

Postprint: Insights from a Study of U.S. Resource and Environmental Think Tanks

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Abstract

[Objective/Significance] U.S. resource and environment think tanks play an important role in global affairs. Their operational mechanisms, product systems, and influence expansion models provide valuable references for the construction of think tanks in China.

[Method/Process] This paper, based on field research of multiple U.S. resource and environment think tanks, analyzes and summarizes the characteristics and operational mechanisms of these institutions from multiple perspectives. Combining the needs and current situation of resource and environment think tank construction in China, it proposes relevant recommendations for building high-level resource and environment think tanks in China.

[Results/Conclusions] The construction of China's resource and environment think tanks should gradually establish an influential think tank system, actively broaden funding channels for think tanks, increase the output of achievements in specialized fields, and actively expand product influence.

Full Text

Abstract

[**Purpose/significance**] American resource and environment think tanks play a significant role in global affairs, and their operational mechanisms, product systems, and influence expansion models offer valuable insights for think tank construction in China. [**Method/process**] Based on field investigations of multiple American resource and environment think tanks, this paper analyzes and summarizes their characteristics and operational mechanisms from various perspectives. Considering the demands and current status of resource and environment think tank development in China, we propose relevant recommendations

for building high-level resource and environment think tanks in China. **[Result/conclusion]** The article argues that China should gradually establish an influential think tank system, actively expand funding channels, increase output in specialized fields, and vigorously extend product influence.

Keywords: think tanks; natural resources and environment; operation and management mechanisms; influence expansion

Classification Number: C932

1 Introduction

The successful experiences of international advanced think tanks provide important reference for China's think tank construction. To understand and learn from the successful operational experiences of advanced international resource and environment think tanks, and to provide reference for building high-level science and technology think tanks in China, our research team conducted field investigations of several typical American resource and environment think tanks during the summer of 2015. These included the World Resources Institute, Paulson Institute, World Wide Fund for Nature, International Fund for China's Environment, Center for Climate and Energy Solutions (formerly Pew Center), and The Nature Conservancy. As the main outcome of this investigation, this paper analyzes the operational mechanisms, product systems, and influence expansion models of American think tanks, and offers recommendations for China's think tank construction efforts.

Through long historical development, think tanks have become an integral component of the American political decision-making system and an important platform for expanding American national influence. By 2015, the total number of American think tanks had reached 1,835, accounting for 26.8% of the global total. The combined total of think tanks in the other top ten countries still falls short of the American figure. As resource and environment issues have gained prominence over the past decades, American resource and environment think tanks have developed particularly rapidly and wield significant global influence. According to the University of Pennsylvania's "2015 Global Go To Think Tank Index," four American think tanks ranked among the world's top ten environmental think tanks: the World Resources Institute, Worldwatch Institute, Brookings Institution, and Center for Climate and Energy Solutions. Similarly, American think tanks occupied four positions among the top ten energy and resource policy think tanks, namely the James A. Baker III Institute for Public Policy, World Resources Institute, Center for Energy and Environmental Policy Research, and Center for Strategic and International Studies [1]. This demonstrates the considerable global influence of American resource and environment think tanks.

2.1.1 Funding Mechanisms

Generally speaking, resource and environment think tanks are non-profit organizations. However, funding serves as the “lifeblood” of think tanks and the foundation for their survival. Consequently, fundraising constitutes the basis for think tank development. Compared with other types of think tanks, American resource and environment think tanks enjoy more diversified funding sources, including government grants, foundations, corporations, private donations, political parties, social organizations, and operating income from publications and academic conferences. Most think tanks rely primarily on donations from foundations, corporations, and individuals. To ensure funding sources, many American think tanks establish dedicated fundraising departments (such as Development and Strategy Departments or Operations and Network Development Departments) or assign specialized personnel to fundraising efforts. Generally, the greater a think tank’s social influence, the more advantageous its position in securing donations. These funds, in turn, expand the think tank’s social influence through research work, creating a virtuous development cycle. Additionally, by maintaining diverse clients and broad funding sources, American think tanks separate fundraising activities from research and consulting activities to preserve their research independence.

(1) Government Funding

For resource and environment think tanks, government funding typically accounts for only a small portion of total funds. The U.S. government generally provides financial support to think tanks through competitive bidding for commissioned projects. Even when think tanks receive most of their research funding from federal, state, and local government agencies, they maintain long-term commitment to independent work. Think tanks maintain a contractual relationship with the U.S. government, with contract terms generally ranging from one to five years and amounts in the tens of millions of dollars.

