the environment, food, and sustainable development.

2.2 Document selection

The policies selected for this study focus on three key areas: agriculture, food, and environment. These areas were chosen based on previous research and for several interconnected reasons.

As one of the world's largest agricultural nations, China's agricultural industry is instrumental in ensuring food supply and driving economic growth. Therefore, investigating agricultural policies is essential to understanding the sector's production models, resource utilization, and sustainability practices (Yu and Wu, 2018).

Food policies are vital for ensuring the safety and compliance of sustainable food, especially in developing countries. These policies aim to establish rigorous standards and regulations to safeguard public health, maintain the integrity of sustainable food production systems, improve agricultural techniques, and reduce ecological issues (Khalid, 2016; Priyadarshini and Abhilash, 2020). Environmental policies play a crucial role in mitigating the environmental consequences of food production. By addressing issues like greenhouse gas emissions, soil degradation, and biodiversity loss, these policies aim to foster sustainable practices that minimize environmental harm and contribute to the overall sustainability of the food system (Olesen and Bindi, 2002).

To comprehensively investigate the current state of sustainable food in China under the influence of policies, this study examines agricultural, environmental, food, and consumer-related policies. It extends its focus to encompass social and economic development planning. This expansion is motivated by recognizing that sustainable agri-food is intricately interconnected with broader socioeconomic development objectives, emphasizing the need for a holistic policy analysis approach.

As this study focuses on analyzing policies related to food, environment, agriculture, and sustainable development, various terms can describe these policy areas. We drew on keywords identified by previous studies to guide our search for relevant policies. The search terms utilized in this study comprised conceptual terms and specific policy-related terms, ensuring a comprehensive exploration of the topic (Mak et al., 2020; Santeramo and Lamonaca, 2021; Pe'er et al., 2020; Drewnowski et al., 2019).

The terms included "food （食物）," "food quality（食品质量）," "addictives （添加剂）," "environment（环境）," "agriculture（农业）," "sustainable development （可持续发展）," "food security （食品安全）," "agricultural products（农产品）," "climate change（气候变化）," "natural resource management policy（自然资源管理）," "biotechnology（生物科技）," "consumer（消费者）," "nutrition（营养）," "animal farming（动物养殖）," "rural development（农村发展）," "sustainable consumption（可持续消费)," and "dietary guidance（饮食指南）."

The data utilized in this study were sourced from Beijing University Law Information Center's online legal database, known as 'Beida Fabao' (www.pkulaw.com/law). This database provides access to various legal documents, including laws, judicial interpretations, policies, and scholarly articles (Yang et al., 2021). The data collection involved searching and retrieving relevant legal documents from the database based on specific keywords and filters.

2.3 Collection of policy documents for sustainable food development policies

The policy documents in the Appendix encompass various initiatives the ministries undertake across different domains. These policy documents are issued by various governmental ministries, including the State Council, Ministry of Health, National Development and Reform Commission, National People's Congress Standing Committee, and others, highlighting multi-agency involvement in policymaking.

3 Material and Methods

3.1 Overview

This study employs three analytical methods: heatmap, neural network, and topic analysis. The reasons for selecting these three methods are as follows. Firstly, heatmap analysis was chosen because it is a fundamental tool for revealing the strength and frequency of relationships among entities within the dataset. By intuitively representing these relationships, heatmap analysis allows a deep understanding of the interaction levels between various concepts (Alasmari, 2020). This approach lays the foundation for understanding the complex interactions among different entities.

Secondly, neural network analysis complements heatmap analysis by delving into the complex network structures of concepts expressed in policy texts. Identifying important nodes, clusters, and connection patterns provides a more nuanced understanding of the policy relationship network. This method enriches exploring the relationships between policy concepts, contributing to a more comprehensive analysis of the research domain (Aljohani et al., 2021).

Lastly, integrating topic analysis enhances the understanding of the research domain by identifying latent themes in policy texts from different policymakers and supplementing heat-map and network analysis by providing insights into policy texts (Jelodar et al., 2019; Aranda et al., 2021; Guo, 2024).

