

Rivers, Straits and Power: Global Infrastructure Game from Yarlung Zangbo Hydropower Project

Zhiying Cai

*School of Marxism, Northeastern University, Shenyang, China
20220330@mail.neu.edu.cn*

Abstract. On July 19, 2025, in Nyingchi, Tibet, the lower Yarlung Zangbo River hydropower project with a total investment of about 1.2 trillion yuan was officially started. As a downstream country, India regarded it as a geopolitical challenge. The traditional single territorial dispute has evolved into a complex competition and cooperation with water resources, scientific and technological strength and economic ability as the core. The project can not only accelerate the transformation of China's green energy, upgrade Tibet's infrastructure, but also strengthen the economic resilience of border areas; At the same time, India is worried that the upstream regulation will solidify China's dominance in the disputed area and reduce its water security. The Yarlung Zangbo River case shows that large-scale infrastructure has gone beyond the scope of technology and become a key variable in reshaping the regional power structure. Similar logic also appears in the geopolitical game between the Strait of Malacca and the Suez Canal. In the future, the form of international conflict may change from military confrontation to "engineering competition" with infrastructure as the carrier, and controlling the dominant power of infrastructure is to master the right to speak and initiative. In this context, this paper uses case analysis to study and compare the international status of different countries, and obtains the Countermeasures of countries with different status through secondary data and secondary literature research. In the future, in the large-scale infrastructure game, large countries will expand their influence through financing, technical standards and cooperation strategies, while passive countries will safeguard their sovereignty through multilateral cooperation, technological autonomy and legal framework. All parties need to find a balance in the three dimensions of financing, technology and cooperation to achieve sustainable development and mutual benefit and win-win results of global infrastructure.

Keywords: Yarlung Zangbo River hydropower project, Sino-Indianrelations, National game.

1. Introduction

United Nations headquarters in New York on July 22, calling for accelerating the transformation of clean energy. By the end of 2024, China has built more than 94000 dams, ranking first in the world in terms of number and installed capacity. The installed capacity of hydropower is 436million kilowatts, generating 1.42 trillion kwh annually, accounting for 57% of renewable energy power generation. China adheres to the concept of green energy transformation and actively responds to the

development goals of the United Nations. The official commencement of the hydropower project in the lower reaches of the Yarlung Zangbo River is undoubtedly a major milestone in global hydropower. However, it is not only a key measure of China's energy structure transformation, but also triggered a series of reactions in the Sino-Indian border areas and even at the international level, which contains complex big country game factors. The benefit of each party depends not only on its own actions, but also on the actions of others [1]. The Strait of Malacca and the Suez Canal, which are both large-scale infrastructures, also have strong political implications and represent a series of countries behind them. This paper aims to explore the impact of the lower reaches of the Yarlung Zangbo River Hydropower Project on Sino Indian border relations and how countries in different positions should respond appropriately in the future era of infrastructure as a weapon.

This paper aims to explore the direct and indirect effects of the lower Yarlung Zangbo River Hydropower Project on China India Relations after it was put into operation, and to track its chain reaction; At the same time, under the background of global infrastructure competition, compare the future path and operation mode that the active planner and the passive receiver can choose respectively. Its practical significance is to provide a comparable development list for countries with different status: it not only reminds upstream countries how to give consideration to development benefits and regional mutual trust, but also sorts out multiple options for downstream countries to mitigate risks and win-win cooperation, for policy makers' reference and actively respond to world changes.

This paper mainly uses the method of case analysis and comparative study, first analyzes the impact of the hydropower project in the lower reaches of the Yarlung Zangbo River on China and India, and then makes a comparative study of the historical disputes and games between countries in the Strait of Malacca and the Suez Canal; Through the analysis of second-hand data and second-hand literature, the conclusion is drawn. This paper first discusses the various impacts of the construction of hydropower projects in the lower reaches of the Yarlung Zangbo River on China and India, then traces back to the national game between the Strait of Malacca and the Suez Canal, and further verifies the universal interaction between infrastructure projects and geopolitics. Finally, based on the above case experience and literature, this paper summarizes the feasible strategies for the future financing of active infrastructure countries and passive recipient countries, so as to provide reference for the positioning of differentiated countries.

