國立臺灣大學理學院氣候變遷與永續發展國際學位學程

碩士論文

International Degree Program in Climate Change and Sustainable Development

College of Science

National Taiwan University

Master's Thesis

# 構建台灣的氣候身份:國際媒體論述分析

# Constructing Taiwan's Climate Identities: An Analysis of International Media Discourses


懷霜

Elizabeth Grace Frost

指導教授: 林子倫

Advisor: Tze-Luen Lin, Ph.D.


中華民國 114 年 6月

June, 2025

doi:10.6342/NTU202501242

**Acknowledgments**

With sincere thanks to Professor Lin Tze-Luen: this thesis was shaped by his expertise, advice, and encouragement. I am lucky to have had such a generous and kind advisor during my time at NTU.

I am also grateful to IPCS for the opportunities to connect with a like-minded community. I have grown as both a scholar and a person through learning together with my classmates and teachers.

Above all, I would like to thank my parents Jane and Julian, my grandparents Jean, Alan, Ann, and Peter, brother Jamie, and partner Kevin for their unwavering support and love. From nurturing my interest in environmental and political issues, to supporting my decision to study in Taiwan, none of this would have been possible without you. I will forever be grateful to you all.



doi:10.6342/NTU202501242

## 中文摘要

面對氣候危機的重要性在國際政治中日益凸顯，各國因此在全球氣候治理中扮演著多元角色。這些身份認知與國際體系中的其他行為體相互構建。台灣因其模糊的國際地位，成為研究國家在氣候變遷議題上，如何以及為何試圖建構特定國家身分的一個引人注目的案例。現有文獻有力地指出，台灣的氣候承諾受到提升國際認可和擴展國際空間的驅動。氣候外交已成為台灣外交政策的重要組成部分，官方論述將台灣呈現為負責任的利益相關方、建設性的夥伴，以及被聯合國氣候制度不公正排除在外的國家。然而，台灣此種策略對國際社會如何認知其氣候角色的影響，尚未得到深入評估。本論文透過論述分析，探討2015年至2024年間國際英文媒體對台灣氣候身份的建構方式。研究範圍涵蓋來自六個國家的26家媒體共138篇文章，採用歸納式編碼的過程，識別出五種身份話語：受害者、貢獻者、被排斥者、落後者，以及能源四難困境（energy quadrilemma）。這些話語展現了以下幾點：台灣的氣候身份以多種方式被建構；國家中心的氣候變遷觀點強化了台灣的正當性；同時，台灣外交部的氣候外交策略與國際利益在不同方面影響其氣候身份的塑造，並且在許多情況下，台灣的氣候身份處於經濟與安全考量的從屬地位。本研究不僅為理解台灣氣候外交的國際影響提供了新的視角，還回應了對台灣氣候變遷社會政治面向分析的嚴重不足。未來的研究可以基於本研究的發現，進一步探討塑造台灣氣候身份媒體話語的不同行為者，例如記者與編輯，以及這些氣候身份話語如何影響國際社會對台灣的公眾輿論。



關鍵詞: 台灣, 氣候身份, 氣候外交, 氣候治理, 論述分析





doi:10.6342/NTU202501242

**Abstract**

Confronting the climate crisis has gained salience in international politics, leading to states taking on a variety of roles in global climate governance. These identity conceptions - such as leader, pioneer, follower - are mutually constituted with other actors in the international system. Taiwan, due to its ambiguous international status, provides an interesting example of how and why states attempt to construct a specific international image with regards to climate change. The existing literature compellingly argues that Taiwan's climate commitments are motivated by a desire for increased recognition and international space. Climate diplomacy has become a key strand of Taiwan's foreign policy approach, with official discourses presenting Taiwan as a responsible stakeholder, a constructive partner, and unjustly excluded from the UN climate regime. However, the consequences of Taiwan's approach on shaping international perceptions of its climate role have yet to be assessed. Through discourse analysis, this thesis uncovers how Taiwan's climate identity has been constructed in international English-language news coverage in the period 2015 - 2024. 138 articles from 26 digital publications across six countries were selected for an iterative process of inductive coding, which identified five identity discourses: *victimisation, contribution, exclusion, lagging,* and *energy quadrilemma.* These discourses demonstrate: how Taiwan's climate identity has been constructed in diverse ways; that 2021 was a turning point in the discourse; that a state-centric understanding of climate change bolsters Taiwan's legitimacy; and that MOFA's climate diplomacy strategy and international interests shape Taiwan's climate identity in different ways, with Taiwan's climate identity subordinate to economic and security concerns in many cases. This research not only adds another dimension to understandings of the international consequences of



doi:10.6342/NTU202501242

Taiwan's climate diplomacy, but also addresses the severe lack of analysis of the socio-political dimensions of climate change in Taiwan. Future research could build on these findings by exploring the roles and motivations of different actors, such as journalists and editors, who shape media discourses of Taiwan's climate identity, and how these climate identity discourses have influenced international public opinion of Taiwan.

**KEYWORDS**: Taiwan, climate identity, climate diplomacy, climate governance, discourse analysis



doi:10.6342/NTU202501242

## Table of Contents





doi:10.6342/NTU202501242

doi:10.6342/NTU202501242

## List of Figures, Boxes and Tables





doi:10.6342/NTU202501242

doi:10.6342/NTU202501242

## 1. Introduction: Taiwan, Climate, and Identity

As the climate crisis has gained increased salience in international politics, successive Taiwanese governments have attempted to leverage climate issues in their diplomatic outreach as a path towards greater recognition and increased international space. These aims are of particular importance to Taiwan's sovereignty creation, in light of the widespread lack of official diplomatic recognition, including its exclusion from the UN climate regime.

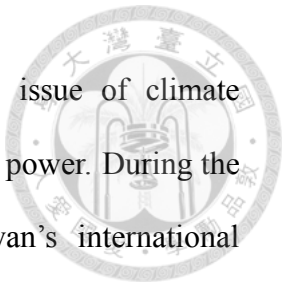
Despite its exclusion from the UNFCCC, Taiwan has made significant progress on climate governance domestically. In 2023, the Tsai administration codified Taiwan's 2050 net zero target into law through the Climate Change Response Act. This landmark decision reflects Taiwan's unique self-imposed compliance with UN climate processes, further demonstrated by its voluntary submission of nationally determined contributions for over a decade.

Existing research has explored the motivations for Taiwan's voluntary alignment with the international climate regime, identifying Taiwan's own political aims - namely the quest for increased legitimacy and international space - as a significant driving force. Engaging in climate action offers Taiwan the opportunity to gain recognition as a responsible eco-citizen and strengthen its relationships with the global community.

Beyond domestic measures, climate change has also become a focus of foreign policy. Taiwan engages in climate diplomacy with the aim of constructing a specific climate identity, to achieve broader foreign policy aims. Starting in the Chen Shui-bian



doi:10.6342/NTU202501242



administration, successive Taiwanese governments have used the issue of climate change to push for greater UN participation and boost Taiwan's soft power. During the Tsai administration, climate issues were a key aspect of Taiwan's international engagement strategy, including the "Taiwan Can Help" initiative. Newly inaugurated President Lai seems set to continue using climate issues as a key strand of diplomatic relationships: speaking just before the May 2024 election, he identified climate change as an area of cooperation with Europe.

A deeper understanding of *why, how,* and the *consequences* of the government's attempts to construct a specific climate identity for Taiwan will provide insights into the development of climate diplomacy in this unique case. The existing literature has engaged with the first of these questions by exploring *why* Taiwan has engaged with international climate norms in its domestic policy making. The second question of *how* Taiwan approaches climate diplomacy has received some attention, but current studies have mostly overlooked identity construction. This thesis adds empirical detail through an assessment of identity construction in MOFA's external climate narratives. The third aspect, the consequences of these narratives on international perceptions of Taiwan's climate identity, has yet to be studied. To address this gap, this thesis sets out to answer the following research question:

> *How has Taiwan's climate identity been constructed by international English-language media discourses, and what are the implications of these discourses for Taiwan?*



doi:10.6342/NTU202501242

With regards to scope, this thesis will cover the ten year period from January 2015 - December 2024, a transformative period for both international climate politics and Taiwan's climate diplomacy.

To answer the above research question, this thesis will proceed in four stages. Firstly, the literature review establishes the theoretical foundation of this thesis through three critical aspects: state identities, climate diplomacy, and the motivations behind Taiwan's climate policy development.

Next, a contextual chapter explores how these motivations manifest in Taiwan's climate diplomacy, setting out its historical evolution with a particular focus on the Ma, Tsai, and Lai administrations. This is complemented by an examination of English-language statements and videos released by the Taiwanese Ministry of Foreign Affairs (MOFA) to establish how official narratives present Taiwan's climate identity to an international audience. This section builds on existing research through deeper engagement with empirical sources, providing important contextual detail.

This thesis then conducts a discourse analysis of articles covering Taiwan and climate issues published in prominent English-language online newspapers from the US, the UK, Japan, Australia and the EU. This approach reveals the discourses which construct Taiwan's climate identity in diverse ways, and is this thesis' primary novel contribution to the research field.

The implications of these discourses are then discussed, including what they reveal about Taiwan's international identity and geopolitical position. Based on these findings,



doi:10.6342/NTU202501242

this thesis concludes with a set of recommendations for how Taiwan could develop a more compelling international climate identity to achieve its international aims.

In the study of climate diplomacy, the case of Taiwan offers unique insights into how and why states attempt to build a positive climate identity outside of official climate negotiations through public diplomacy. Assessing how international audiences may view a state's climate identity through a media discourse analysis, allows an assessment of the effectiveness of public diplomacy efforts, and also reveals external forces shaping state identities. Empirically, this thesis sets out to uncover conceptualisations of Taiwan's climate identity in both official and media discourses, in order to highlight areas of opportunity and potential challenges. Theoretically, a new approach to assessing the outcomes of climate diplomacy efforts is established, utilising discourse analysis techniques.



doi:10.6342/NTU202501242

## 2. Literature Review: Identity, Diplomacy, and Governance in Climate Politics

### 2.1 State Identities and Interests

This thesis is grounded in the constructivist school of international relations, starting from Wendt's position that "identities and interests are constituted by collective meanings that are always in process" (Wendt, 1992, 407). Unlike more traditional conceptualisations of state identities and interests, constructivism holds that a state has multiple identities that are co-constructed and changeable, and these identities inform national interests that are also constructed rather than primordial. National interests can be understood as a social construction, emerging out of a process of interpretation as states interact with their own identities and the identities of external actors (Weldes, 1996). States can hold multiple, and even incompatible, identities at the same time - this is an expression of different orientations towards different sets of relationships, including towards specific issue areas (Holsti, 1970).