In summary, this study aims to provide a comparably comprehensive textual analysis of the research findings by integrating these three complementary methods. Each method offers insights into different dimensions of the dataset.

3.2 The heat-map analysis

The Heat-map Analysis table describes the steps for generating and interpreting a heat-map based on co-occurrence frequencies of words or themes in the policy documents by Tableau. Tableau is a powerful data visualization software that allows users to create interactive and dynamic visualizations (Alasmari, 2020). It involves data preparation, calculating co-occurrence frequencies, generating the heat map, and interpreting the patterns and associations among words or themes. The heat-map analysis provides valuable insights into the relationships and clusters of terms related to sustainable food development policies. Table 1 shows a detailed overview of the steps involved in this analysis.

Table 1.
The heat-map analysis descriptions

STEPS	DESCRIPTION
1	**Data preparation**: Prepare the data in a format with rows representing categories or entities, and columns representing the variables or attributes to be visualized.
2	**Connect data**: Open Tableau and connect to the prepared data source.
3	**Create a heat-map visualization**: Drag and drop the desired variables onto the Rows and Columns shelves and choose the heat-map chart type.
4	**Customize the heat-map**: Adjust the color scheme, add labels, and apply formatting options to enhance the visual presentation.
5	**Analyze and interpret**: Analyze the heat-map to identify patterns, trends, and relationships in the data. Interpret the findings to draw meaningful insights

3.3 Neural network analysis

Network analysis is conducted to analyze the relationships and connections between entities in the context of policies. As shown in Table 2, the process involves data preparation, importing the data into a network analysis and visualization software - Gephi 0.10.1, applying a suitable layout algorithm, customizing the network visualization, and analyzing and interpreting the results. This analysis helps identify important nodes, clusters, and patterns of connections, providing insights into the relationships between entities in the data (Aljohani et al., 2021). Gephi is a powerful tool for visualizing and understanding these complex relationships, contributing to a deeper understanding of the network structure (Aljohani et al., 2021).

Table 2 Network analysis descriptions

STEPS	DESCRIPTION
1	**Data preparation**: Prepare the data in Excel file. Ensure the data includes nodes (entities) and edges (relationships between nodes).
2	**Import data**: Open Gephi 0.10.1 and import the prepared data file - Chinese word segmentation.
3	**Network layout**: Apply a suitable layout algorithm to arrange the nodes and edges in the network visualization.
4	**Customize visualization**: Customize the appearance of the network by adjusting node size, color, and edge thickness.
5	**Analyze and interpret**: Analyze the network to identify important nodes, clusters, and patterns of connections. Interpret the findings to gain insights into the relationships between entities in the data.

3.4 LDA topic analysis

LDA (Latent Dirichlet Allocation) topic analysis, utilized in text analysis, aims to uncover concealed topics within a collection of documents and ascertain their distribution (Jelodar et al., 2019). It views documents as blends of multiple topics, each represented by a set of words, facilitating a nuanced exploration of thematic patterns in text data. In this study, LDA topic analysis was integrated with manual analysis to examine the relationships among agricultural, environmental, and food-related policies issued across various domains. Table 3 outlines the steps involved in topic analysis.

Manual topic analysis entails scrutinizing policies through close reading and allows for the precise assignment of topic labels based on human expertise (Aranda et al., 2021; Guo, 2024). It ensures a nuanced understanding of policy nuances and intricacies. Conversely, LDA topic analysis offers scalability and objectivity, revealing hidden themes that may not be immediately apparent through manual examination (Nanda et al., 2021). By combining both approaches, researchers aim to capture a comprehensive spectrum of insights, leveraging the strengths of each method.