2. Yarlung Zangbo River hydropower project: how hydropower infrastructure becomes the “trigger” of sino-indianrelations

2.1. Introduction to Yarlung Zangbo River hydropower project

The lower Yarlung Zangbo River hydropower project was officially started in Nyingchi, Tibet on July 19, 2025. Yarlung Zangbo hydropower project is a century project with large volume, long period and far-reaching impact. The total investment of the project is about 1.2 trillion yuan, the installed capacity is nearly 70million kW, and the annual power generation can reach 300billion kwh, which is three times that of the Three Gorges power station. It can meet the annual power demand of 300million people, replace 90million tons of standard coal, and reduce carbon dioxide emissions by 300million tons [2]. The project plans to build five cascade hydropower stations, which will be developed by cutting off bends and straightening and tunnel diversion. The hydropower utilization rate is expected to increase to 85%, bringing about 20billion yuan of fiscal revenue to Tibet every year. 80000 people will be directly employed in the construction phase of the project, and 200000 people will be indirectly employed [2]. With the annual reduction of 300million

tons of carbon dioxide in Yarlung Zangbo River hydropower project, once the carbon sink index is listed and traded, it will immediately turn into a considerable “green dividend”. At the same time, Nyingchi can attract cloud computing and data centers with clean electricity at almost zero cost, migrate massive servers to the foot of snowcapped mountains, continue to expand tax sources, and continue to inject local finance like running water.

2.2. India’s intensified contradictions

2.2.1. Impact on water resources and water volume

The artificial interception of the hydropower station in the lower reaches of the Yarlung Zangbo River will lead to the artificial flow in the lower reaches. To a certain extent, the hydrological situation of the basin in India is inseparable from the relationship between the two countries. The reservoir at the upstream of the river will intercept most of the sediment, which will lead to the scouring of the riverbed at the downstream and the degradation of the estuary Delta. Six cascade hydropower stations built in the upper reaches of China, including Zangmu and Jiacha, have reduced the discharge in the dry season by 12%, while the planned Motuo hydropower station has an installed capacity of 60million kW, which is equivalent to Three Gorges projects. Its water storage regulation function may further change the hydrological rhythm in the lower reaches. The national water resources development authority of India simulated and predicted that if China implemented the power generation mode of “storage in winter and release in summer”, the risk of water shortage in Northeast India in dry season would increase by 23%. The Indian media used the matter to hype the “water threat theory”, worried that China’s flood storage in the rainy season would lead to a sharp reduction in its agricultural water use, and regarded it as a bargaining chip at the negotiating table. After all, the basin is an important rice and tea planting area in India. For example, India’s economic times has trumpeted the “500million people facing water crisis”, trying to portray China’s hydropower projects as a threat to India’s water resources.

2.2.2. More prominent strategic issues

After independence, India took the illegal “McMahon line” as its “heritage”, repeatedly created border disputes and controlled southern Tibet through immigration and other means. The Motuo hydropower station of the lower Yarlung Zangbo River hydropower project is located in the West rang village of Motuo, which is only 20 kilometers away from the actual control line between China and India. The site selection of Motuo hydropower station is of great strategic significance. Motuo hydropower station found that the unit was buried under the 200-mu granite mountain, which could resist conventional weapons attack, and it was difficult to destroy unless nuclear weapons were used. The air defense and UAV network has minimized the blind area of border monitoring, and greatly improved the monitoring ability of China India border. The construction of Motuo hydropower station will drive the border construction. The construction of supporting railways and highways will open the southwest strategic channel, and the logistics supply time at the Sino Indian border will be reduced by 60%. Tunnel technology is directly transformed into missile silos and command posts, forming a defense in depth that “integrates the military with the people”. In 2005, China and India signed the joint statement, announcing the establishment of a strategic partnership for peace and prosperity, and taking the first step towards resolving the border issue. In 2019, China and India held the 22nd Meeting of special representatives on border issues and reached consensus on strengthening confidence building measures. In 2020, the Indian side overtly violated the consensus