The increasing salience of environmental problems in the last several decades has led to the emergence of a new state identity: that of the ecological state. Eco-states place environmental concerns at the heart of their actions in much the same way the welfare state, which emerged in the twentieth century, took on substantial responsibility for providing social services to its population (Meadowcroft, 2005). However, unlike the welfare state, the ecological state is inherently outward looking. Given the global nature of environmental issues such as the climate crisis, an ecological state can only achieve its goals through collaboration with other states (Meadowcroft, 2005). Such an interpretation leads to a more outward-facing national identity and national imaginary,



doi:10.6342/NTU202501242

where the state takes responsibility not only for its own interests but also for the broader global community affected by its policymakers' decisions (Eckersley, 2004).

This has led to an increased interest in the identity conceptions of different states with regards to climate change, with a particular focus on leaders, pioneers and followers (Wurzel et al., 2019). For example, there has been considerable research into the role of the EU (Gupta and Ringius, 2001; Oberthür and Dupong, 2021) and China (Li et al., 2017; Hurri, 2020) as climate leaders. States such as Germany and Norway have constructed their identities as climate leaders through discourses which embrace larger responsibilities for the global community beyond state borders (Eckersley, 2016). Non-state actors also hold important roles in global climate action, especially in the context of polycentric climate governance systems (Ostrom, 2017; Bäckstrand et al., 2017).



doi:10.6342/NTU202501242

## 2.2 Climate Diplomacy and Public Diplomacy

The global scale and complexity of the climate crisis means that no country can control the climate threats facing it alone. Developing a global regime that effectively limits climate risk requires international cooperation - and diplomacy is the foundation of such efforts. Over the last several decades as the impacts of the climate crisis have intensified, climate change has evolved to become one of the key issues for mainstream diplomacy and a significant foreign policy concern for many countries. The field of diplomacy focussed on addressing climate change, known as climate diplomacy, has become the subject of a growing body of literature aimed at exploring this phenomenon.

While there is currently no universally accepted definition of climate diplomacy, its purpose can be understood as constructing the international climate regime, ensuring its effective functioning, and shaping its development in response to emerging challenges (Mabey et al., 2013). Climate diplomacy also works to promote national interests in international climate debates and negotiations (Mabey et al., 2013). At the political level, the Council of the European Union identifies four key strands of climate diplomacy: a commitment to multilateralism; the nexus between climate change and security; a commitment to action at all levels; and the need to strengthen international climate collaboration through advocacy and outreach (Council of the European Union, 2018).

For countries where climate change poses an existential risk, such as small island developing states (SIDS), climate change has become a defining foreign policy focus. The EU's climate diplomacy efforts have also emerged as a key focus of the climate



doi:10.6342/NTU202501242

diplomacy literature, with many scholars identifying the EU as a climate leader (Oberthür and Dupont, 2021). Most recently, UK Foreign Secretary David Lammy announced that climate change would become the focus of British foreign policy, highlighting its central importance to the UK's geopolitical and economic ambitions (Lammy, 2024).

Taiwan has aligned with this trend, with climate issues becoming a key strand of its diplomatic approach. However, unlike the aforementioned examples, Taiwan has been excluded from the core multilateral climate negotiation body: the UNFCCC. Direct exclusion from international negotiations and agreements is one manifestation of Taiwan's marginalisation within climate change action, alongside misrecognition by organisations operating at the science-policy interface, and the confusion and conflation of Taiwan with other entities in scientific exchange (Mabon and Shih, 2021).

Because of this marginalisation, Taiwan is unable to effectively fulfill the primary purpose of climate diplomacy, creating the international climate change regime and ensuring its effective operation (Mabey et al., 2013). Instead, Taiwan's climate diplomacy has primarily manifested in the form of public diplomacy. Public diplomacy is based on the dynamic interactions between the government, the media, and public opinion, with the government attempting to cultivate soft power: "a form of national power that is based on ideational and cultural attractiveness, which is intentionally or unintentionally utilized by actors in international relations to achieve strategic imperatives" (Lee, 2011, 11).



doi:10.6342/NTU202501242

Successive Taiwanese governments have strategically promoted narratives of Taiwan which they hope will appeal to global audiences and thus encourage them to focus more on Taiwan, empathise with its challenges, and back its political agenda (Rawnsley, 2014). Proactive promotion of democracy, human rights, trade liberalisation, public health, and LGBT rights have all formed part of Taiwan's public diplomacy efforts, often in an attempt to align Taiwan with the values of major Western powers, although these narratives have shifted depending on the aims of the party in power (Rawnsely, 2014; Chen and Fell, 2021).



doi:10.6342/NTU202501242

### 2.3 Climate Governance and Identity in Taiwan

Climate issues have become an increasingly important political issue in Taiwan. Lin (2008) divides Taiwan's climate change policy in the 1992 to 2008 period into four discursive eras. Two major discourse coalitions dominated this period: the Environmental Pragmatism Discourse Coalition and the Climate Action Discourse Coalition (Lin, 2008).

The Environmental Pragmatism Discourse Coalition adopted a pragmatic attitude toward climate change issues, emphasising technical and administrative rationality, favouring conservative and incremental policy reforms, and advocating for maintaining the status quo of political and economic systems. In contrast, the Climate Action Discourse Coalition embraced a perspective of ecological rationality, critically challenging the growth-oriented ideology of political and economic systems, and highlighted the importance of economic structural transformation and paradigm shifts, while emphasizing respect for the intrinsic value of the environment and ecosystems.

Lin identifies 1992-1997 as the "scientific knowledge discourse" period, where awareness of climate change began entering Taiwan's policy agenda, although remaining a peripheral issue (Lin, 2008, 162-164).

1998-2000 is characterised by Lin as the period of "Energy Security Discourse," as the Taiwanese government primarily placed climate change issues within the framework of electricity and energy policy as a component of energy security (Lin, 2008, 164-166).



doi:10.6342/NTU202501242

The "Nuclear-Free Homeland Discourse" dominated the 2000-2005 period, as the 2000 presidential election was followed by a decision to halt the construction of the Fourth Nuclear Power Plant (Lin, 2008, 166-168). This period underscored the complexities of balancing environmental priorities with political, economic, and societal considerations within Taiwan.

2005-2008 saw the emergence of the "Energy Conservation and Carbon Reduction Discourse," characterised by interplay between international trends such as the Kyoto Protocol coming into effect and Al Gore's *An Inconvenient Truth* bringing global attention to climate change, and domestic developments including the 2005 National Energy Conference, the 2006 Taiwan Economic Sustainable Development Conference, and the 2008 Sustainable Energy Policy Framework (Lin, 2008, 168-171).

Chen (2020) offers a similar overview of the eras of Taiwan's climate policy. She characterises 1990-2000, under the KMT's Lee administration, as the "Emergence of Climate Actions" period. 2000-2008 under the DPP's Chen administration was the period of "The Formation of Climate Policy." 2008-2016 under the KMT's Ma administration was the "The Process of Climate Policymaking" period, where climate change was recognised as a major policy issue. Finally, 2016-2020 under the DPP's Tsai administration was the "The Implementation of Climate Policy" period.

Significant recent climate governance milestones in Taiwan include the passing of the Greenhouse Gas Reduction and Management Act (GRMA) in 2015, President Tsai's announcement of Taiwan's 2050 net zero target in 2021, and the promulgation of the Climate Change Response Act (an amendment to the GRMA) in 2023 which codified



doi:10.6342/NTU202501242

the net-zero goal as the national reduction target and prescribed multiple decarbonisation and adaptation measures (Climate Change Response Act, 2023).

Since climate change was recognised as a major policy problem in 2008, Taiwan's climate policies have been significantly influenced by international norms, following the outcomes of international climate agreements (Lin, 2008; Shyu, 2014; Cheng, 2022). Lin (quoted in Wu, 2023) sees this as stemming from a sense of anxiety and a desire to "catch-up" with the international community, as a result of being excluded from the UN. Lin also acknowledges that this exclusion has led to Taiwan lacking a "sense of urgency and pressing action" (quoted in Wu, 2023).

More recently, pressures from international supply chains have also emerged as a driver of Taiwan's climate policies, as Taiwanese industry responds to the increasing global demand for low carbon manufacturing (Cheng, 2022). For example, TSMC, Taiwan's most profitable company and the producer of the world's most advanced semiconductors, was the world's first semiconductor company to join the RE100 initiative pledging to use 100% renewable energy by 2040 to align with the carbon neutrality goals of major customers such as Apple (RE100, 2020).

Taiwan's international climate identity is something of a paradox. On the one hand, some scholars have argued that Taiwan has generally demonstrated "little political ambition to play a more significant role as a climate actor on the global stage" (Liu and Chao, 2023, 5). Reasons for this include Taiwan's ambiguous sovereignty, its exclusion from UN membership, and the resulting lack of international governmental pressure to drive Taiwan to advance its decarbonisation plans (Liu and Chao, 2023; Lin, quoted in



doi:10.6342/NTU202501242

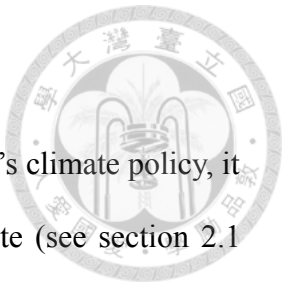
Wu, 2023). Additional domestic factors behind Taiwan's lagging climate action include its high-carbon, industry-driven development model (Chou and Liou, 2020) and the fact that climate change does not hold much political weight in a political system dominated by national identity questions and the China issue (Liu and Chao, 2023).