Table 3.
Topic analysis steps

Manual Topic Analysis Method	LDA Topic Analysis Method
1. Text Reading and Summarization: Carefully read policy documents and create text summaries.	1. Topic Modeling: Utilize natural language processing tools for automated topic modeling.
2. Topic Selection: Define specific topics or keywords for analysis.	2. Automatic Topic Modeling: Employ natural language processing tools to perform automated topic modeling.
3. Manual Topic Labeling: Manually assign topic labels to each policy document.	3. Topic Label Generation: Automatically generate labels for the generated topics.
4. Text Excerpting: Select representative text paragraphs from policy documents.	4. Text-Topic Assignment: Match text with the generated topics.
5. Comparison and Summarization: Conduct detailed comparisons and summaries of excerpted text to determine similarity.	5. Topic Comparison: Compare topic distributions across policy documents to determine relationships.
6. Subjective Judgment and Expertise Support.	6. Interpretability Analysis: Ensure topics are meaningful

4 Results

4.1 Heat map analysis - Key insights for sustainable food systems

The heat map analysis underscores an urgent need to reassess policy priorities in China's pursuit of a sustainable food system. While policies have traditionally emphasized the relationship between food safety and agricultural products, a significant oversight has been in protecting agricultural biodiversity and addressing climate change (Figure 1). This oversight is concerning, particularly given the increasing consumer demand for eco-friendly agricultural products and sustainable production methods.

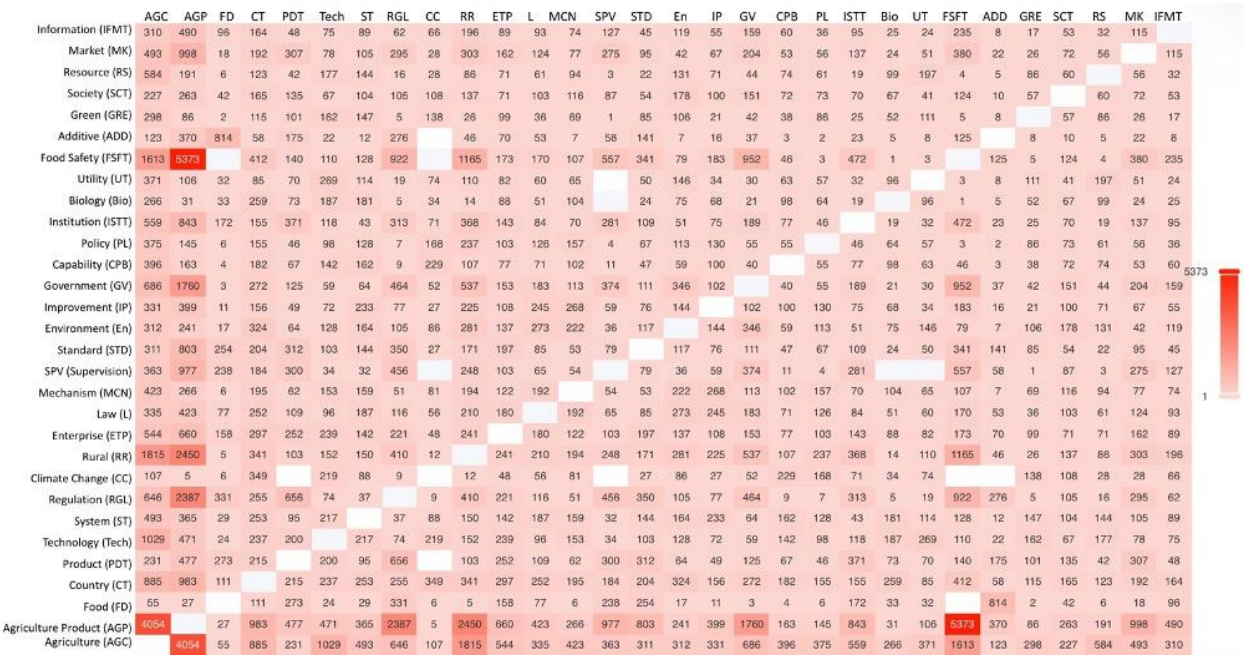

Figure 1. Heat-map analysis results.
The color becomes darker to indicate a stronger correlation between the two concepts. The brief introduction in the top row can be found in the leftmost column corresponding to the full name.