of both sides, crossed the line of actual control and deliberately provoked the Chinese side, and continued to create conflicts in the gallewan River Valley and Bangong Lake area. For a long time, the Sino Indian border issue has not been resolved, nor can it be completely resolved in the future. Therefore, the site selection and construction of Motuo hydropower station is an important measure after considering the national defense strategy of Southwest China.

2.2.3. Focus on political issues: water nationalism and domestic election politics

India has been competing for water resources with Pakistan, Nepal and other countries. Relying on its geographical upstream advantage, India built intercepting buses, which directly threatened the agricultural irrigation and power generation water sources in Pakistan, and was called “water terrorism” by Pakistan. In modern times, water resources are no longer a simple resource grabbing problem. In India, water nationalists have turned cross-border rivers into a stage for Hindu nationalism and a lever for geopolitical game. The construction of hydropower stations in the lower reaches of the Yarlung Zangbo River has undoubtedly exacerbated India’s so-called water panic. The control of water resources also affects political elections in India. In India, it can be said that “whoever controls the sluice will control the vote.” In April 2025, the modi government suddenly closed the gate of bagrihar dam on Naboo River after the terrorist attack in Kashmir, resulting in the drying up of farmland in Pakistan downstream, and “flood discharge” washed away 1.2 million tons of wheat to be harvested in Pakistan controlled Kashmir. This “alternation of drought and flood” tactic was packaged as “anti-terrorism justice” by the Indian media, which increased modi’s support rate by 12% in three days. Historical statistics show that the probability of border conflict between India and Pakistan in the election year is 47% higher than that in normal years. In short, on the Indian election stage, “water” is not only the lifeblood of agriculture, but also the amplifier of nationalism.

2.3. China’s response logic

2.3.1. “Green power demand” under the commitment of carbon neutrality

China strives to reach the peak of carbon dioxide emissions by 2030 and achieve the goal of carbon neutrality by 2060. Hydropower is clearly defined as the ballast stone of “green rigid demand”. Compared with the high fluctuation of power grid caused by the unstable growth of wind power generation, hydropower generation can achieve the effect of “peak shaving in seconds and long-term energy storage”. The lower reaches of the Yarlung Zangbo River have superior geographical conditions for hydropower development. The huge natural fall of the river section, the hard granite on both sides of the canyon, and the concentration of water in the downstream make it possible to build the world’s largest and safest clean energy aircraft carrier in the same river section, with unparalleled geographical advantages in the world. In fact, the hydropower project in the lower reaches of the Yarlung Zangbo River has not caused a high degree of discussion in the international community. The Indian Ministry of foreign affairs only reiterated “close communication with China”. The chief minister of Assam state said publicly that “there is no reason to panic immediately”, and the Indian media dropped sharply. As a responsible country in the world, China has always maintained a highly responsible attitude towards the development of transboundary rivers and has rich experience in the development of hydropower projects. China has also carried out hydrological report, flood control and disaster reduction cooperation with relevant downstream countries, and has conducted necessary communication on the project, and will continue to

strengthen cooperation with downstream countries. It can be said that the lower Yarlung Zangbo hydropower station project has significant potential in balancing hydropower development, ecological protection and climate change adaptation. By optimizing the operation of the reservoir, the system can not only provide stable energy supply for China, but also enhance the ability of flood control in the context of climate change. At the same time, it has little impact on the ecosystem of downstream countries, and even can provide flood protection in some cases [3].

