

A Systematic Review and Content Analysis: Green Finance and Sustainability in MIECF

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ABSTRACT. Environmental pollution and climate change are the great challenges we face today. The opening of MIECF is aimed at promoting green development and building an ecological civilization. This paper reviews the forum changes in recent ten years and the hot green topics in recent years through a systematic review, and uses content analysis to review and analyze the conference report on green finance and sustainability in MIECF. The topic of green finance and sustainable development is a cutting-edge innovation. Macao can serve as a bridge linking the Guangdong-Hong Kong-Macao Greater Bay Area and portuguese-speaking countries as a green financial center platform to jointly promote the process of green development.

1. INTRODUCTION

Formal verification under the traditional development model, economic growth depends on huge amount of resource consumption, leading to environmental pollution and climate change, and the living environment of human beings is facing great challenges. Today, all sectors of society have shifted their focus to a new sustainable model of green development, which aims to develop the economy while protecting the ecological environment. Countries all over the world are talking about green development related topics, such as the construction of eco-cities, green tourism, innovation of green financial systems, and sustainable development schemes. Based on the current hot social background, this paper selects Macao International Environmental Co-operation Forum & Exhibition (MIECF) to discuss the green issues that China has been concerned about in recent years.

MIECF is an important activity initiated by the government of the Macao special administrative region of the People's Republic of China. This paper reviews the conference report and uses Content Analysis to analyze the relevance of the conference report, aiming to describe the trend changes in the green field and discuss the two hot topics of green finance and sustainable development.

1.1. About Green Finance

According to Xi Jinping (2019) proposed to deepen the supply-side structural reform of finance, establish a financial system compatible with green development, and support the development of green finance in the financial circles of Guangdong, Hong Kong and Macao [1,2]. In recent years, green finance centered on environmental protection has become a trend, whose essence lies in correctly handling the relationship between finance and sustainable development [3]. Yao & Zhi & Priyanka Goe (2016) defines green finance as all forms of investment or loans that take into account environmental impacts and enhance environmental sustainability. Green finance is a phenomenon that combines the financial and commercial world with environmental protection behaviors. Different from traditional financial activities, green finance pays more attention to ecological and environmental benefits, pays more attention to environmental protection industry, and is a medicine to realize the harmony between economy and environment [4, 5].

1.2. About Sustainability

The term "sustainable development" is used in many areas of life and is becoming a modern phenomenon that determines the direction of progress in every society. Sustainable development means sustained economic development in terms of environmental principles and focuses on overcoming the conflict between economy and ecology [6]. Weitzman(1997) defines "sustainability" as the broad future consumption capacity of an economy over time [7]. Ma guang (2014) proposed that sustainable development is based on natural resources and coordinated with the bearing capacity of the environment. The coordination between economic development, social development and the environment cannot achieve economic growth at the cost of environmental pollution (degradation) [8]. Science and technology department of the People's Republic of China (2016) formulated the "much starker choices-and graver consequences-in" national and social development of science and technology innovation plan, establish the sustainable development agenda innovation demonstration area, the formation of science and technology and social development depth fusion systems and mechanisms, stimulate the development of society to the new kinetic energy and achieve coordinated economic and social development, the formation of a batch of can copy, can promote the sustainable development of the real sample and pattern [9]. The United Nations sustainable development summit (2015) proposed the United Nations sustainable development goals (SDGs), which thoroughly solved the development problems in the three dimensions of society, economy and environment in an integrated way, and shifted to the path of sustainable development [10].

2. Forum Review

2.1. Forum Theme Changes

MIECF is committed to becoming an international exchange and cooperation platform for One Belt And One Road countries and regions, pan-pearl river delta region, Guangdong-Hong Kong-Macao Greater Bay Area, portuguese-speaking countries, European countries and global environmental protection enterprises, technology transfer and sustainable development. Since 2008, it has been held once a year to promote the exchange of environmental business, technology and information between the pan-pacific region. Since 2011, it has become an international exhibition certified by the international exhibition industry association, a high-profile international event for the environmental protection industry. MIECF 2020 will continue to promote the exchange of themes across the Pacific.

According to the theme of the conference from 2008 to 2019, the green theme focus of the forum can be seen from the keywords, as shown in table 1. Since 2008, the topic of sustainability has come up three times; Green economy and green business opportunities occur most frequently, and the construction of eco-city runs through recent years. From the perspective of the theme direction of "Sustainability" and "Green Finance" in the forum over the years, "Sustainability" mainly focuses on sustainable cities or communities, sustainable tourism and sustainable buildings. In the past two years, there have been 10 conference reports on issues related to green finance, and 6 on sustainable development, accounting for a large proportion. It can be seen that green finance is becoming increasingly important in this forum. In the outline of the development plan for the Guangdong-Hong Kong-Macao Greater Bay Area, it is proposed that the greater bay area should vigorously develop green finance, build a green financial center of the greater bay area and participate in the construction of One Belt And One Road. In 2035, achieve the goal of improving economy and protecting ecology [11]. MIECF provides a platform to explore the building of a sound green financial system and contribute to the realization of the goals of the greater bay area.