Filling this gap is critical. Policymakers can promote the development of resilient and sustainable food systems by prioritizing the protection of agricultural biodiversity and aligning policy frameworks with consumer preferences for environmentally friendly products. Additionally, amid challenges of resource scarcity, clear directives and comprehensive policies are essential to ensure the continued supply of resources and meet consumer expectations for resource sustainability.

In response to these findings, policymakers should strengthen guidance on sustainable food production and technological innovation that caters to consumer preferences for safe and healthy food. Moreover, an emphasis on rural development and facilitating market access for agricultural products can provide consumers with diverse food choices and convenience while promoting sustainable practices.

Furthermore, considering China's significant role as a food consumer, policymakers must formulate policies that meet consumers' demand for healthy, safe, and sustainable food choices. Reissuing and revising China's current dietary guidelines can play a crucial role in promoting the long-term resilience of China's food system on both the consumption and production ends.

4.2 Neural network graph - Complex relationships of policy concepts

Based on the neural network graph analysis, China's agricultural, environmental, and food policies encompass several core concepts with evident interconnections (Figure 2). Agriculture emerges as the primary core concept, linking agricultural products, food, the nation, and China. The most significant association between agricultural products and food safety indicates a high priority placed on ensuring food safety within policies. Additionally, the connection between agricultural products and agriculture reflects the policy's emphasis on closely integrating agricultural production with agricultural development. Furthermore, connections between agricultural products and rural areas and agricultural products and regulation demonstrate policy attention towards rural development and regulatory systems. However, connections between other concepts are sparse, including biotechnology, law, capacity, environment, standards, resources, society, green food, additives, institutions, enterprises, and mechanisms, suggesting lower policy emphasis in these areas or some degree of discontinuity. Consequently, policymakers may consider enhancing.

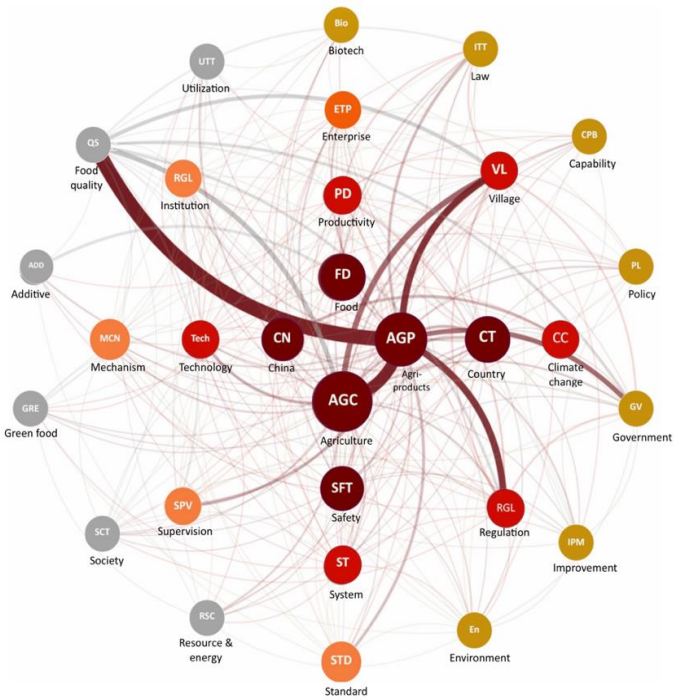

Figure. 2 Policy textual neural network analysis results.
This neural network graph illustrates the connections between different concepts, with each concept represented by a circle.

Policymakers need to delve deeper into the implications behind these non-associations and translate them into tangible actions. Specifically, policymakers need to consider incorporating environmental sustainability and social responsibility into entitlement, agriculture, and food policies. In other words, policymakers must recognize that focusing solely on food safety and agricultural production is insufficient. Achieving sustainable development in the environment, agriculture, and food sectors requires careful consideration of environmental, social, and economic factors in policy

formulation. The future path to establishing a lasting agricultural and food system in China may involve developing more comprehensive policy frameworks, promoting green production practices, encouraging social participation, and raising public awareness of health, safety, and environmental issues.