2.3.2. Rationality of Chinese behavior

As a country in the upper reaches of the Yarlung Zangbo River, China has great rationality in building giant cascade hydropower stations here. First of all, the Yarlung Zangbo River section has the world's rare Canyon drop and abundant runoff, which can convert the huge amount of hydropower into green electricity with an annual reduction of 300 million tons of carbon emissions; Second, the hydropower station adopts the world's highest standard design of runoff type, no regulation and storage, and tunnel drainage. It does not cut off water and store water, and only uses natural fall to generate electricity. Through the China India expert mechanism established in 2006, the hydropower station can share hydrological data in real time, so that downstream India can get flood peak warning 48 hours in advance in flood season and stable ecological flow in dry season [4]. Historically, Nuozhadu and Xiaowan power stations on the Lancang River also operated in the mode of "upstream development and downstream benefit". From November 2020, China will provide annual hydrological information of Lancang River to Mekong countries. It helps Thailand, Laos and Cambodia in flood control and disaster reduction, and is known as the "hydrological lighthouse" by downstream countries. The hydropower project in the lower reaches of the Yarlung Zangbo River is an upgraded version of this successful experience, which proves once again that the rational development of the upper reaches can not only ensure the energy security of the country, but also benefit the surrounding areas with institutionalized cooperation, so as to achieve a real win-win situation in the basin.

2.3.3. Project for negotiation

Since the reform and opening up, China's comprehensive strength has been growing day by day, and it wants to gain the international voice through "non war" means. China has replaced the "last mile" of the war with some new forces and methods, and has not appealed to war to peacefully transform the international order. Among them, large-scale infrastructure can be used as an important lever in the game between China and other countries. At present, China has upgraded its infrastructure output to a global negotiation tool with the "belt and road" as a lever [5]. China is reshaping the pattern of water resources with "hydropower diplomacy". On the one hand, by submitting detailed hydrological data and ecological simulation results to the United Nations, we can break the information barrier and provide a transparent basis for cross-border water resources management; At the same time, the "power for port" plan will be used to sign electricity tariff agreements with surrounding countries, closely bind hydropower resources with regional economic development, and strengthen the economic ties of regional cooperation.

3. From Malacca, Suez to Yarlung Zangbo River: national game of large infrastructure

3.1. The great powers' game in Malacca Strait

As a key channel connecting the Indian Ocean and the Pacific Ocean, the Strait of Malacca is of self-evident importance. It is not only the throat of Global trade, but also the focus of the strategic game of major powers in the Asia Pacific region. Since 1992, the United States has moved the logistics supply command of the seventh fleet of the navy in Subic, Philippines, to Changi naval base in Singapore, it has tried to intervene in the Strait of Malacca through the “Proliferation Security Initiative” and the regional maritime security initiative, in order to maintain its dominance in the Asia Pacific region. Although Malaysia and Indonesia oppose the intervention of US military forces, the United States still expands its military influence in the region under various names. Its real intention is to contain China and other countries that may challenge its dominant position in Asia through strategic containment [6]. In recent years, India's economy has developed rapidly and its demand for energy has been rising. The Strait of Malacca is also crucial to its energy security. India tried to contain China's influence in the region by cooperating with the United States, and established a military presence in the Andaman Nicobar Islands at the western entrance of the Malacca Strait to safeguard its strategic interests in the Indian Ocean. India's move is not only to ensure the security of its own energy channel, but also to play a greater military influence in the Asia Pacific region. Singapore, Malaysia and Indonesia, the three countries along the Strait of Malacca, have adopted the strategy of “power balance” and actively promoted the multilateral cooperation mechanism led by the coastal countries. To sum up, the Strait of Malacca is not only a key channel for Global trade and energy transport, but also the focus of the strategic game among major powers in the Asia Pacific region.