(2) Foundations

Foundation funding represents a relatively stable source of support that helps maintain research independence. Overall, foundations constitute one of the most important sources of funding, typically accounting for over 50% of total funding. For American resource and environment think tanks, foundation funding often exceeds corporate sponsorship and has become the main force supporting think tank finances.

(3) Crowdfunding and Private Donations

Crowdfunding and private donations also represent a significant proportion of American think tank funding, primarily including contributions from board members, founders, and members. The prerequisite for accepting private donations is that donors cannot interfere with think tank research projects or conclusions. However, individual donations typically indicate donor identification with or support for the think tank’s viewpoints. U.S. tax policies provide certain support for individual donations to public welfare organizations, facili-

tating private donations to American think tanks.

(4) Corporate Sponsorship

Accepting corporate sponsorship also serves as a funding channel. Some large enterprises gain “access” to specific research areas by donating to think tanks. When think tanks hold seminars or roundtable meetings, they generally invite sponsors to participate, providing a platform for exchanging industry information and think tank analysis results between think tanks and sponsors. This both enhances the reliability of think tank policy analysis and promotes industrial development.

(5) Research Contract Income

By completing consulting research projects commissioned by non-governmental social organizations and receiving corresponding remuneration, think tanks use this income to cover administrative expenses for normal operations and related public welfare activities. Although research contract income is not the main source of funding, it remains an important fundraising method that think tanks highly value.

(6) Publication Sales Income

Most think tanks also obtain funds by selling research reports, technical reports, research briefs, and books, as well as through organizing seminars, providing training courses, and offering consulting services. While this income proportion is not large, it reflects think tank research capabilities and status among peers from another perspective.

(7) Other Channels

Other income channels include appreciation of think tank assets, investment income, and occasionally credit for conducting core project research.

American non-profit think tanks enjoy preferential tax policies exempting them from income and property taxes. Corporate and individual donations to think tanks can be deducted from taxable income while also receiving corresponding services from think tanks, such as subscription to publications and naming rights for infrastructure based on donation amounts. Therefore, tax policies largely guarantee funding sources for American resource and environment think tanks and represent an important factor in their vigorous development.

Regarding fund management, American think tanks emphasize balance between income and expenditure to ensure financial conditions meet current and long-term development needs, and they ensure normal operations through efficient fund management.

2.1.2 Project Operation and Management

Through long-term development, American think tanks have gradually established a sound project management mechanism that implements performance evaluation, dynamic adjustment, and termination mechanisms for research projects, along with supervision systems that clarify responsible entities and

supervisory penalties. Research projects serve as effective tools for think tank operation. American think tanks generally determine project topics based on policy requirements and allocate research funding and human resources according to project scale and effectiveness. Some think tanks also establish project steering committees to provide valuable suggestions for project design and important financial support.

Regarding contract-commissioned projects, within the scope defined by contract objectives with government departments or enterprises, both parties communicate and exchange ideas to modify specific content and finally form project implementation plans. After project budgets are in place and implementation begins, research results are provided according to the implementation plan.

Some think tanks also have their own funds to independently conduct research projects. Researchers apply for support from such funds through project applications. Think tank management departments provide scientific and objective consultation to applicants through peer review to help them improve project proposals. Another approach involves foundations funding research ideas of researchers in certain fields, with researchers who have good reputations and research results in their fields having greater opportunities to receive funding.

In summary, sound project operation and fund management systems provide American think tanks with healthy and dynamic self-sustaining capabilities, enabling efficient operation and excellent development.

2.2.1 Personnel Hiring Mechanisms

American resource and environment think tanks adhere to competitive, open, and merit-based hiring principles, recruiting high-quality talent through public recruitment, with particular emphasis on introducing former government officials, accomplished experts and scholars, and young elites from prestigious universities. Generally, American resource and environment think tanks consist of the following personnel: administrative management staff; researchers (including leading experts in relevant research fields, data processing and analysis personnel, and research assistants); administrative and secretarial staff; external publicity and liaison personnel; dedicated fundraising personnel; editors and library management personnel; other service personnel.