However, beyond domestic measures, Taiwan has also voluntarily complied with aspects of the UN climate regime, evidenced by the regular submission of nationally determined commitments and the codifying of the 2050 net zero goal. As Taiwan is not a signatory to the UNFCCC, the Kyoto protocol, or the Paris Agreement, it is not legally obligated to limit greenhouse gas emissions. Its voluntary compliance is unusual given the general resistance of sovereign states to compulsory international obligations (Tseng et al., 2023).

Chen (2020) interprets this unique course of action as a process of climate bandwagoning: a strategic attempt to link global climate change politics with Taiwan's political goal of gaining increased international support and recognition. Tseng, Kao, and Tseng (2023) reach a similar conclusion, arguing that Taiwan's voluntary compliance is strongly connected to Taiwan's international reputational interest. They see Taiwan's climate action as "motivated by a logic of appropriateness," with the desire to achieve a specific international identity being the primary motivation for Taiwan's climate action, which in this case has resulted in the gap between Taiwan's climate commitments and the reality of ineffective policy implementation (Tseng et al., 2023). Grano (2019) also argues that Taiwan's proactive approach to climate change politics could characterise it as a responsible eco-citizen, therefore gaining international goodwill.



doi:10.6342/NTU202501242



Based on these assessments on the motivating factors driving Taiwan's climate policy, it appears that Taiwan attempts to present itself as an ecological state (see section 2.1 above) for reputational purposes. However, whether or not a sense of responsibility for addressing climate change and other environmental concerns is truly at the heart of Taiwanese state decision making, rather than just a desire to appear like a responsible member of the international system, is a more challenging question to answer.

The existing literature has made a convincing case for the motivation behind Taiwan's climate action being strongly linked to a desire to shape its identity as a responsible, collaborative partner on climate change, and thus contribute to the foreign policy goal of increased recognition and international space.

However, there remains a lack of analysis of the consequences of this approach and how it has influenced international narratives surrounding Taiwan. Given the importance of how Taiwan projects itself to the outside world (Grano, 2019), this thesis seeks to explore how Taiwan's climate identity has been constructed in English-language news coverage of Taiwan and climate change. The results of this research will not only add another dimension to understanding the international consequences of Taiwan's climate politics as studies have so far focused mainly on motivations and domestic consequences, but will also go some way to addressing the severe lack of analysis of the socio-political dimensions of climate change in Taiwan identified by Chao and Liu (2023) and Lee et. al (2022).



doi:10.6342/NTU202501242

## 3. Taiwan's Climate Diplomacy: Historical Overview and MOFA Narratives

The existing literature compellingly addresses the motivating factors - in other words, the *why* - of Taiwan's climate diplomacy approach and climate role conception. This section seeks to provide greater empirical insight into *how* the Taiwanese government conducts its climate diplomacy and seeks to present Taiwan's climate role internationally. This section is split into two parts, a review of Taiwan's climate diplomacy approach in the period 2008-2024, followed by a qualitative review of English-language MOFA documents and videos published online in the period 2015-2024.



doi:10.6342/NTU202501242

## 3.1 A Timeline of Taiwan's Climate Diplomacy, 2008-2024

### 3.1.1 2008-2016: The Ma Administration

Chen (2020) identifies the 2008 presidential election as the turning point after which climate change became a significant political issue in Taiwan. Subsequently, climate change featured in the Ma Ying-jeou administration's diplomatic strategy, with the launch of the first campaign for meaningful UNFCCC participation. This aligned with Ma's overall strategy of rapprochement with China, which focused on improving cross-strait relations by prioritising working towards participation in specific UN agencies - including the UNFCCC - rather than calling for full UN membership. This was considered a more feasible approach as the post-Kyoto climate agreement was likely to include non-state actors, which would allow Taiwan a means of participation that could avoid the question of statehood (Chen, 2020).

During this time period, Taiwan's vulnerability to climate change was used to legitimise its bid for participation in the UNFCCC. The destruction caused by Typhoon Morakot in 2009 was a particular catalyst, with President Ma referencing this disaster in his attempts to gain international support for Taiwan's UNFCCC participation (Chen, 2020).

The Greenhouse Gas Emission bill (later renamed the Greenhouse Gas Reduction and Mitigation Act otherwise known as the GGRMA) was the most significant climate achievement during the Ma administration. Its adoption in 2015 can be partially interpreted as a diplomatic gesture to position Taiwan as a responsible international partner acting on its climate responsibility (Chen, 2020).



doi:10.6342/NTU202501242

### 3.1.2 2016-2024 The Tsai administration

President Tsai continued to develop Taiwan's climate legislation and diplomacy, despite worsening Taiwan-China relations after her election. This deterioration further restricted Taiwan's already limited participation in international organizations, including excluding it from any participation in UNFCCC COPs entirely in some years.

Under President Tsai, climate issues remained part of Taiwan's strategy for pursuing international space, including seeking modest participation in the UNFCCC, becoming an area for formal collaboration with diplomatic allies and informal relations with major powers, and fostering a behavioural profile aligning with that of a signatory of the UNFCCC (deLisle, 2021).

Chen (2020) characterises the Tsai administration's approach to climate diplomacy as shifting from calls for Taiwan's "meaningful participation" towards making "meaningful contributions" to global climate action. This narrative shift is exemplified by the "Taiwan Can Help" slogan adopted in 2017. The Taiwan Can Help slogan was applied not only to climate change, but to a wide range of issues where Taiwan sought increased international recognition of its contributions to issues of global concern, including public health and disaster response.

As Chen (2020) writes, this new strategy presented Taiwan not just as acting responsibly and capably on climate change, but also as a key driver in reducing domestic emissions and advancing the energy transition. #TaiwanCanHelp was widely



doi:10.6342/NTU202501242

used in social media posts from official government accounts during the Tsai administration.

Outside of official UN processes, Tsai continued to advance Taiwan's polycentric strategy for its international climate efforts. NGOs, municipalities, and industry all participated in Taiwan's multi-stakeholder climate diplomacy efforts, aimed at a range of audiences including diplomatic allies and Western democracies (Biedermann, 2017). For example, Taiwan Day, held in 2021 on the sidelines of COP26 in Glasgow, featured not only government officials, but also representatives of Taiwanese business, industry, and civil society engaging in promoting Taiwan's contribution to climate action to international audiences (Taiwan Representative Office in the UK, 2021).



doi:10.6342/NTU202501242

### 3.1.3 2024 Onwards - The Lai Administration

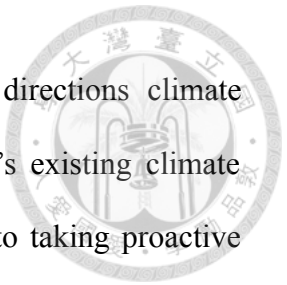
At the time of writing, it appears that the Lai administration's approach to climate diplomacy has not yet significantly deviated from the approach developed under President Tsai. At COP29, the first UNFCCC to take place after President Lai's inauguration, MOFA continued to urge other countries to support Taiwan's "professional, pragmatic, and contributory participation in COP29," while a range of non-governmental actors continued to be included as representatives of Taiwan (Chiou, 2024).

The creation of the National Climate Change Response Committee directly under the Presidential Office in June 2024 (as well as the Whole-of Society Defense Resilience Committee and the Healthy Taiwan Promotion Committee) demonstrates that climate change remains a national priority under the Lai administration. As reported by Jobin (2024), the first meeting of the National Climate Change Response Committee held in August 2024 primarily focused on nuclear power, industrial development and energy supply.

During the meeting, Lai's environment minister Peng Chi-ming emphasised the importance of net zero policy, climate adaptation and disaster prevention to Taiwan's overall resilience (Jobin, 2024). As such, as the Lai administration's approach to climate diplomacy evolves, it may adopt narratives which highlight the security dimensions of climate and energy issues.



doi:10.6342/NTU202501242



An op-ed published by Peng in November 2024 suggests the directions climate diplomacy may take under the Lai administration. Firstly, Taiwan's existing climate identities of being a victim of climate change and as committed to taking proactive steps to address climate change are reaffirmed:

> "As a **member of the international community**, Taiwan also faces **serious challenges** in this area. In recent years, we have witnessed the most severe drought in a century, intense rainfall, and devastating typhoons." (Peng, 2024, emphasis added by author).

> "Taiwan is taking **many steps** to address climate change. In a demonstration of **commitment** to emissions reduction, it has incorporated the 2050 net-zero emissions target into the Climate Change Response Act." (Peng, 2024, emphasis added by author).

With regards to international governance, Peng's focus is on Taiwan as a technological innovator who can assist global climate governance, and expresses a desire for international recognition:

> "As a major economy and a hub for technological innovation, **Taiwan's capabilities in renewable energy, climate adaptation, and low-carbon technological innovation can be of great help to global climate governance…. We hope the international community will recognize that Taiwan is willing and able to contribute to global climate change efforts**." (Peng, 2024)



doi:10.6342/NTU202501242

The “Taiwan Can Help” slogan appears to have been replaced by “Chip In With Taiwan,” since Lai’s inauguration, with the new slogan appearing in several videos released by MOFA, including one connected with COP29, as explored in section 3.2.2 below. The slogan appears to convey a similar message to Taiwan Can Help, but with the added dimension of a reference to Taiwan’s reputation as a semiconductor superpower. MOFA stated that the new slogan reflects the government's economic and trade strategy within its integrated diplomacy approach, using the pun “chip in” to emphasize Taiwan’s commitment to meeting its international responsibilities as a positive global force (Taiwan Today, 2024).

Rawnsley (2014) found that Taiwan’s public diplomacy approaches were highly dependent on the political party in power, for example noting a shift from democracy-based approach under the Chen DPP administration towards an approach which highlighted Chinese culture under the Ma KMT administration. However, this is not necessarily applicable to Taiwan’s climate diplomacy. While the above timeline offers only a brief overview of Taiwan’s climate diplomacy across the Ma administration, the Tsai administration, and the early days of the Lai administration, it appears that Taiwan’s climate diplomacy approach has evolved rather than diverged.