4.3 Topic analysis - Topics from diverse policy issuers

The thematic analysis presented in this study further illuminates the distribution of food and agricultural policy themes among various policy issuers in China, offering more profound insights into the research question. Figures 3 and 4 depict policy issuers related to agriculture and food, including the National People's Congress Standing Committee, the Ministry of Agriculture and Rural Affairs, the State Council, and the State Environmental Protection Administration.

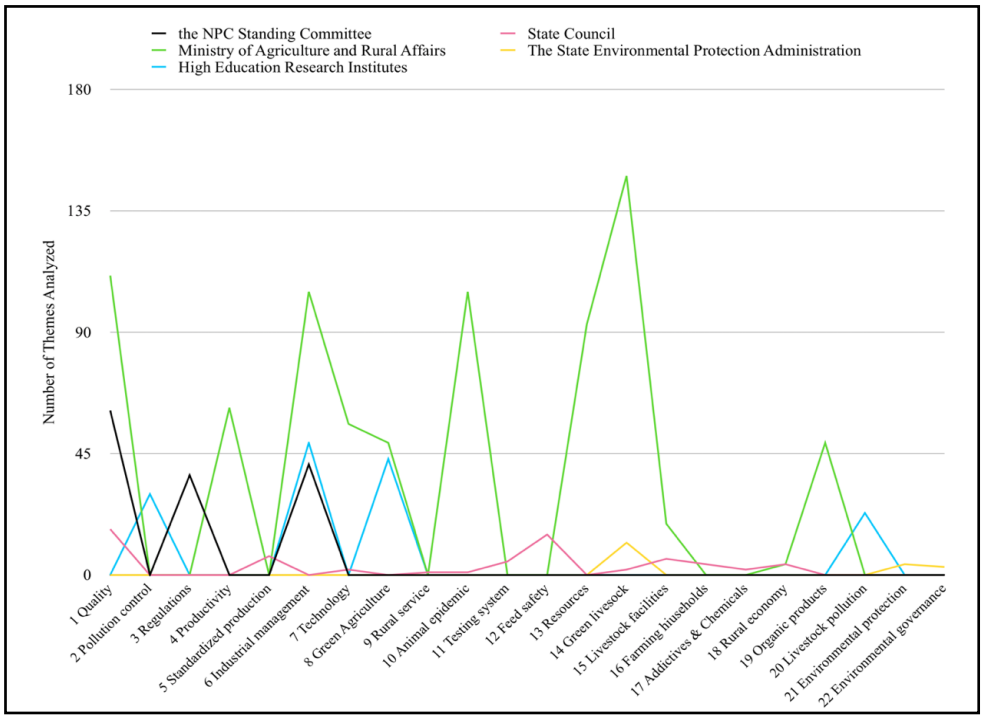

Figure 3. Topics extracted in agricultural policies issued by different issuers.