To improve operational efficiency, some American resource and environment think tanks introduce humanized management concepts in personnel allocation and departmental setup. For instance, in personnel allocation, leading researchers are generally equipped with research and administrative assistants. In departmental setup, departments responsible for materials, information, and data analysis are established.

2.2.2 Personnel Mobility Mechanisms

Think tank independence is accompanied by flexibility in personnel management systems. American resource and environment think tanks have relatively flexible researcher management systems, with frequent personnel mobility not only between think tanks and between think tanks and universities, but also between government and universities and between government and think tanks. While China has the saying “excel in learning and then serve in officialdom,” abroad there is even more the path of “excel in officialdom and then pursue learning” [2]. Personnel mobility inevitably strengthens talent competition and rational allocation of human resources. Therefore, researchers at American resource and environment think tanks mostly have rich knowledge backgrounds, solid knowledge foundations, and research methods not limited to a single field, while also conducting methodological innovations [3], such as using the Delphi method for expert forecasting, employing systems science methods for systems analysis, and utilizing artificial intelligence science to design expert consultation systems for decision-making [4].

American resource and environment think tanks serve as a “revolving door” for scholarly elites to “enter politics from academia,” for high officials to “enter academia from politics,” and for “combining learning and business,” fulfilling three functions of talent cultivation, reserve, and turnover. Consequently, they have smooth personnel exchange channels with government, universities, and large enterprises [5]. Through the “revolving door” effect, American academic and political circles, as well as ideas and power, achieve full exchange [6]. Additionally, while maintaining research independence, American resource and environment think tanks have certain partisan or political backgrounds to ensure their influence on American policies. American resource and environment think tanks implement intern systems, are invited to universities for academic exchange activities, or conduct joint research, which helps ensure the sustainability and forward-looking nature of think tank “intellectual products.” Interaction between learning and business helps resource and environment think tanks consolidate and enhance their vitality for survival and development. For example, Henry M. Paulson, President of the Paulson Institute, and Andrew Steer, CEO of the World Resources Institute, both previously worked for the U.S. government and international organizations, representing a case of the American think tank “revolving door.”

2.2.3 Position Incentive Mechanisms

Regarding salaries, American resource and environment think tanks determine employee compensation based on industry classification and reference to equivalent local salary levels for similar positions. In personnel recruitment, they adopt a combination of cultivation and employment, with each think tank recruiting interns year-round and determining whether to hire interns as formal employees based on their performance at the end of the internship period. For instance, the World Resources Institute hires half of its interns as formal employees and

nually. In personnel evaluation, each think tank establishes strict hierarchical performance evaluation systems and assessment and appointment systems internally, determining researcher promotion, renewal, or dismissal based on regular evaluation results.

Taking the World Wide Fund for Nature and the World Resources Institute as examples, they conduct employee evaluations based on annual task plans signed at the beginning of the year. Project leaders are responsible for evaluating project team members, while project leaders themselves are evaluated by higher-level management and research personnel. Regarding elimination mechanisms, if certain researchers fail to secure research projects for a long time or cannot effectively participate in research projects, meaning they cannot contribute to the think tank, they will face dismissal. In practice, bundling human and financial resources with research projects ensures optimized allocation of think tank research resources.

Reasonable personnel structure promotes think tank output. American resource and environment think tanks establish employment systems with rational allocation of permanent and mobile personnel, implementing long-term appointment systems for senior researchers and short-term appointment systems for junior and intermediate researchers as assistants. They establish visiting scholar systems to absorb relevant personnel worldwide to participate in project research, expanding the social foundation of project research. Additionally, they employ professional information technology developers and website management personnel for technical development and website maintenance.

American resource and environment think tanks attach great importance to training for current employees. Taking the World Resources Institute as an example, training for project leaders or managers without management experience is generally organized by the institute itself, while training for personnel on specific research projects is conducted through external training courses, with training costs borne by the World Resources Institute. Relevant trainees are required to serve for a certain period; otherwise, they must pay corresponding training fees before leaving.

3 Product System and Quality Control Process of American Resource and Environment Think Tanks

High-quality think tank products are fundamental to think tank survival. American resource and environment think tanks establish relatively stable product systems and continuously launch series of think tank products to serve and influence their users.

Although the scale and types of think tank products vary depending on think tank positioning, funding, and personnel size, all think tanks strive to build and develop think tank products with distinctive positioning and brand effects. Some brand products (such as WRI's Earth Trends data tool) have been formed through long-term accumulation and enjoy good reputations in relevant fields.