Overall the motivations behind Taiwan’s climate diplomacy approach (increasing international space and recognition) and the portrayal of Taiwan as a contributor to climate action in line with the global community have remained much the same, with some small differences in how this has been communicated. While Taiwan’s approach to climate diplomacy has remained mostly consistent, evolving rather than diverging,



doi:10.6342/NTU202501242

the biggest challenge has come from the changing relationship with China under different Presidents, showing that the success of Taiwan's climate diplomacy is often dependent on external factors.



doi:10.6342/NTU202501242

### 3.2 Taiwan's Climate Diplomacy Narratives

The following insights are based on a review of English-language MOFA documents and videos related to climate change. Understanding the discourses employed by MOFA as it seeks to construct Taiwan's climate role will provide valuable context for the results explored in section four.

The Ministry of Foreign Affairs, Republic of China (Taiwan), also commonly known as MOFA, is the cabinet-level ministry primarily responsible for foreign affairs and diplomacy. Taiwan's foreign policy is guided by Article 141 of the ROC constitution, which states:

> "The foreign policy of the Republic of China shall, in a spirit of independence and initiative and on the basis of the principles of equality and reciprocity, cultivate good-neighborliness with other nations, and respect treaties and the Charter of the United Nations, in order to protect the rights and interests of Chinese citizens residing abroad, promote international cooperation, advance international justice and ensure world peace." (ROC, 1947).

The MOFA English-language website (https://en.mofa.gov.tw/) is an official platform which shares a wide range of information, including news and events, press releases, statements and responses, policies and issues, and government information.



doi:10.6342/NTU202501242

The YouTube channel "潮台灣 Trending Taiwan" (https://www.youtube.com/@TrendingTaiwan) is managed by MOFA and "features captivating videos that introduce diverse and intriguing aspects of Taiwan."

Comparing content from these two sources shows that while key messages about Taiwan's climate identity are shared between the two, the tone and focus are quite different. This is likely because they are aimed at different audiences, with the MOFA website primarily providing updates for official audiences, while the Trending Taiwan YouTube channel is a forum for public diplomacy aimed at the international public.

### 3.2.1 Climate Diplomacy Discourses and Tools in MOFA Documents

A qualitative review of 19 documents published between 2015-2024 which had climate change as the central topic (see appendix 1) revealed several diplomatic strategies employed in Taiwan's climate diplomacy approach and also uncovered three discourses contributing to the construction of Taiwan's climate role.

The majority of these documents make direct reference to the UN climate regime, including the Paris Agreement, COPs, and the Sustainable Development Goals (SDGs). These references serve several purposes in the documents: to provide context on the current state of and continued need for global collaboration on climate change, and as a means to demonstrate Taiwan's alignment with the UN climate regime. Eight of the documents (MOFA 2016, MOFA 2018, MOFA 2019A, MOFA 2019B, MOFA 2021, MOFA 2022, MOFA 2023A, MOFA 2023B) directly advocate for Taiwan's meaningful participation in the UNFCCC, including calls to action for other countries to support



doi:10.6342/NTU202501242

Taiwan's inclusion. These documents are usually published in the months leading up to annual UNFCCC COP conferences.

The documents that call on other countries to support Taiwan's "professional, pragmatic, and constructive participation in the UNFCCC" reveal three conceptualisations of Taiwan's climate role, and the argumentative strategies used to develop these discourses. These conceptualisations are *responsible stakeholde*r, *constructive partner*, and *unfairly excluded*. The premises (or reasons) and evidence used in each discursive approach are presented in table one and are illustrated with supporting textual quotes.



doi:10.6342/NTU202501242

*Table 1: Taiwan's climate identity conceptions constructed in MOFA documents calling for Taiwan's greater participation in the UNFCCC.*

| Climate Identity | Premise | Evidence | Textual Examples |
|---|---|---|---|
| Responsible Stakeholder | Taiwan's domestic climate policy demonstrates it is a "responsible stakeholder" committed to climate action. | Domestic climate policy aligns with the UN climate regime: Climate Change Response Act, 2050 carbon neutrality roadmap, Greenhouse Gas Reduction and Management Act, National Climate Change Adaptation Action Plan, renewable energy transition.<br><br>Taiwan's private sector is contributing to climate action: RE100 membership | "Building on the Paris Agreement and aiming for net-zero emissions by 2050, Taiwan strives to do its part" (MOFA 2021)<br><br>"Taiwan understands that the issues associated with climate change are inextricably linked to the UN 2030 Agenda for Sustainable Development, and is committed to helping achieve the 17 Sustainable Development Goals." (MOFA 2018)<br><br>"Taiwan not only shares the objectives of the UNFCCC, but also putting them into practice" (MOFA 2019B) |
| Constructive Partner | Taiwan is a "constructive partner" contributing to climate action by collaborating with partner countries. | Cooperation projects including: good environmental governance with Palau, early warning systems collaboration with Central American countries, Energy efficiency with the Marshall islands, green finance and technological innovation, cooperation with the European Bank for Reconstruction and Development | "Taiwan is willing to share its experience and technology with other countries." (MOFA 2021)<br><br>"Taiwan has much to offer the UNFCCC" (MOFA 2018)<br><br>"This will ensure that Taiwan and like-minded partners continue to further promote international trade and contribute to global environmental sustainability, thereby aligning with international climate governance" (MOFA 2023A) |
| Unjustly Excluded | Exclusion of Taiwan from the UNFCCC is unjust, both to Taiwan and to the | Referencing the UNFCCC preamble that calls for the participation of all countries in climate action - Taiwan has a responsibility to help mitigate climate change. | "The exclusion of Taiwan contradicts the aims of the UNFCCC." (MOFA 2021)<br><br>"It is unjust to keep Taiwan excluded from the UNFCCC and leave the government to deal with the impact of climate change on |



doi:10.6342/NTU202501242

| | | | |
|---|---|---|---|
| | wider global community. | Highlighting the harmful impacts of climate change & exclusion from the UNFCCC on Taiwan. | its own." (MOFA 2018)<br><br>"Climate change does not discriminate, and mechanisms to address climate change such as the UNFCCC and the Paris Agreement should not discriminate against Taiwan due to political reasons." (MOFA 2023A)<br><br>"The Chinese Communist Party has politicized the mechanism, placing narrow-minded political considerations above global efforts to combat climate change and maliciously blocking Taiwan's participation for years." (MOFA 2022) |



doi:10.6342/NTU202501242

Several of the documents reveal that climate change has become a key element of a number of Taiwan's bilateral relationships. For example, in "Remarks by Vice Minister Li-kuo Chen at a reception for the 100th National Day of the Republic of Türkiye" (MOFA, 2023), Mister Chen makes specific reference to Taiwan's Climate Change Response Act, and references "green energy, circular economy, and technology" as key areas for collaboration between Taiwan and Turkey.

Similarly, the "Opening remarks by Minister Jaushieh Joseph Wu at the 2023 Pacific Climate Change Forum" (MOFA, 2023) highlights how climate change has become a central concern for Taiwan's diplomatic relations with Pacific countries. "MOFA sincerely thanks Saint Christopher and Nevis National Assembly for adopting resolution supporting Taiwan's participation in international organizations" (MOFA, 2024) shows how Taiwan's allies have helped further its ambitions for participation in the UNFCCC, along with other international bodies, demonstrating how climate change has become a diplomatic consideration on the same level as more traditional issues such as health.

Another key tool utilized by MOFA in their approach to climate diplomacy is multi-stakeholder diplomacy. Several of the collected documents reveal how this approach is utilized. This approach to climate diplomacy is embodied by the 2016 UNFCCC NGO Forum, which aimed to encourage local governments and UNFCCC accredited NGOs to form closer links with MOFA. As local governments and NGOs are less restricted in their abilities to participate in COPs and other international climate initiatives than the central government, this kind of event works to ensure Taiwan's climate diplomacy aims are shared by all stakeholders. Seven years later, in a document published in 2023, the results of Taiwan's multistakeholder climate diplomacy can be



doi:10.6342/NTU202501242

seen ("Public, private Taiwanese actors participate in UNFCCC COP28, highlight Taiwan's contribution to net-zero world," MOFA, 2023).

Another example in the documents of Taiwan's utilization of multistakeholder climate diplomacy is a joint summit on climate justice held with the NGO Foundation for Women's Rights Promotion and Development ("MOFA and NGO jointly hold Climate Justice Leaders' Seminar, share Taiwanese women's efforts in fighting climate change", MOFA, 2022). By partnering with an NGO, MOFA was arguably able to attract a greater range of high profile political figures to attend the summit, especially from countries which do not formally recognise Taiwan.

The documents also show how MOFA has worked to link climate change with other areas of public diplomacy where Taiwan has had success in gaining international acclaim and recognition: human rights ("The right to live in a stable climate," MOFA, 2018) and gender equality ("MOFA and NGO jointly hold Climate Justice Leaders' Seminar, share Taiwanese women's efforts in fighting climate change," MOFA, 2022). This approach allows Taiwan to further demonstrate its alignment with global norms and liberal values, in contrast to China.



doi:10.6342/NTU202501242

### 3.2.2 Climate Diplomacy Through MOFA Videos

MOFA also attempts to shape Taiwan's climate change identity in videos uploaded on the Trending Taiwan YouTube channel. A brief assessment of 12 videos uploaded between 2015-2024 mentioning climate change (see appendix 2) follows. Generally, one climate change related video was published per year, with the exception of 2017, 2018 and 2022 when two videos were uploaded per year, and 2020 when no videos were uploaded.

While a diverse range of artistic approaches are evident in the videos, from more traditional documentary style to wordless montages, and a music video, generally the videos focus on Taiwan's domestic climate action and Taiwan's climate collaboration with other countries in order to demonstrate Taiwan's contribution to a "green world" (*Our Pale Blue Dot,* 2024).

Much like the documents reviewed above, many of the MOFA videos are created in direct dialogue with the UN regime. Two videos, *Taiwan a Partner for a Better World* (2017) and *An SDG a day* (2018) explicitly reference Taiwan's work towards the UN sustainable development goals, while three others, *A Promise to the Land*, 2018; *Pathway to Net Zero,* 2022; and *Our Pale Blue Dot, 2024,* directly connect to COP24, COP27, and COP29 respectively. This again demonstrates how Taiwan's climate diplomacy is directly aligned with the UN regime.