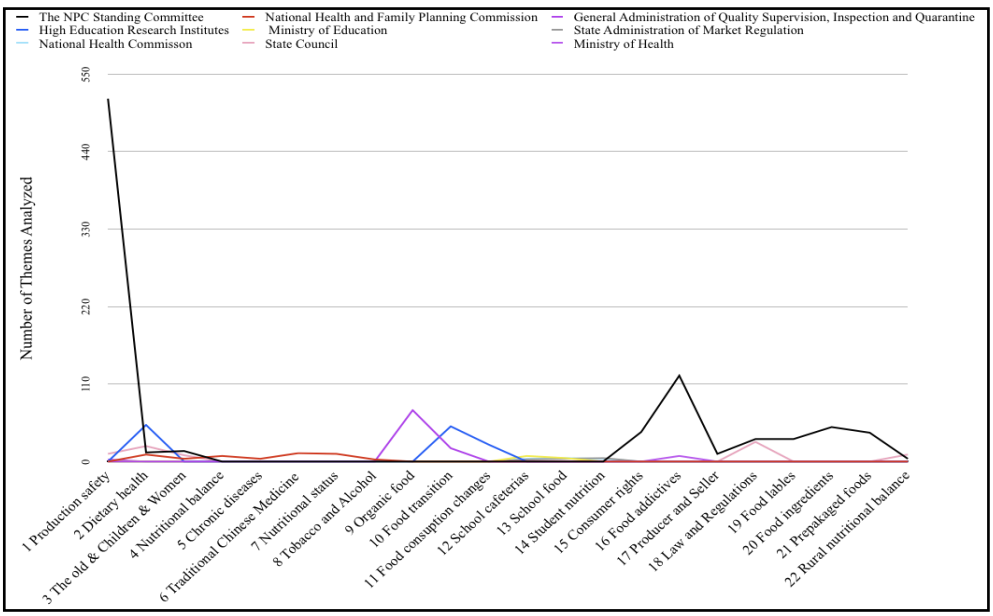

Figure 4. Topics extracted in food policies issued by different issuers.

Significant overlap exists among policies issued by different governmental bodies. For instance, the emphasis on agricultural product quality and safety is echoed by multiple entities such as the National People's Congress Standing Committee, the Ministry of Agriculture and Rural Affairs, and the State Council (Figure 3). This dispersion of policies across multiple government departments poses challenges and potential inconsistencies. While various agencies address policies regarding livestock facilities, a more unified approach may be necessary to reduce resource wastage and ensure consistent enforcement, highlighting the importance of enhanced coordination.

Figure 4 illustrates themes extracted from food-related policies. The redundancy in policies across multiple governmental bodies may lead to resource dispersion and policy landscape confusion. For instance, the National People's Congress Standing Committee predominantly focuses on production safety, while other areas receive less attention. The General Administration of Quality, Supervision, Inspection, and Quarantine solely emphasizes organic food, and themes addressed by the Higher Education Research Center are relatively novel, such as food transformation.

The findings from diverse government departments underscore the urgent need for interagency coordination to promote comprehensive agricultural development and ensure consistent enforcement of regulations. However, the dispersion of policies across multiple departments also presents challenges, indicating the necessity for streamlined policy development and enhanced coordination mechanisms. While the redundancy in policies reflects a commendable commitment to safeguarding public health and empowering consumers, it also highlights the potential for resource dispersion and confusion within the policy landscape.

5 Discussion and Conclusion

The research findings on China's agricultural, environmental, and food policies over the past 20 years reveal the following discussions. Firstly, the heatmap and neural network analysis results indicate that, overall, policymakers have prioritized agriculture and food safety over the past two decades. The study's findings corroborate and extend previous research, highlighting China's focus on addressing agricultural and food safety issues at the policy level due to its large population and relatively scarce resources, aiming to meet the increasing demand for food (Zhang et al., 2018).

Secondly, the heatmap and neural network results of this study reveal a lack of comprehensive attention from policymakers towards the entire agricultural and food production and consumption system, especially concerning emerging issues such as the lack of substantive aspects related to food safety, such as food traceability, the dissemination of food label information, and food environmental education. As previous studies have indicated, food safety remains a longstanding systemic issue awaiting resolution (de Raymond et al., 2021). This study attempts to complement this assertion by suggesting that China's food issues are, to some extent, a concern of policymakers, or rather, a matter of power dynamics.