3.2. The great powers' game in Suez Canal

The Suez Canal, as a key waterway connecting the Mediterranean and the Red Sea and running through the three continents of Europe, Asia and Africa, has been the focus of great powers' struggle since its opening in 1869, and its strategic position is self-evident. Britain initially consolidated its hegemony in the Indian Ocean by virtue of its control over the canal and incorporated Egypt into the colonial system. The canal became the key “wedge” to maintain its global empire. However, with the active participation of France in the early stage of the canal construction and the subsequent competition between Britain and France for control, the geopolitical pattern of the canal has gradually become complicated. When the Suez Canal Crisis broke out in 1956, Britain and France tried to maintain control of the canal by military means, but were forced to withdraw under the joint pressure of the United States and the Soviet Union. This event marked the decline of Britain and France's global influence, the formation of the US Soviet bipolar pattern in the Middle East, and the transfer of control of the Suez Canal from Britain and France to the US Soviet dominated international system. After the end of the cold war, the United States has become the main geopolitical leader in the Suez Canal region. Through its military presence and economic assistance, the United States has ensured the free navigation of the canal, while safeguarding its strategic interests in the Middle East [7]. However, with the promotion of China's “belt and road” initiative, China's role in the Suez Canal region has gradually become prominent. From France's insistence on excavation to Britain's strong participation, to Britain's and France's competition for control of the canal and the United States and the Soviet Union's competition for control of the canal, all the competitions around the canal are still geopolitical and economic interests in the final analysis.

4. Future coping strategies of large-scale infrastructure game

4.1. Financing game and cooperation: shaping geopolitical influence with economic leverage

In the early stage of financial financing of large-scale infrastructure projects, financing is the link with the widest range of influence, which is mainly divided into three stages: negotiation terms, fund allocation and repayment. At the negotiation stage, the lender can obtain political concessions by setting favorable loan conditions. Loans between countries can show the relationship between two countries. At the same time, the lender can also shape the specific details of the project and set the repayment conditions through negotiation. In the history of Indian railway projects, Britain once asked the Indian Ministry of finance to provide 5% profit guarantee for railway companies, and the insufficient part was paid by the Indian Ministry of finance [8]. However, the investment environment is affected by geopolitical dynamics and the local regulatory environment. In 2022, Transparency International's Corruption Perception Index showed that many countries participating in the "belt and road initiative" were below the average level in terms of governance quality. However, through strengthening bilateral cooperation, the continuous dialogue between China and the host country has prompted about 75% of the participating countries to report that the regulatory conditions for foreign investment have been improved [9]. At the repayment stage, the lender can obtain more benefits through debt restructuring and other means. For example, Sri Lanka cannot repay China's debt. The two sides reached a debt-to-equity agreement, and China has obtained the control right and 99-year operation right of Hambantota port; The lender can also obtain benefits through the resource financing mode. For example, China has widely used the "resource financing infrastructure" mode in infrastructure projects in Africa, that is, to repay the loan with resource income. This mode increases the debt burden of the host country, because the interest usually continues to accumulate after the completion of the project; In addition, even if it is not the main creditor country of the host country, the lender also has influence in the debt restructuring. For example, in the debt restructuring of Sri Lanka, although China only holds about 10% of Sri Lanka's external debt, it obtained control of the port of Hambantota through debt restructuring [8]. It can be seen that financial financing is the stage with the widest range of influence in infrastructure projects. The lender can obtain political concessions, shape project details and set repayment conditions through negotiation terms, exert influence through rewarding supporters, dealing with corruption and resolving contract disputes in the fund allocation stage, and obtain more benefits through debt restructuring and resource financing mode in the repayment stage. These strategies not only affect the economic benefits of the project, but also may have a far-reaching impact on the politics and sovereignty of the host country.