The videos position Taiwan as a leader and key innovator in green technologies, including solar panels (*Shedding Light on Taiwan's Solar Energy Sector*, 2015), green



doi:10.6342/NTU202501242

transport (*Taiwan Rides into a Low-Carbon Future*, 2016), community-based solutions to climate change (*Change Begins in the Heartland,* 2017) and green buildings (*Building Better, Building Green*, 2022).

Renewable energy development is another key theme across the videos, in particular offshore wind power. Taiwan's development of wind power is a key motif across the videos, with footage of wind turbines often used as b-roll to emphasise Taiwan's green energy transition. *Riding the Wind* (2019) takes the inauguration of Taiwan's first offshore wind farm as its starting point, describing Taiwan as "riding the wind to the world." In *A Green Promised Land* (2021) Taiwan's development of different renewable energy technologies is framed through reference to Indigenous myths, connecting green energy innovations with the idea of living in harmony with nature in line with Indigenous ways of life. The invocation of Indigenous myths also works to establish Taiwan as having a cultural and historical identity that is distinct from China.


*Figure 1: Connecting renewable energy sources with Indigenous myths, screenshot from "A Green Promised Land" (2021)*



doi:10.6342/NTU202501242

Taiwan's climate-related assistance to other countries is another key message permeating the videos. *A Promise to the Land* (2018) features a young child from Myanmar thanking Taiwan for "bringing clean energy to my village" in the form of solar power. *Green Action Taiwan* (2023) mentions Taiwan helping allies with climate change early warning systems, while *Our Pale Blue Dot* (2024) references climate assistance projects with allies in Belize, Eswatini and Palau.


*Figure 2: "Thank you Taiwan, for bringing clean electricity to my village," screenshot from "A Promise to the Land" (2018)*

Taiwan's specific vulnerability to climate change is rarely mentioned, with the emphasis instead being on the worldwide impacts of climate change. *Change Begins in the Heartland* (2017) is an exception, as its storyline is based on the devastating impacts of Typhoon Morakot on the town of Linbian. However, the video emphasises Taiwan's successful recovery and innovative approach to adaptation, including the development of solar energy and a smart microgrid. In the video, Taiwan is presented as being keen to share this hard-won experience with countries in ASEAN.



doi:10.6342/NTU202501242

Similarly, Taiwan's exclusion from the UN is not mentioned in the videos, except for an oblique reference in *Riding the Wind* (2019): "Taiwan cannot just watch from the sidelines." The general omission of Taiwan's vulnerability to climate change and exclusion from the UN climate governance regime in favour of a focus on progress and international assistance demonstrates MOFA's decision to adopt a more positive approach to climate diplomacy highlighting Taiwan's contributions to global climate action.

Many of the specific slogans used as part of Taiwan's climate diplomacy strategy (as mentioned above) also make appearances in the videos. In 2015's *Shedding Light on Taiwan's Solar Energy Sector*, Taiwan is directly referred to as "A responsible member of the international community." The "Taiwan Can Help" slogan appears directly in *An SDG a Day* (2018), *Riding the Wind* (2019), with a similar iteration "a net-zero world with help from Taiwan" appearing in *Pathway to Net-Zero* (2022). Taiwan's commitment to climate action is similarly underlined in *Building Better, Building Green* (2022): "When it comes to global issues like climate change, Taiwan won't be missing in action." The most recently uploaded video, *Our Pale Blue Dot* (2024) employs what appears to be an evolved version of the "Taiwan Can Help" slogan: "Chip In With Taiwan," which draws on Taiwan's reputation as a chip manufacturing superpower.




doi:10.6342/NTU202501242

*Figure 3: Taiwan Can Help slogan, screenshot from "Riding the Wind" (2019)*


*Figure 4: Chip in With Taiwan slogan, from "Our Pale Blue Dot" (2024)*

From the above review of Trending Taiwan's video content, a public diplomacy tool which aims to engage international audiences with MOFA's preferred narratives about Taiwan, several discourses of Taiwan's climate identity begin to emerge. Through these videos, MOFA presents Taiwan as actively working towards a greener future through its domestic targets, actions, and innovations, and being an active senior partner utilizing its experiences, technology, and financial capacity to help other countries with both adaptation and mitigation efforts.



doi:10.6342/NTU202501242

# 4. Methodology: Uncovering Climate Identities Through Discourse Analysis

## 4.1 Theoretical Foundations of Discourse Analysis

Just as this research takes a constructivist view of international relations and state identity, its methodological approach is also grounded in the social constructivist tradition of the social sciences which recognises the existence of multiple, socially-constructed realities. In this tradition, language is seen not as a neutral tool that merely reflects reality, but as profoundly shaping our understanding of the world: "Language has the capacity to make politics, to create signs and symbols that shift power balances, to render events harmless or, on the contrary, to create political conflict" (Hajer and Versteeg, 2005, 179). With regards to environmental issues, "the way we construct, interpret, discuss, and analyze environmental problems has all kinds of consequences" (Dryzek, 2013, 11).

Identifying patterns of language in discussions or debates is the aim of discourse analysis, a methodological approach otherwise known as the study of language-in-use (Wetherell et al., 2001). Through deconstructing texts, discourse analysis can offer important insights into issues like the intentions of the author, dominant ideologies, and the potential impact on the audience.

In this thesis, discourse is defined following Dryzek as:

> "A discourse is a shared way of apprehending the world. Embedded in language, it enables those who subscribe to it to interpret bits of information and put them together into coherent stories or accounts. Discourses construct meanings and



doi:10.6342/NTU202501242

relationships, helping define common sense and legitimate knowledge. Each discourse rests on assumptions, judgments, and contentions that provide the basic terms for analysis, debates, agreements and disagreements" (Dryzek, 2013, 9).

Discourse analysis takes a critical view of "truth," focussing instead on how knowledge is communicated and how meaning is understood (Hajer and Versteeg, 2005). As such, for this research, the reality of Taiwan's climate action in itself is not of central importance, but rather how international society, via the media, interprets it.

Discourse analysis is particularly suited to the study of environmental politics. Environmental politics, much like the entwined ecological and climate crises that are its focus, is a complex process. The meaning of central concepts, like sustainable development, green growth, common but differentiated responsibilities, are constantly contested. Discourse analysis has several strengths in making sense of this "messiness": uncovering the role of language in politics, highlighting the embeddedness of language in practice, revealing mechanisms, providing answers to "how" questions, and revealing how different actors actively seek to shape how a problem is defined (Hajer and Versteeg, 2005).

John Dryzek's seminal work The Politics of the Earth (2013) embodies one of the "lasting contributions" of discourse analysis: illuminating the evolving dominance of specific discourses within environmental politics (Hajer and Versteeg, 2005, 179). Dryzek asserts that language and discourse have significant consequences on the way society defines, interprets, and addresses environmental issues. He identifies four key



doi:10.6342/NTU202501242

elements for discourse analysis: basic entities recognized or constructed, assumptions about natural relationships, agents and their motives, key metaphors and other rhetorical devices (Dryzek, 2013).

Figure 5 lists the environmental discourses identified by Dryzek. These discourses reflect a range of ideological standpoints and approaches to defining and responding to environmental problems. These discourses also appear in the data collected for this thesis, and Dryzek's formulations have proved indispensable in understanding the inherent values and assumptions underpinning many of the discourses explored in this research.

| | *Reformist* | *Radical* |
|---|---|---|
| *Prosaic* | **Problem solving:** administrative rationalism, democratic pragmatism, economic rationalism | Limits and survival Promethean |
| *Imaginative* | **Sustainability:** Sustainable development, green modernisation | **Green radicalism:** green consciousness change, green politics |

*Figure 5: Dryzek's classification of environmental discourses, adapted from Dryzek (2013, 16)*

Multiple approaches to operationalizing the theoretical underpinnings of discourse analysis into a robust research process have been proposed. Carvalho's (2000) assessment of three widely employed approaches' suitability for researching media coverage of climate change is of particular relevance to this thesis. Her critique forms the basis for the following review of different approaches.



doi:10.6342/NTU202501242

Frame analysis, and its close relative framing analysis, seek to uncover the frames present within texts and understand their contribution to shaping public opinion. Definitions of frames and framing vary, but in the realm of political communication, Entman's seminal 1993 work offers the following definition:

> "To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described. Typically frames diagnose, evaluate, and prescribe." (Entman, 1993, 52).

A focus on frames and framing is useful for examining how particular issues are framed and how those frames influence public discourse and political decisions. However, by focusing on identifying a central frame this approach can be reductionist, overlooking important, if minor, aspects of how the issue is constructed (Carvalho, 2000). While frame-based analytical approaches also focus on the variable construction of the world, discourse analysis places greater emphasis on language and on the relationships between discourse and specific social, political and cultural contexts (Carvalho, 2007).

Given the research interest of this thesis is very broad - media coverage of Taiwan and all aspects of climate change - a framing analysis approach, if adopted, would present several challenges. As a wide range of topics and issues are covered by the research scope, a framing analysis would struggle to accurately capture specific frames. Framing analysis better suits narrower topics of study. As this thesis is interested in the



doi:10.6342/NTU202501242

construction of Taiwan's climate identities, a more holistic methodological approach to understanding how and why certain discourses are constructed, and their consequences for Taiwan's climate identity is more appropriate.

Carvalho also considers Van Dijk's cognitive-structural model for critical discourse analysis. Van Dijik's approach centers on the concept of a "macrostructure," the thematic organization of topics within a text, and the hierarchical relationships between them. This method is of limited utility for this thesis, as it is challenging to apply to a large number of texts and makes inter-textual comparison difficult.

Another popular approach to discourse analysis is narrative analysis, which seeks to uncover the story being told through the means of discourse. Being based on the concept of a story, the key elements of a narrative include: characters, setting, action, outcome, and chronological sequence. As such, the weaknesses of a narrative approach are that elements of a text that do not contain characteristics of a narrative can be overlooked, and subordinate or counter-narratives may receive limited attention.