Regarding the hierarchical system of think tank products, product cycles range from several months to several years. Diversified management cycles are adopted for products with different research depths, respecting the production patterns of various think tank product types to ensure scientific research conclusions and operable research recommendations, thereby ensuring adoption effectiveness and building intangible think tank influence through tangible think tank products.

Stable products with broad audiences constitute an important foundation for think tanks to maintain vitality and influence continuously. Generally, think tank products include briefings, basic research products, thematic research products, and quantitative analysis tools and databases.

3.1 Briefing Products

This type of think tank product mainly introduces the institution's recent research stage achievements, focus areas, and latest international developments and hotspots. These products feature short publication cycles and strong timeliness, generally with cycles of several days, one week, one month, or irregular intervals. Such products primarily focus on factual reporting with minimal in-depth processing, and their main function is to provide original information for decision-makers and researchers and references for relevant personnel to understand the latest frontier developments. Briefing products play an important role in helping government decision-makers, researchers, enterprise managers, and the general public understand think tank research dynamics.

Briefing products build an information communication bridge between researchers, the public, and decision-makers, effectively gathering economic, scientific, technological, and policy information in the same field to form a platform that can promptly reflect field progress information. The release of such briefings is not simple data compilation but rather strongly directive information products that have undergone think tank product review process checks. These products have unique advantages in rapidly responding to social hotspot events and sudden resource and environment issues.

3.2 Basic Research Products

Theoretical and methodological research forms the foundation of high-quality think tank products and the basis for enhancing a think tank's academic influence. Basic research products are not actually core think tank products, but they are significant for exploring and researching relevant theories and methods. New theories and methods help form core think tank competitiveness. These products mainly take the form of research papers and monographs, generally serving as "by-products" of think tank research work rather than key funding directions.

American resource and environment think tanks with considerable influence all attach great importance to relevant theoretical and methodological research, continuously producing high-level articles and monographs. These research

achievements establish the theoretical and methodological foundation for think tank long-term development and also enhance the credibility of their main products.

3.3 Quantitative Analysis Tools and Databases

Quantitative research platforms integrate natural science research data according to specific needs, fully 挖掘 ing data value to make them important tools supporting science and technology decision-making. In recent years, quantitative analysis has gradually become an essential method for think tank product analysis. Therefore, research and development of quantitative tools represent an important direction for numerous think tank research institutions, and influential American resource and environment think tanks generally possess unique quantitative research platforms.

In developing quantitative platforms, think tank institutions generally outsource technical development, and the original data collection process is also generally completed by professional institutions. This both saves costs and ensures think tank researchers devote more energy to their true core competitiveness enhancement—namely, thinking innovation. The quantitative analysis capabilities of American resource and environment think tanks mainly rely on integrating and introducing analysis tools from around the world. By cooperating with developers of analysis tools, they integrate and consolidate the most advanced analysis tools and methods to support high-level think tank products. Additionally, some think tanks also develop important specialized resource and environment analysis tools and databases as needed, such as the Global Forest Watch visualization analysis tool, which integrates advanced technology and open scientific data to build a global forest observation and statistical analysis platform.

3.4 Thematic Research Products

This product type mainly appears in the form of reports, generally serving as the main product of each think tank institution. Product topics focus on major issues and challenges facing socio-economic development or commissions from government, industry, and other sources. Due to topics closely following socio-economic development, these products have high consulting value and strong guidance for decision-makers in identifying problems and formulating corresponding strategies. These products are generally lengthy with in-depth and thorough analysis, employing both quantitative methods and qualitative comprehensive analysis. Personnel involved in developing this product type include specialized data analysis personnel and experts from various fields, government decision-makers, and enterprise managers. Rational allocation of product development personnel and comprehensive and objective analysis methods ensure their high decision-making consultation value. After thematic reports form conclusions, they often produce another type of report when submitted to decision-making departments— “consultation reports” —which are more readable with

more popular and concise language, primarily aimed at making decision-makers understand and accept them more easily.

Additionally, according to product service targets, thematic research products can be divided into four categories: Global and human development-oriented: research topics for this category are relatively open, mainly focusing on scientific issues currently facing global development and exploring pathways for human sustainable development. Government-oriented: providing consultation references for formulating various government development strategies and assisting in strategy formulation. Industry-oriented: providing forward-looking consulting services for enterprise innovation and sustainable development, and consulting for enterprise technology product development and promotion. Public-oriented: conducting popular science propaganda for the public, conducting public opinion research and guidance for implementing relevant decisions, and promoting balance between democratic and scientific decision-making.