4.2. The game between standards and construction: the dual competition between technology and system

Large countries set standards and transfer technology through infrastructure projects in the design and construction stages. In terms of standard setting, project management rights and supply chain options enable large countries to promote their own standards. For example, Germany promoted German technology and standards through the Baghdad railway project during the Ottoman Empire. The technology relevance theory emphasizes the technical similarity or cognitive proximity between industries, and provides a technical strategy for the infrastructure game of large countries [10]. Large countries can find areas with high relevance to new infrastructure technology by analyzing their own industrial technology foundation, such as the layout of artificial intelligence, industrial

robots and other fields in Europe and the United States. For passive countries, we can identify their own advantageous industries through technology correlation analysis, strive to obtain technology transfer and cooperation opportunities in relevant new infrastructure fields, reduce technology dependence, and enhance their competitiveness in global infrastructure. For example, some developing countries use their advantages in the field of basic material processing to cooperate with developed countries to jointly develop intelligent material manufacturing technology, which not only meets their own industrial upgrading needs, but also occupies a place in international infrastructure cooperation. Major countries use key enabling technologies, such as 5g and cloud computing, to promote domestic industrial innovation and economic transformation. At the same time, they dominate international infrastructure cooperation through technology output and standard setting [8]. Passive countries need to identify the potential value of key enabling technologies for their own industries, actively strive for technology introduction and cooperation, and avoid being monopolized by technology. For example, some African countries have not only improved the level of their communication infrastructure through the construction of 5G base stations in cooperation with China, but also promoted the development of local digital industry and narrowed the digital gap with developed countries with the help of China's technical support.

4.3. The balance between cooperation and game: safeguarding national sovereignty and promoting global development

Passive countries need to safeguard their sovereignty through multilateral cooperation, technological autonomy and legal framework when facing the infrastructure game of large countries. For example, Mongolia balances China's influence through cooperation with Russia in the China Mongolia Russia high-speed rail project. At the same time, Mongolia has reduced its dependence on foreign technology by strengthening domestic technical education and training. In terms of the legal framework, Mongolia has adopted strict foreign investment laws to restrict the ownership of foreign companies in key infrastructure areas [8]. The theory of regional integration emphasizes the trans regional operation mechanism of new infrastructure from the perspective of multi-agent and multi-scale. Passive countries need to actively participate in the process of regional integration and strive for fair treatment in the new infrastructure layout.

At the same time, big countries also need to seek cooperation in the infrastructure game to promote global development and consolidate their international status. For example, the European Union has integrated new infrastructure resources in the region through the construction of a digital single market to enhance its overall competitiveness [8]. Through the "belt and road" initiative, China cooperates with countries along the belt and road to build infrastructure and promote regional economic development. At the same time, China helps countries along the belt and road to enhance their development capacity through technology transfer and training. At the level of international organizations, China actively participates in projects of the world bank and the Asian Development Bank, and promotes global infrastructure construction through multilateral cooperation mechanisms.

To sum up, we can analyze the coping strategies of countries with different positions in the future large-scale infrastructure game from the three dimensions of financing, technology and cooperation. At the financing level, large countries exert influence on the political, economic and military levels through negotiations, fund issuance and debt management, while recipient countries need to seek a balance between obtaining funds and safeguarding sovereignty. At the level of technology and standards, large countries use their own technological advantages to promote their own standards, while passive countries reduce dependence and enhance competitiveness through technology association analysis and technical cooperation. At the cooperation level, passive countries maintain

sovereignty through multilateral cooperation, technological autonomy and legal framework, while major countries promote global development through regional integration and multilateral mechanisms to achieve win-win results. These analyses reveal the strategies and responses of all parties in the infrastructure game, and provide a reference perspective for understanding the global infrastructure game cooperation.

5. Conclusion

By analyzing three typical cases of the hydropower project in the lower reaches of the Yarlung Zangbo River, the Strait of Malacca and the Suez Canal, this paper discusses the role of large-scale infrastructure projects in the geopolitical game and their impact on international relations. The study found that large-scale infrastructure projects are not only the product of technological and economic development, but also the key variable to reshape regional power structure and international relations. In the case of the hydropower project in the lower reaches of the Yarlung Zangbo River, China successfully resolved India's concerns through a responsible development model and a transparent international cooperation mechanism, while providing new solutions for regional green development and energy security. In the case of the Strait of Malacca and the Suez Canal, the game between major powers reveals the far-reaching impact of infrastructure control on the geopolitical pattern. These cases show that the form of international conflict in the future may change from traditional military confrontation to "engineering competition" with infrastructure as the carrier, and controlling the dominant power of infrastructure, that is, mastering the voice and initiative.