Recognising that each of these approaches allows insights into different aspects of a text, and that each presents various problems for the analysis of media texts covering climate change, Carvalho (2000) proposes an alternative approach developed to best suit an investigation of discourses present in written media coverage of climate change: a historical-diachronic discourse analysis, to be undertaken alongside a comparative-synchronic one. Her approach integrates multiple analytical tools and addresses the issue of time, by proposing an analysis of various representations of an issue at the time of writing of one specific article (the comparative-synchronic analysis)



doi:10.6342/NTU202501242

and an analysis of the evolution of discursive constructions of an issue across time (the historical-diachronic analysis).

Given Carvalho's proposed method for discourse analysis was developed to best suit an investigation of discourses present in written media coverage of climate change, it is of great utility for this thesis, which shares a similar research interest and unit of analysis. This thesis' methodology therefore takes Carvalho's approach as its starting point, as detailed in section 4.2 below.



doi:10.6342/NTU202501242

### 4.2 Research Design and Analytical Approach

Following Carvalho (2000, 2007), the discourse analysis approach adopted by this thesis is as follows in box 1. As discussed above, this method of analysis best suits both the dataset and the research goals of this project, respectively news articles covering climate change and uncovering identity discourses across publications and over time.

*Box 1: Discourse analysis approach, adapted from Carvalho (2000)*

I. Textual analysis.

*Coding frame:*

1. Surface descriptions and structural organization
2. Objects
3. Actors
4. Language and rhetoric
5. Discursive strategies and processes
6. Values and ideological standpoints

II. Contextual analysis

1. Comparative-synchronic analysis
2. Historical-diachronic analysis

The second stage of analysis considers the context in which discourses are produced. Firstly, several articles relating to the same object (i.e. issue or event) published in the same time period (within one year in the case of this thesis) will be compared in a



doi:10.6342/NTU202501242

**comparative-synchronic analysis**. This will reveal discursive differences across texts and publications, for example comparing how an event is interpreted in different geographical publication settings.

The second temporal analysis approach to **historical-diachronic analysis**, which assesses the evolution of discursive constructions of an issue across time. This approach enables an evaluation of how variables such as specific critical discourse moments and evolving values impact discourses.

After data collection (outlined below in section 4.3) and several close initial open-ended readings of the collected texts to begin to identify the most significant characteristics of the data, an iterative process of inductive qualitative coding was conducted to uncover the discourses constructed in the texts. Qualitative coding software NVIVO was used as the primary coding tool, with the framework matrix function utilised to assist in identifying the textual dimensions across texts (Lumivero, 2023). These textual elements are explained in further detail below.

(Lumivero, 2023). The coding process aims to identify the textual dimensions listed above, which are explained in further detail below.

1. *Surface descriptions and structural organization*

**Headline, date of publication, author, the newspaper in which it was published, relevant website tags.** Particular attention is paid to the headline and the first few paragraphs of the text when identifying the main topic of coverage, as these components indicate the preferred reading of the entire article.



doi:10.6342/NTU202501242

2. *Objects*

**Topics and themes** present in the text, including both broader objects (e.g. energy, climate change impacts) and more specific ones (e.g. wind energy, climate change impacts on industry).

**Events** associated with these issues are also coded, to map the links between these events and their impact on other issues. Certain events may be recognized as "critical discourse moments," which play a key role in issue construction and can potentially challenge the dominant discursive positions (Carvalho, 2000).

3. *Actors*

**Individuals and institutions** quoted or referenced in the text. Distinct actors exercise power through attempting to impose a particular discourse onto a discussion (Hajer and Versteeg, 2005). As such, attention is given to how actors are represented - are they presented as an active participant in the story, or are they included to provide an outside or expert perspective? Consideration is also given to which perspectives dominate the text.

4. *Language and rhetoric*

The use of specific **vocabulary, writing style, metaphors and emotionally charged language**. How do these connect specific concepts with wider cultural and ideological ideas?

5. *Discursive strategies and processes*



doi:10.6342/NTU202501242

Consider which of the following discursive strategies are employed, and by which actors.

**Selection of an angle**, or the use of framing: identify Entman's four frame functions: defining problems, diagnosing causes, making moral judgements, and suggesting remedies. Which aspects are included, and which are omitted?

**Narrativization**: The construction of a sequence of events and outcomes involving an action, a conclusion or outcome, characters, and a setting.

**Positioning**: constructing actors into specific relationships with others.

**Legitimation**: Justifying and legitimizing a particular action or exercise of power, based on normative or other rationales.

**Politicization**: Assigning a political nature or status to a specific reality (e.g. climate change).

6. Values and ideological standpoints

**Fundamental political and normative standpoints, moral judgements and values.** These are "possibly the most fundamental shaping influence in a text" (Carvalho, 2000). Media discourse and ideology are mutually constitutive, involved in a dynamic process of co-construction (Carvalho, 2007).



doi:10.6342/NTU202501242

### 4.3 Data Collection from Digital Articles

For the vast majority of the global public, "the world that [they] have to deal with politically is out of reach, out of sight, out of mind" (Lippmann, 1922, p. 18). Most political information is therefore acquired not from first hand experience, but from the media - which plays an important role in consensus building around an issue as a platform for the discourses of others and a speaker in its own right (Carvalho, 2007). Understanding the discourses employed in the media coverage of a certain topic or event allows us to understand how the public's perceptions, opinions, and behaviour may be influenced.

The news media shapes public opinion on climate change issues (e.g. Sampei and Aoyagi-Usui, 2009; Arlt et al., 2011; Bogert et al., 2024) and foreign affairs (e.g. Soroka, 2003; Baum and Potter, 2008). While new digitized communication pathways - notably social media - have emerged in recent years, institutional media still play a key role in the framing process by "occupy[ing] the second rung of the cascade below the elites" (Entman and Usher, 2018). Furthermore, the media is still more effective at reaching and mobilizing mass audiences, as an individual's social media post is unlikely to gain widespread attention unless amplified by elites or the media (Entman and Usher, 2018).

Contemporary media consumption trends show that the majority of adults now consume news digitally rather than in print. Pew Research Center's 2024 research into the news habits of Americans shows that a large majority (86%) of US adults get their news at least sometimes from digital devices. In contrast, only 26% of US adults often or



doi:10.6342/NTU202501242

sometimes get news in print. Pew's research also found that news websites or apps and search engines are the primary digital platforms used to access news, above social media and podcasts. Given the growing importance of online news platforms in shaping contemporary news consumption trends, this thesis focuses its data collection on digital news publications.

Consultation with Professor Lin Tze-luen, a leading expert in Taiwan's climate diplomacy, helped define the geographical scope of this study. Professor Lin identified the United States, the United Kingdom, the European Union, Australia, and Japan as key targets of Taiwan's climate diplomacy efforts. Since Taiwan's strategies are tailored to these regions, media from these countries will form the analytical focus of this research - although the influence of these publications extends far beyond their country of origination as they are widely read by an international audience. Within Taiwan, international news media is often considered more influential than domestic news, especially with regards to topics of international interest such as climate change and sustainability. As such, the discourses present in the news articles selected for analysis are important not only for how they shape international perceptions of Taiwan, but also for their influence in driving climate policy debates within Taiwan.

To ensure comparative consistency and align with the personal research capacity of the author, only English-language articles from these target countries will be included in the analysis. The most renowned elite English-language publications from each country were searched for relevant articles. The publications that contained relevant articles based on keyword searches (as outlined below) are listed in table one.



doi:10.6342/NTU202501242

The selected online publications (listed alphabetically in table one) can be grouped into two broad categories: elite news outlets targeting the general public and specialized outlets focused on climate change, business news, or foreign affairs. Publications have been sorted into these categories according to the needs of this research, taking into account criteria including coverage scope, target audiences, and content depth.

By analyzing articles from these categories, the research enables a comparative examination of the discourses present in mainstream publications versus those used in specialized media. Mainstream media is characterised for the purposes of this thesis as media which covers a broad spectrum of national and international news across topics, whereas specialized media is primarily concerned with a narrower thematic interest (in this instance business, foreign affairs, climate change, and academic research) and often features more analytical and opinion articles rather than just straight news. This approach will provide deeper insights into how different types of outlets construct and disseminate narratives around Taiwan's climate policies.

*Table 2: Publications included in research*

| **Publication** | **Country** (defined by the location of headquarters) | **Description** |
|---|---|---|
| ABC (Australian Broadcasting Corporation) | Australia | Mainstream |
| The Age | Australia | Mainstream |
| The Australian | Australia | Mainstream |
| BBC (British Broadcasting Corporation) | UK | Mainstream |
| Bloomberg | US | Specialised *Business* |



doi:10.6342/NTU202501242

| | | |
|---|---|---|
| CLEW (Clean Energy Wire) | Germany | Specialised<br>*Climate Change* |
| Climate Home News | UK | Specialised<br>*Climate Change* |
| CNBC | US | Specialised<br>*Business* |
| CNN (Cable News Network) | US | Mainstream |
| The Conversation | Australia | Specialist<br>*Academic* |
| The Diplomat | US | Specialist<br>*Foreign Affairs (Asia-Pacific)* |
| DW (Deutsche Welle) | Germany | Mainstream |
| The Economist | UK | Specialised<br>*Business / Foreign Affairs* |
| The Financial Times | UK | Specialised<br>*Business* |
| Forbes | US | Specialised<br>*Business* |
| France24 | France | Mainstream |
| The Guardian | UK | Mainstream |
| Huffpost | US | Mainstream |
| Nikkei Asia | Japan | Specialised<br>*Business* |
| The New York Times (NYT) | US | Mainstream |
| Reuters | UK | Mainstream |
| The Sydney Morning Herald | Australia | Mainstream |
| The Telegraph | UK | Mainstream |
| Time | US | Mainstream |
| The Washington Post | US | Mainstream |



doi:10.6342/NTU202501242

| | | |
|---|---|---|
| The Wall Street Journal | US | Mainstream |

The temporal scope of this research (January 2015 - December 2024) covers a transformative decade for Taiwan's climate diplomacy. The signing of the Paris Agreement in 2015 marked a milestone for global climate action (Falkner, 2016). In Taiwan, the election of President Tsai Ing-wen in 2016, and her subsequent re-election in 2020, ushered in a new era of diplomatic strategies, including a stronger focus on climate diplomacy (Chen, 2020). Analysis of news coverage in this ten-year period enables a deeper analysis of how framing has evolved over time, especially in response to pivotal events and shifts in both global and domestic contexts.