Table 1 MIECF theme keyword integration

Year	Theme key words
2019	Ecological Civilization; ECO Development
2018	Eco-City; Green Economy

2017	ECO Development; Sustainable Future
2016	Green Economy; Green Business Opportunities
2015	Green Economy; Green Business Opportunities
2014	Green Business Opportunities
2013	Sustainable Development
2012	Green Economy
2011	Green Opportunity; Low Carbon City
2010	Green Knowledge; Green Technology; Green Financing
2009	Green Business Opportunities
2008	Sustainable Development

2.2. Overview of Forum Reports

Sean Kidney (2019) discussed the development opportunities of green bonds and green finance between the greater bay area and One Belt And One Road. China is the world's second largest green bond market, with five of the top 20 domestic green bond underwriters based in the greater bay area. The development plan of the greater bay area is introduced in detail. Su Yuzhou (2019) stated that green finance represents public and private green investment and financing of public policies supporting green initiatives. He Weigang (2018) discussed the practice and experience of promoting green finance reform and innovation experiment in Guangdong. Yang Yiming (2019) shared the achievements of the European green finance survey and its enlightenment to the greater bay area. Zheng Xiaoping (2019) mentioned three systems of green financial innovation. The concept of green finance center and green finance model is introduced. Suggestions on green finance cooperation with Macao are also proposed. Ma Jun (2018) expressed the view that a green financial system is needed to mobilize private green investment. He Xiaojun (2019) stated that the development of green finance is an urgent need for sustainable development of the greater bay area in terms of ecological conservation and restoration. Wang Zhen (2019) elaborated that the combination of green technology and fintech can provide solutions for the field of green development and form a platform that can be copied and promoted. Ye Zhaojia (2018) closely related to the concept of green development and discussed the development between green finance and Macao. Zhu da (2019) pointed out low-carbon development, green city is the development direction. Ye Ziqing (2019) proposed the concept of "smart ecology, green travel", pointing out that the current automobile is moving towards the electric era in which hydrogen fuel cells and pure electric vehicles develop in parallel. Li Zhiliang (2018) proposed the sustainable development of green economy -- tourism based on the challenges faced by the evolution of eco-tourism toilets from concept to reality. Ellen van Bueren(2018), taking the experience of the Netherlands as an example, proposed to implement a multi-sector urban solution locally. John Thwaites (2018) pointed out the importance and usefulness of the sustainable development goals (SDGs) and the fact that all countries had signed up to the SDGs.

3. Data and Methods

3.1. Content Analysis

This paper uses Content Analysis to analyze. This is a social science method widely used to disseminate information content. Berelson(1952) defined content analysis as "the research method of objective, systematic and quantitative description of the communication content with definite characteristics"[12]. GAO (1996) refers to content analysis as a set of procedures for collecting and organizing information in a standardized format that allows analysts to infer the characteristics and meaning of written and other recorded material[13]. The method can be used for a variety of purposes, such as revealing the focus of individual, group or social concerns and describing topics, trends, objectives or other characteristics in the communication content [14].

3.2. The Research Process

In this paper, the conference reports of MIECF in 2018 and 2019 are selected, and two experts independently conduct the research of content analysis. Through reading, summarize the reports related to green finance and sustainable development, and then classify the key words of the reports. After comparison, experts further discuss and re-read, summarize and classify the meeting report to improve the credibility. Finally, the expert comparison results are consistent, as shown in figure 1 and figure 2. The size of the number is taken as the degree of correlation between the report and the keyword. The number of 1 means the degree of correlation is high, and the number of 0.3 means the content of the report is involved. It can be seen from figure 1 that the keyword "Green Finance" has the highest correlation degree, occupying a larger frequency than other keywords, followed by "Green City" and "Sustainable Development". It can be concluded from figure 2 that the discussion on green finance and sustainable development is diversified. Macao is the center of the discussion on macau-related regions, such as Guangdong, Hong Kong and portuguese-speaking countries, so as to achieve the goal of jointly promoting green finance to achieve sustainable development.