Lastly, the thematic analysis results of this study reveal that policies from different policymakers exhibit some degree of repetition and complementarity. For instance, there is an overlap between the focus areas of the NPC Standing Committee and the Ministry of Agriculture and Rural Affairs, such as agricultural product quality and industrial management. There is also complementarity; for example, the Ministry of Agriculture and Rural Affairs independently focuses on animal epidemics, green animal husbandry, and organic food while lacking policy focus in the food domain. Conversely, the NPC Standing Committee places almost all its attention on food production safety (including food additives). The General Administration of Quality Supervision, Inspection, and Quarantine mainly focuses on organic food. The Ministry of Education and the National Health and Family Planning Commission lack policy guidance on food consumption, closely related to agricultural products/food consumption. The State Environmental Protection Administration only focuses on green agriculture, lacking attention to the complex relationship between food, agriculture, and the environment. As previous research has pointed out, policies provide norms and guidance, prompting individuals, organizations, and governments to take action in specific areas to achieve specific goals or values (Constantino et al., 2022). This study corroborates and further suggests the need to consider integrating different policymakers to address policy complementarity and repetition issues.

When considering further actions for policymakers, it is essential to recognize that policy overlaps and gaps may lead to resource wastage, inconsistent implementation, and policy confusion. Therefore, policymakers should take the following actions to address these issues:

1) Strengthen interagency coordination: Given the significant overlap in policies issued by different government agencies, policymakers need to establish more effective mechanisms for interagency coordination, including holding regular cross-departmental meetings, developing unified policy guidelines, and establishing information-sharing platforms to facilitate better communication and coordination among different agencies.

2) Streamline the policy formulation process: Complex policy formulation processes can result in prolonged policy cycles, making it difficult to respond promptly to societal needs. Policymakers should streamline the policy formulation, reduce approval times, and enhance policy responsiveness to better adapt to evolving market and environmental demands.

3) Enhance policy evaluation and monitoring: Regular assessment and monitoring of policy implementation effectiveness are crucial for ensuring consistency and efficacy in policy execution. Policymakers should establish robust policy evaluation mechanisms to promptly identify and address implementation issues, making necessary adjustments and improvements based on evaluation results.

4) Strengthen policy exchange and sharing experiences: Policy experiences and practices may vary across regions and departments. Therefore, policymakers should enhance mechanisms for policy exchange and sharing of experiences, which can be achieved through organizing thematic seminars, conducting policy exchange activities, and establishing databases of policy practices to facilitate learning and cooperation among policymakers.

6 Limitation

Although this study offers insight into China's national agri-food policies, there are several limitations to consider:

1) Consideration of Policy Diversity: The study primarily focuses on policymakers at the central government level, overlooking policies from local governments and different enterprises. However, local governments and enterprises also formulate their agricultural food policies, which may vary due to factors such as region and industry. Therefore, future research could delve deeper into analyzing policies from local governments and enterprises to comprehensively understand the diversity and complexity of China's agricultural food policies.

2) Utilization of Experimental Methods: While this study employs text analysis to examine policy documents, it does not verify the actual effectiveness of the policies through on-the-ground validation. Future research could employ experimental methods, such as quasi-natural experiments in pilot cities, to assess the impact and effectiveness of different policies on the agricultural food system. Such experimental approaches can provide more concrete data support, enhancing understanding of policy effects.

3) Limitations of International Comparisons: This study primarily focuses on China's national agricultural food policies without comparing them with those of other major agricultural food nations. However, policy experiences and practices from other countries may offer valuable insights into China's policy formulation. Therefore, future research could conduct comparative analyses of policies from other major agricultural food nations to gain more cross-national insights, enriching the understanding of China's policies.

Despite these limitations, this study provides important insights into the complexity and diversity of China's national agricultural food policies, offering valuable references for future research and policy formulation.