The unit of analysis for this research is the individual written article. Articles were collected based on a keyword search using Google advanced search and Lexis Advance. The keywords "Taiwan" "climate" "climate change" "global warming" "carbon" "net zero" "renewable" and "energy" were selected after a pretest indicated these keywords would deliver a comprehensive selection of articles covering climate change issues in Taiwan. Furthermore, these keywords reflect core elements of Taiwan's climate change policy, including the focus on carbon reductions to reach net zero and the energy transition towards renewables.

Articles were then screened to ensure a substantial reference to Taiwan and climate change as interconnected topics. Only articles meeting at least one of the three following criteria were selected for analysis: the headline directly mentioning climate change and Taiwan, over 50% of the text explicitly addressing Taiwan and climate



doi:10.6342/NTU202501242

change related issues, or being “tagged” as a climate change story. Articles which did not meet any of these criteria were discarded.

For example, articles which contained reference to both Taiwan and climate change as separate issues facing the China-US relationship, were not selected for analysis. Repeat publications (the same content published on multiple platforms) were also discarded to avoid repetition. Sponsored articles and articles written by Taiwanese government officials were discarded as they are not considered representative of the organic discourses present in international media coverage. However, opinion pieces by representatives of Taiwanese non-governmental organisations were included, as they reflect the perspectives and framing choices of Taiwanese stakeholders who actively engage with international audiences while not directly repeating official government narratives.

The number of articles selected for analysis per publication is presented in table two. Table two also breaks down the types of articles collected. News stories are defined as factual news reports of events which have or are about to happen, features are typically longer reports which feature more in-depth coverage of the background of a story and often includes the author’s personal experiences, opinion pieces are clearly marked as such and expresses the author’s arguments about a topic, interviews contain questions and the interview subject’s responses, commentaries analyze and interpret events and are often written by an external source, and columns are clearly marked recurring items expressing a regular contributor’s personal stance towards a topic. As displayed in table 3, the vast majority (101/138) of collected articles are news stories.



doi:10.6342/NTU202501242

*Table 3: Articles selected for analysis*

| **Publication** | **Total Article Count** | **Type of Article** |
|---|---|---|
| Nikkei Asia | 29 | News Story: 23<br>Opinion: 3<br>Interview: 3 |
| Reuters | 24 | News Story: 19<br>Feature: 4<br>Column: 1 |
| Bloomberg | 23 | News Story: 21<br>Feature: 1<br>Opinion: 1 |
| The Diplomat | 9 | Opinion: 4<br>Commentary: 4 |
| Forbes | 6 | News Story: 5<br>Feature: 1 |
| Climate Home News | 5 | News Story: 3<br>Feature: 1<br>Opinion: 1 |
| France24 | 4 | News Story: 4 |
| The Financial Times | 4 | News Story: 4 |
| BBC (British Broadcasting Corporation) | 3 | News Story: 3 |
| The Guardian | 3 | News Story: 2<br>Feature: 1 |
| Huff Post | 3 | Feature: 1<br>Opinion: 1<br>Interview: 1 |
| The New York Times | 3 | Feature: 3 |
| The Washington Post | 3 | News Story: 3 |
| The Wall Street Journal | 3 | News Story: 3 |
| ABC (Australian Broadcasting Corporation) | 2 | News Story: 2 |
| The Economist | 2 | News Story: 2 |
| The Telegraph | 2 | News Story: 2 |
| Time | 2 | Feature: 2 |
| CLEW (Clean Energy Network) | 1 | Feature: 1 |



doi:10.6342/NTU202501242

| | | | |
|---|---|---|---|
| The Age | 1 | News Story: 1 | |
| The Australian | 1 | News Story: 1 | |
| CNBC | 1 | News Story: 1 | |
| CNN (Cable News Network) | 1 | News Story: 1 | |
| The Conversation | 1 | Feature: 1 | |
| DW (Deutsche Welle) | 1 | News Story: 1 | |
| Sydney Morning Herald | 1 | Interview: 1 | |
| | | News Story | 101 |
| | | Feature | 17 |
| | | Opinion | 10 |
| | | Interview | 5 |
| | | Commentary | 4 |
| | | Column | 1 |
| TOTALS | | **TOTAL** | **138** |

Figure 6 displays the percentage of collected articles per country of origin, with the top three countries being the US (38.5%), the UK (31.9%) and Japan (21.5%). Figure 7 displays the percentage of collected articles by type of publication, with specialised business publications (48.1%) and mainstream publications (40.7%) accounting for the vast majority.



doi:10.6342/NTU202501242

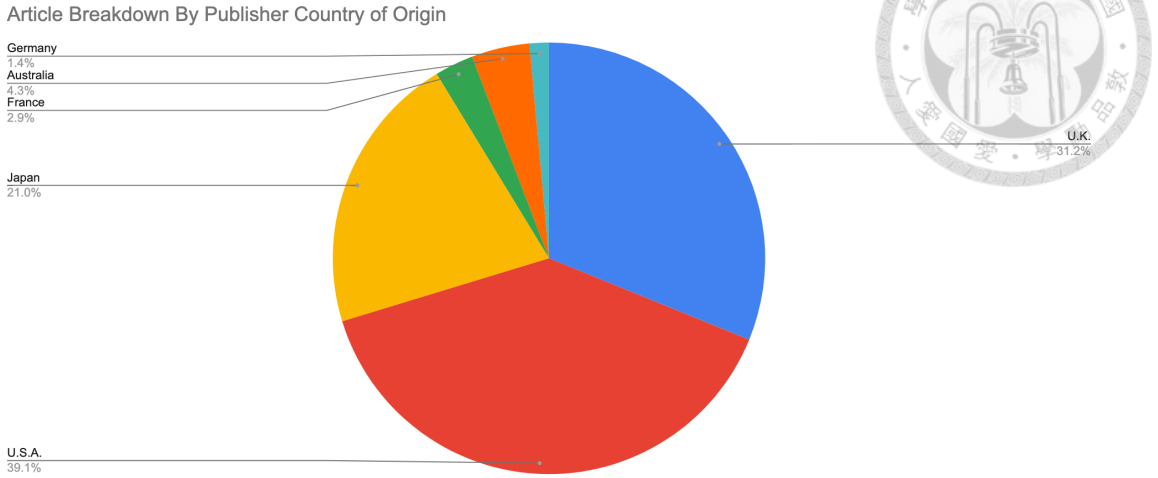



*Figure 6: Percentage of collected articles by country of origin*

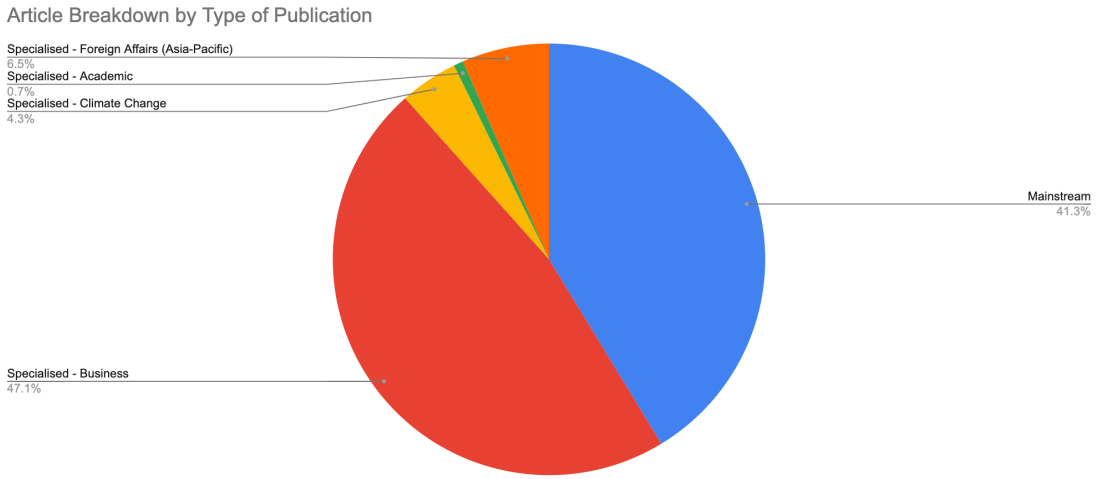



*Figure 7: Percentage of collected articles by type of publication*

As shown in figure 8, the number of publications on Taiwan and climate change have clearly increased over time, reflecting not only the increased coverage of climate change issues over recent years (Bolstad and Victor, 2024), but also potentially increased interest in Taiwan after the semiconductor shortage following the COVID-19 pandemic.



doi:10.6342/NTU202501242

Factors contributing to the increase in publications are explored in more detail in section 6.