Year	Speaker	Key Words								
		Green Finance	Sustainable Development	ESG	Green City	Green Travel	Green Energy	Water Resource	Sustainable Development Goals (SDGs)	Others
2018	Li Zhiliang				1			1		1
	Dong Ke				1	0.3	0.3	0.3		
	John Thwaites		1		1			1	1	
	Ye Zhaojia	1								
	He Weigang	1								
	Ma Jun	1								
	Ellen van Bueren				1		1	1		1
2019	Sean Kidney	1								
	He Xiaojun	1	1	1				0.3		1
	Su Yuzhou	1	0.3							1
	Wang Zhen	1	1				0.3			
	Yang Yiming	1	0.3	1					0.3	
	Fan Haisheng									1
	Ye Ziqing				1	1	1			
	Zhen Xiaoping	1	0.3							
	Zhu Da	1			0.3		0.3			

Figure 1 Key words: green finance and sustainable development report

Year	Speaker	Region					
		GBA	Macao	Guangdong	Hong Kong	Portuguese-Speaking Countries	B&R
2018	Li Zhiliang				1		
	Ye Zhaojia		1				
	He Weigang	0.3	1	1			
	Ma Jun						0.3
	Ellen van Bueren		0.3				
2019	Sean Kidney	1	1	1	1	0.3	1
	He Xiaojun	1	1	1	1		
	Su Yuzhou	0.3	1		1	1	0.3
	Wang Zhen						1
	Yang Yiming	1					
	Zhen Xiaoping		1				
	Zhu Da	1	1				

Figure 2 The green finance and sustainable development report explores the region

4. CONCLUSION

This paper reviewed and analyzed the conference report of MIECF through systematic review and content analysis, and concluded that: 1. In the conference discussion of green finance and sustainable development, MIECF mainly focused on green finance, green city and sustainable development, among which green finance had the highest correlation. 2. MIECF will conduct regional discussions with Macau as the center to achieve the goal of jointly promoting green finance to achieve sustainable development.

Green finance and sustainability have become the focus of discussion in recent years. The report on this cutting-edge topic offers a number of green technology and financial innovation solutions that contribute to green development.

References

- [1] Xi Jinping. (2019). Speech at the 13th collective learning conference of the Political Bureau of the CPC Central Committee. [online]. People's Daily. Retrieved from: http://www.gov.cn/xinwen/2019-02/23/content_5367953.htm
- [2] Xinhua. (2019). The national green development fund will be officially launched in 2020. [online]. Xinhua News Agency. Retrieved from: http://www.xinhuanet.com/politics/2019-12/26/c_1125392611.htm
- [3] Zhang Wenzhong. (2005). Green Finance: current situation, problems and trends. *XinJiang Caijing*, (6), 38-43.
- [4] Wang, Y., & Zhi, Q. (2016). The role of green finance in environmental protection: Two aspects of market mechanism and policies. *Energy Procedia*, 104, 311-316.
- [5] Goel, P. (2016). Green Finance: A step towards sustainable financial system. *Abhinav International Monthly Refereed Journal of Research in Management & Technology*, 5(3), 22-31.
- [6] Popović, B., Janković Šoja, S., Paunović, T., & Maletić, R. (2019). Evaluation of Sustainable Development Management in EU Countries. *Sustainability*, 11(24), 7140.
- [7] Weitzman, M. L. (1997). Sustainability and technical progress. *Scandinavian Journal of Economics*, 99(1), 1-13.
- [8] Ma Guang. (2014). Introduction to environment and sustainable development. KeXue Press.
- [9] Ministry of Science and Technology of the People's Republic of China. (2016). "the 13th Five-year plan" for science and technology innovation in National Social Development plan. [online]. Retrieved from http://www.most.gov.cn/mostinfo/xinxifenlei/fgzc/gfxwj/gfxwj2016/201703/t20170315_131996.htm
- [10] Assembly, G. (2015). sustainable Development goals. SDGs), *Transforming our world: the, 2030*. Retrieved from: <http://www.igbp.net/download/18.62dc35801456272b46d51/1399290813740/NL82-SDGs.pdf>
- [11] Central Committee of the Communist Party of China&State Council. (2019). Outline development plan for the Guangdong-Hong Kong-Macao Greater Bay Area. Retrieved from https://www.bayarea.gov.hk/filemanager/en/share/pdf/Outline_Development_Plan.pdf
- [12] Berelson, B. (1952). Content analysis in communication research.
- [13] United States. General Accounting Office. Program Evaluation, & Methodology Division. (1996). Content analysis: a methodology for structuring and analyzing written material. US General Accounting Office.
- [14] Downe-Wamboldt, B. (1992). Content analysis: method, applications, and issues. *Health care for women international*, 13(3), 313-321.