However, this paper also has some limitations. First, the construction of the hydropower project in the lower reaches of the Yarlung Zangbo River is still in progress, and its long-term impact on China India relations needs time to be verified. Secondly, the discussion of "water diplomacy crisis" in this paper is relatively limited. Future research can further analyze the role of water resources in international relations and its potential crisis management mechanism. In addition, this paper mainly focuses on the game between big countries, and the analysis of the role and strategy of small and medium-sized countries in infrastructure projects is relatively insufficient, which is also the direction for further research in the future.

With the acceleration of global green transformation, the importance of water resources and clean energy will be further highlighted. As the two largest economies in Asia, how to achieve win-win cooperation in water resources management and energy development between China and India will be an important development direction of regional relations in the future. At the same time, with the promotion of the "belt and road" initiative, China's influence in the field of international infrastructure will continue to increase. Future research can focus on how China can help countries along the belt and road to enhance their development capacity and maintain regional peace and stability through technology transfer and international cooperation. In addition, with the application of emerging technologies such as artificial intelligence and big data in infrastructure projects, the future infrastructure game will be more complex and diverse, which also provides a new perspective and direction for future research. In a word, through the in-depth analysis of large-scale infrastructure projects, this paper provides a new perspective for understanding the global infrastructure game, and also provides a certain reference for future related research.

References

- [1] Barua, A., Baruah, T., & Vij, S. (2025). Game theoretical analysis of China-India interactions in the Brahmaputra River Basin. *Journal of Hydrology*, 132602. <https://doi.org/10.1016/j.jhydrol.2025.132602>

- [2] Xu, B. B. (2025, July 28). World-class green hydropower project with a value of 1.2 trillion yuan starts construction. *Financial Times*, p. 4.
- [3] Zhang, F., Yang, Q., Wang, J., Liu, H., Zeng, Q., Yan, L., ... & Hu, P. (2025). Hydropower system in the Yarlung-Tsangpo Grand Canyon can mitigate flood disasters caused by climate change. *Communications Earth & Environment*, 6(1), 323. <https://doi.org/10.1038/s43247-025-01314-5>
- [4] Xie, C. (2025, July 31). Why is India so calm this time about the start of the Yarlung Tsangpo hydropower station project? *Observer*. <https://iis.fudan.edu.cn/56/c9/c6893a743113/page.htm>
- [5] Lin, D. (2023). The Belt and Road Initiative and China's pursuit of agenda-setting power. *Orbis*, 67(4), 496–523.
- [6] Wu, J. J., & Qiao, Y. (2021). Geopolitical analysis of the Suez Canal. *Journal of Canal Studies*, 2021(2), 179–189.
- [7] Tang, C., & Li, Z. F. (2012). Security issues of the Malacca Strait and China's policy choices. *Southeast Asian and South Asian Studies*, 2012(3), 6–12+92.
- [8] Hillman, J. E. (2019). *Influence and infrastructure: The strategic stakes of foreign projects*. [Publisher Name].
- [9] Habibjonov, U. (2024). General structure, investment attractiveness and investment environment of China's "One Belt, One Road" program. Nordic Press.
- [10] Ye, Y. Y., Chen, Y. J., Liu, X. J., & Xu, J. L. (2024). Beyond the perspective of technology: Theoretical basis and scientific issues of new infrastructure to promote the high-quality development of regional economy. *Scientia Geographica Sinica*, 44(4), 553–561. <https://doi.org/10.13249/j.cnki.sgs.20230567>