3.5 Product Quality Control

For a resource and environment think tank with continuous influence, the main carrier of its core competitiveness is its product quality. American resource and environment science and technology think tanks generally establish independent departments and standardized mechanisms to review their products to ensure released products meet standards of clear expression, rigorous logic, and high influence. For example, the World Resources Institute (WRI) establishes a dedicated Science Support department to manage product release processes. For reports released under the WRI name, the general review cycle is six months or longer to ensure all aspects meet quality standards. Different review standards apply to different product levels, with strictly standardized reviews for report products with strong consulting attributes, while more flexible and rapid review methods are adopted for products with weaker policy attributes such as working papers.

Strict product review mechanisms also serve as important work in other resource and environment think tanks such as WWF and are universally emphasized. To ensure product viewpoints are more objective and more easily accepted by consultation targets, think tanks invite experts and personnel from different fields and with different positions for consultation during and after report writing. For example, in a climate change report, personnel or groups with conservative and open positions on climate change (such as Democrats and Republicans) will be invited for consultation to facilitate better adoption by broader decision-making personnel.

Overall, American resource and environment think tank product quality control has several important indicators: reliability of analysis data, logic of analysis process, credibility of analysis results, and relevance and operability of policy recommendations. The core purpose of setting these indicators is to maximize the quality of products that sustainably influence decision-making, thereby main-

taining and enhancing the think tank's brand value and good reputation. Additionally, American think tanks generally intervene less in achievements published in the form of journal papers and monographs and not released under the think tank name, generally imposing neither quantity requirements nor inclusion in the think tank series product quality control standard process.

4 Influence Expansion Models of American Resource and Environment Think Tanks

Influencing government, enterprise, media, and public decision-making, promoting scientific consensus, and facilitating unified action constitute the main functions of think tanks. Currently, numerous resource and environment think tanks exist internationally, with even more non-governmental organizations continuously expressing opinions and suggestions at various levels. How to stand out among these organizations and continuously maintain influence on government, organizations, and the public represents the main objective of American resource and environment think tanks. American resource and environment think tanks have many aspects worth learning from in influence operations.

4.1 Utilizing Internal and External Personnel to Expand Think Tank Influence Through Intellectual Resources

The characteristic that think tank core research teams consist of both professional researchers and former government officials is common in American think tanks. This personnel structure effectively combines researchers' academic advantages with government officials' policy advantages, ensuring think tank viewpoints are more forward-looking and credible to a greater extent, which facilitates think tank influence expansion.

Regarding personnel hierarchical structure, it mainly includes renowned scholars in fields, policy researchers, newly graduated professional researchers from universities, and a certain number of intern graduate students. These researchers constitute hierarchical think tank research teams, facilitating team construction according to research needs. Think tanks internally organize research teams with clear division of labor based on specific projects and research questions, ranging from several to dozens of people. This structural hierarchy facilitates brainstorming and rapid response.

Think tank internal researchers have good interactive relationships with external experts. In some think tanks (WRI, WWF), a large proportion of resident personnel are management support staff and core researchers. During the execution of relevant research projects, the external researchers they absorb often far exceed their own "staff" personnel.

Former government and international organization officials are important influential members in resource and environment think tanks. Government officials enter think tanks through the "revolving door" after leaving office, enabling

them to continue influencing decision-making through think tank research and publicity work. The adjustment of senior official positions during the rotation of America's two political parties provides an important source of policy talent for think tanks. Meanwhile, think tank staff rotating into government agencies also promotes think tank influence expansion.

Senior researchers and personnel with government backgrounds constitute the think tank's "wisdom" core. Through collaborative research work, they can ensure that launched think tank viewpoints are innovative, forward-looking, and impartial "wisdom crystallization," and facilitate the transformation of think tank viewpoints into decision-making.

4.2 Maintaining Seamless Connection with Users to Form Positive Feedback Loops for Think Tank Work

All work conducted by American resource and environment think tanks in their fields serves specialized or ubiquitous user groups, and through these products influences users' cognition or scientific decision-making, achieving the purpose of demonstrating think tank functions and exerting think tank influence. On the basis of ensuring think tank product quality and viewpoint credibility, conducting targeted think tank work according to user characteristics and needs is particularly important.