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Appendix

	China's Policy documents list during 2000 – 2022			
No.	Year	Issuer	Domain	Title
1	2001	State Council	Agriculture	Outline of Poverty Alleviation and Development in Rural Areas of China (2001-2010)
2	2002	Ministry of Health	Food	Measures for the Hygiene Administration of Food Additives
3	2005	State Council	Environment	Decision of the State Council on Implementing the Scientific Outlook on Development and Strengthening Environmental Protection
4	2006	The National People's Congress Standing Committee	Agriculture	Law on the Quality and Safety of Agricultural Products
5	2002	Ministry of Ecology and Environment	Environment	China's Policies and Actions on Climate Change
6	2006	State Environmental Protection Administration	Agriculture	Action Plan for Environmental Protection in Rural Areas for Achieving a Well-off Society
7	2006	Ministry of Agriculture and Rural Affairs	Agriculture	Eleventh Five-Year Plan for National Agricultural and Rural Economic Development
8	2007	National Development and Reform Commission	Environment	National Program for Climate Change
9	2007	National Health and Family Planning Commission	Food	Chinese Dietary Guidelines for Residents 2007 Edition
10	2009	The National People's Congress Standing Committee	Food	Food Safety Law of the People's Republic of China
11	2010	State Administration for Market Regulation	Food	Market Regulation: Announcement on the Certification and Administration of Organic Products
12	2011	State Council	Agriculture	Accelerating the Advancement of Agricultural Science and Technology Innovation
13	2012	State Council	Food	9National Development and Reform Commission: Special Rectification in Dairy Products, Grain and Oil, and Other Areas for Deepening Food Safety
14	2013	State Council	Agriculture	Strengthening the Supervision of the Quality and Safety of Agricultural Products
15	2013	General Administration of Quality Supervision, Inspection and Quarantine	Food	Measures for the Certification and Management of Organic Products
16	2014	State Council	Food	China's Food and Nutrition Development Outline (2014-2020)
17	2013	National Health and Family Planning Commission	Food	General Rules for Prepackaged Food Labels
18	2015	The National People's Congress Standing Committee	Food	Food Safety Law of the People's Republic of China
19	2015	National Health and Family Planning Commission	Food	Chinese Residents' Nutrition and Chronic Disease Status of the Chinese Population
20	2015	Ministry of Agriculture and Rural Affairs	Agriculture	National Plan for Sustainable Agricultural Development (2015-2030)

21	2016	National Health and Family Planning Commission	Food	Chinese Dietary Guidelines for Residents 2016 Edition
22	2016	State Council	Food	Healthy China 2030 Plan Outline
23	2016	National Development and Reform Commission	Agriculture	Guidance on Promoting Government and Social Capital Cooperation in the Agricultural Field
24	2017	State Council	Food	National Nutrition Plan
25	2017	National Energy Administration	Environment	Environmental Protection Law
26	2018	The National People's Congress Standing Committee	Consumption (food)	Consumer Rights Protection Law
27	2019	State Council	Food	Deepening Reform and Strengthening Food Safety Measures
28	2019	Ministry of Education /State Administration of Market Regulation/ National Health and Family Planning Commission	Food	Regulations on School Food Safety and Nutritional Health Management
29	2020	State Council	Agriculture	Measures to Promote High-Quality Development in Animal Husbandry
30	2020a	Ministry of Agriculture and Rural Affairs	Agriculture	Notice on the Proper Utilization of Livestock and Poultry Manure Resources
31	2020b	Ministry of Agriculture and Rural Affairs	Agriculture	Special Action Plan for the Quality and Safety of Agricultural Products
32	2021	Ministry of Agriculture and Rural Affairs	Agriculture	The 14th Five-Year Plan for National Agricultural and Rural Science and Technology Development
33	2021a	State Council	Environment	Policy and Actions for Addressing Climate Change in China
34	2021b	State Council	Other (Society and Economy)	The 14th Five-Year Plan for Economic and Social Development and the Vision for 2035
35	2022	High Education Research Institute	Food	China and Global Food Policy Report
36	2022	Ministry of Ecology and Environment	Environment	China's Policies and Actions on Climate Change - 2022 Annual Report
37	2022	National Health and Family Planning Commission of	Food	Chinese Dietary Guidelines for Residents
38	2022a	State Council	Agriculture	The 14th Five-Year Plan for the Promotion of Agricultural and Rural Modernization
39	2022b	State Council	Biotechnology	Notice on the Issuance of the 14th Five-Year Plan for the Development of the Bioeconomy
40	2022	Ministry of Agriculture and Rural Affairs	Environment	Typical Cases in the Supervision of Agricultural Product Quality and Safety