For ubiquitous users without clear identities, think tanks generally understand their scientific cognition and viewpoint positions, as well as their further demands for think tank products, through needs surveys and feedback surveys. For clear product users, closer contact can be established to build close connections and exchanges for deeper understanding. By understanding user characteristics and product demands, think tanks can conduct more targeted and specialized think tank services. Most think tank institutions also establish user databases in these works to facilitate organizing user consultation work.

Regarding user connection, many resource and environment think tanks enhance project research reliability and close contact with users by establishing branch centers and regional project offices worldwide. For example, the World Wide Fund for Nature (WWF) has established offices in China while also setting up project research offices in Kunming, Lhasa, Chengdu, and other locations. The World Resources Institute (WRI) has established offices in seven countries worldwide, with over 700 researchers from various countries, greatly enhancing connections with decision-making institutions in relevant countries.

Think tanks provide products and viewpoint services to users, and users feed back their demands to think tanks through active or passive means, forming a service-feedback loop that establishes an interactive mechanism between think tanks and users, which helps ensure think tanks work with higher efficiency. Some think tank institutions have also established work mechanisms to invite users to participate in relevant thematic seminars, with user participation beginning at the research design stage to better grasp user needs and incorporate

them into research objectives.

4.3 Maintaining and Operating Media Network Platforms to Amplify Influence Through Storm Center Effects

Information technology development has brought tremendous opportunities for think tank viewpoint dissemination. Currently, major American think tanks have established their own network media platforms, including self-media platforms established by institutions and think tank personnel, which have become efficient means to rapidly expand think tank influence. In the self-media era, there are even cases where small think tank institutions have achieved sudden influence growth through a single outstanding work.

Most American think tank institutions have publicity officers, with specialized core leadership members uniformly responsible for external publicity matters, uniformly designing and organizing product promotion activities, and promoting products and viewpoints through multiple channels. Publicity officers are also responsible for cooperative contacts with relevant media platforms to coordinate product release and promotion matters.

Due to the development of new media methods, the importance of operating and maintaining media networks and platforms has become increasingly prominent. Good media operations help achieve the effect of leveraging small resources for large impact, and through releasing viewpoints on forward-looking issues, they can spark widespread attention to potential policy needs, becoming the “storm center” of issue and policy discussion storms and achieving rapid expansion of institutional influence.

4.4 Coordinating “Think” and “Do” Approaches to Drive Scientific Decision-Making Through Demonstration Activities

Some American think tanks generally define themselves as “Think Tanks” (idea-oriented think tanks) or “Do Tanks” (action-oriented think tanks) or comprehensive think tanks combining both. Typical think tanks focus on providing policy influence. Such think tanks usually have complete policy influence networks and viewpoint delivery channels. For example, think tanks like the Center for Climate and Energy Solutions (C2ES) and the World Resources Institute (WRI) have close interactions with the U.S. Senate, House of Representatives, and other government departments, ensuring their research results are delivered to decision-making levels in a timely manner. American do tanks mostly achieve the purpose of arousing public awareness and influencing government decision-making through protection actions or mobilizing public consensus. Such think tanks are closer to NGO operation models when organizing actions, but their actions aim to influence policies and drive government policy formulation through influential actions.

5 China's Needs for Resource and Environment Think Tank Construction

Since the Industrial Revolution, humanity's ability to transform nature has developed rapidly, becoming an important force comparable to natural processes and producing profound and even irreversible impacts on natural resources and the environment. This has caused human society and economy to face a series of severe resource and environment challenges that constrain sustainable human development. How to properly solve these problems has become a focus of universal concern for countries worldwide. As specialized research organizations that study the causes, impacts, and solutions of resource and environment problems and provide ideas and solutions, resource and environment think tanks have played an indispensable role in consulting and decision-making regarding major resource and environment problems.

During the 30 years of reform and opening up, China's rapid economic and social development has also brought a series of resource, environment, and ecological problems. While becoming the world's second-largest economy, China has also become a major country with environmental and ecological problems. As an important third-party institution between science, the public, and government, resource and environment think tanks can play an important consulting role in serving government scientific decision-making. However, the current quantity and quality of relevant think tanks in China are far from meeting these demands, which seriously mismatches China's status as a populous country, economic power, and major country with ecological and environmental problems. Furthermore, constructing resource and environment think tanks is also necessary for increasing China's discourse power in international resource and environment issues and affairs and enhancing national soft power. Therefore, both internal and external environmental urgent demands require China to vigorously develop resource and environment think tanks.

Compared with the already mature think tank systems in developed countries, China's resource and environment think tank construction is still in its initial stage. Due to historical and institutional factors, China's think tank development has been slow with many problems, such as: very few high-level think tanks with significant international influence and reputation that can generate substantial integrated influence; existing think tank-type institutions generally lack independence, with many external constraints in finance, personnel, and ideas; think tank product quality lacks strict standards and scientific quality control processes, with some viewpoints even generating negative impacts.

Constructing new-type resource and environment think tanks with Chinese characteristics should take resource and environment problems that China or the world may encounter in economic and social development as objects, aim to support scientific and democratic decision-making, reference current world-class think tanks, base on China's national conditions, and serve China's and the world's sustainable resource utilization and environmental sustainable develop-

ment. In this process, it is necessary to fully understand and learn from the successful experiences of developed countries (especially the United States) in organizational structure, personnel composition, funding acquisition, operation models, and product system construction.

6 Reflections and Recommendations

Based on field investigations of American resource and environment think tank operation mechanisms and product systems and analysis of relevant successful experiences, we propose the following four recommendations for China's think tank construction.

6.1 Gradually Establish an Influential Think Tank System According to the Principle of Step-by-Step Progress

Influence constitutes important support for think tank survival and development. American think tank influence is mainly reflected in decision-making influence, public influence, and media influence, while academic influence and international influence are also important. China's think tank construction is currently in a development period, with numerous emerging think tanks appearing while some university and research institute research units and government service units are also transforming into think tanks. Chinese think tanks should focus on building multi-faceted influence from the beginning to lay a foundation for further growth and expansion.

Currently, China's think tank development suffers to some extent from short-sighted problems of aiming too high and pursuing speed and scale, with phenomena of "rushing to build think tanks" in some fields, which does not conform to think tank development laws. The exertion of think tank influence depends on its complete product system and accurate and objective scientific viewpoints, which cannot be formed overnight. To establish mature think tanks requires solid progress in scientific positioning, personnel teams, expert networks, product systems, marketing mechanisms, and many other aspects.

6.2 Actively Expand Think Tank Funding Channels to Enhance Think Tank Vitality

Domestic think tank research institutions all have certain fiscal subsidies, but these are far from meeting think tank development needs. To enhance think tank development capabilities, diversified funding channels should be encouraged and expanded, actively soliciting commissioned projects from local governments or corporations, and raising funds through multiple channels such as research result distribution and individual donations. The government should actively introduce preferential policies encouraging social funding of think tank research, providing more reliable financial operation guarantees for domestic think tank institutions to strengthen product system construction, expand research fields,

improve researcher comprehensive quality, and enhance institutional competitiveness and influence.

6.3 Implement Project Classification Management to Increase Output in Thematic Fields

Domestic think tank research institutions should implement project classification management to improve project management levels and fund use efficiency. For policy research projects, a bidding system should be implemented to enhance policy research transparency, project allocation rationality, and policy research scientificity. Additionally, think tanks must actively conduct independent research oriented toward market and enterprise urgent problems and social hotspots, determining think tank development directions according to social and market demands, and proposing targeted, effective, and feasible policy recommendations.

6.4 Strengthen Product Topic Planning and Expand Product Influence According to Demand

Products and viewpoints constitute the soul of think tanks. In terms of product structure, Chinese think tanks should actively construct a layered product architecture of theoretical research, policy research, and solution research during development. Regarding topic selection, product topics should be determined from three aspects: government decision-making demand, social hotspot issues, and customer needs. In team building, cooperation between field experts, technical departments, and applied research departments should be strengthened, fully leveraging peripheral research forces to build expert networks covering researchers, decision-makers, data analysis personnel, and socio-economic entity workers to enhance product depth. In product influence expansion, multiple approaches should be adopted to expand product influence, constructing think tank product systems as information integration platforms, establishing specialized product promotion departments, and actively cooperating with government decision-makers and enterprise managers to ensure products closely align with real socio-economic development needs. Additionally, active involvement in large-scale activities should be pursued to enrich product public opinion foundation and influence.

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Zheng Junwei: Analysis of think tank construction background and challenges.

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