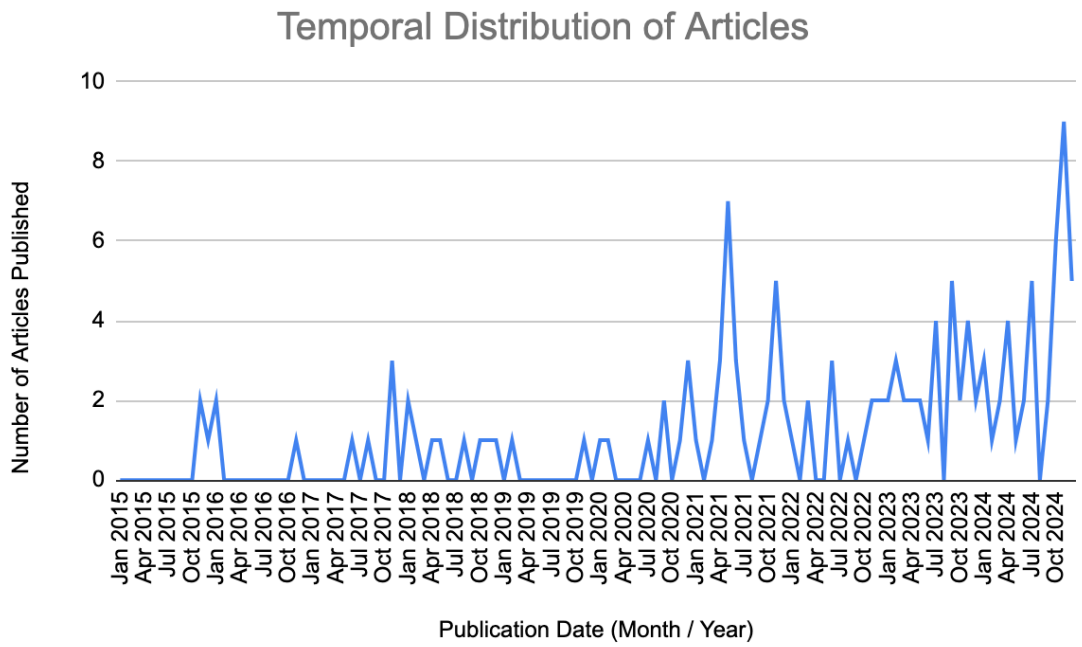



*Figure 8: Temporal distribution of collected articles*



doi:10.6342/NTU202501242

## 5. Five Identity Discourses

Five distinct discourses emerged from the data through the analytical approach described above. These discourses reveal the varied climate identities of Taiwan, as constructed in the international media. Taiwan is, variously, presented as: a victim of climate change in the ***victimisation*** discourse, excluded from international climate governance in the ***exclusion*** discourse, a contributor to climate action in the ***contribution*** discourse, a laggard on climate action in the ***laggardly*** discourse, and facing an ***energy quadrilemma***. These five discourses are summarised in table 4 below, and detailed analysis is provided in the following sections. Elements from multiple discourses often appear in the same article, showing how Taiwan's various climate identities interact and sometimes even reinforce each other.

Graphs tracking the prevalence of these discourses over time are included to visualise how these discourses have evolved and developed in response to international and domestic events. For the purposes of these graphs, only the dominant discourse for each article is recorded, with dominant discourse identification based on the headline, standfirst, and first two paragraphs of each article, as these elements display the overall intended reading of the article.

As this research employs an inductive, data-driven approach grounded in the collected texts, direct textual quotes are included to enhance the transparency of the analytical approach employed, to avoid overgeneralization, and preserve contextual nuance. Content of particular relevance to the analysis within the quotes has been bolded for emphasis.



doi:10.6342/NTU202501242

*Table 4: Summary of Climate Identity Discourses*

| ***Discourse*** | ***Objects*** | ***Actors*** | ***Language & Rhetoric*** | ***Discursive Strategies*** | ***Values*** |
|---|---|---|---|---|---|
| **Victimiasatior** | Impacts of climate change | Impacted: Semiconductor industry, farmers, Indigenous tribes, citizens<br><br>Responsible: government | Emotionally charged language (fear, sadness, helplessness)<br>Metaphors (band-aid solution) | Positioning: agriculture vs. industry<br><br>Legitimation: Taiwanese government's central role in addressing climate change | Human-centric<br><br>Economic-centric |
| **Exclusion** | Taiwan's exclusion from the UNFCCC | Impacted: Taiwan<br>Antagonistic: China | Emotionally charged language (anger, unfairness) | Positioning: Taiwan vs. China<br><br>Legitimation: international politics of climate change | Pro-Taiwan |
| **Contribution** | Climate ambition<br><br>Renewable energy<br><br>Innovation | Countries, semiconductor industry, energy industry, Taiwanese businesses | Metaphors (energy jackpot, stepping stone to Asian market) | Positioning: Taiwan as an example other countries can learn from<br><br>Legitimation of administrative and technological remedies for climate change; of the central role of the Taiwanese government in addressing climate change | Problem-solving<br><br>Ecological modernisation |
| **Lagging** | Energy transition<br>Climate policy | Government, Taipower, renewable energy developers, semiconductor industry | Metaphors (lip service, headwinds, mission impossible, downward spiral) | Positioning: responsibility of addressing climate change (and failure to address climate change ) assigned to government<br>Legitimation: of the Taiwanese | Ecological modernisation |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| | | | | government's central role in addressing climate change | |
| **Energy Quadrilemma** | Energy transition<br>Nuclear phaseout, Semiconductor industry's energy requirements<br>Energy security | Presidents, Taipower, DPP, KMT, energy industry, semiconductor industry, China | Difficult choice<br>Metaphors (Energy transition towards renewables: headwinds, high-risk gamble; nuclear phaseout: political headache, thorn in government policy) | Politicisation of nuclear energy<br><br>Legitimation of Taiwanese government's central role in addressing climate change | Securitisation of climate and energy<br><br>Ecological modernisation |



doi:10.6342/NTU202501242

### 5.1 Discourse of Victimisation

Definition of victimisation (Oxford Languages):

*Noun*: the action of singling someone out for cruel or unjust treatment.

**Box 2: Discourse analysis of Victimisation**

1. **Objects**

   ***Overarching theme:*** impacts of climate change

   ***Sub-themes:*** impacts on industry, impacts on agriculture, impacts on way of life, climate change as threat multiplier

   ***Events:*** Extreme weather events, 2021 drought (key discourse moment), typhoons (Kong-rey 2024, Gaemi 2024, Morakot 2009, Khanun 2023, Doksuri 2023), hottest year on record (2024), cold snap (2016)

   ***Key discourse moment:*** 2021 drought

2. **Actors**

   ***Impacted parties:*** Semiconductor industry (TSMC, United Microelectronics Corp, Micron, Delta), farmers, citizens, Indigenous tribes (Tsou, Atayal, Amis), fishers

   ***Responsible for problem solving:*** government (Water Resources Agency, Environment Ministry), startups (Owlting)

   ***Expert perspectives:*** Environmental groups, academics, economists, consultancies, banks

3. **Language and rhetoric**

   ***Emotionally charged language:*** fear, sadness, helplessness

   ***Metaphors:*** kryptonite, band-aid solution

4. **Discursive strategies**



doi:10.6342/NTU202501242

***Positioning***: government as key problem-solver, agriculture vs industry

***Legitimation:*** Taiwanese government's central role in addressing climate change

5. **Ideological standpoints and values**

***Human-centric:*** experiences of vulnerable groups of central importance, moral imperative for climate action, green consciousness

***Economic-centric:*** growth and continued production of central importance, global importance of Taiwan linked to semiconductor industry, effectiveness of adaptation judged by impact on production

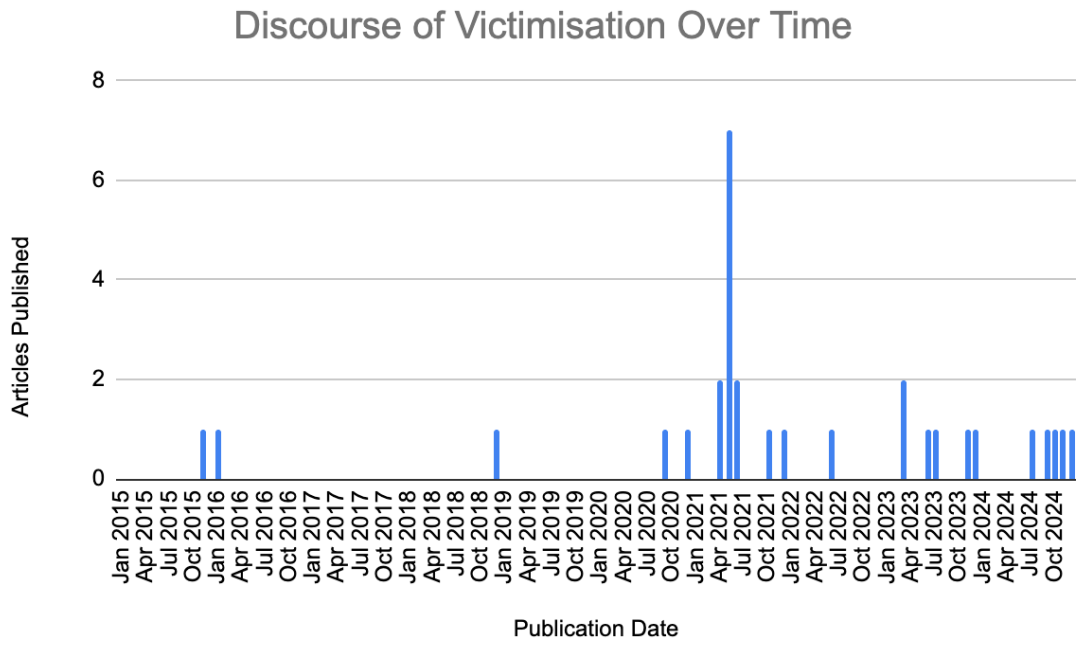



*Figure 9: Discourse of victimisation over time*

One climate identity discourse emerging from the data is that of victimhood, which centers on how Taiwan's society and economy struggle as a result of climate change.



doi:10.6342/NTU202501242

This discourse is most prevalent in articles covering the impacts of climate change, including the impacts of climate change on industry, agriculture, and way of life.

Key events within this discourse are extreme weather events, including droughts, typhoons, heatwaves, and cold snaps, with the 2020-2021 drought in particular being a critical discourse moment. Longer-term changes in weather and temperature patterns are also referenced as the reason for challenges facing Taiwan. These events are connected to climate change through the invocation of experts:

> Persistently warmer waters influenced by human-caused climate change are allowing storms to more rapidly strengthen and sustain high-end intensity, **according to scientists**. (Typhoon Kong-rey makes landfall in Taiwan with high winds, heavy rain; Washington Post, 2024)

However, there are also mentions of uncertainty over whether particular events are directly connected to climate change:

> However, whether or not what is happening in Taiwan's tea country is directly related to climate change remains **an area for debate**. (In Taiwan tea country, a scramble to adapt to extreme weather, Reuters, 2021)

In other instances, there is an appreciation of the ability of those whose livelihoods are deeply connected with the natural world to sense the impacts of climate change on a locale or species, even in the absence of scientific research on those specific cases:



doi:10.6342/NTU202501242

> Long before international scientists and Taiwanese officials began paying attention to the pressing problem of climate change, **the Atayal have seen and lived the changes firsthand**. (Taiwan's Indigenous Farmers Use Local Wisdom to Adapt to Climate Change, Huffington Post, 2015)

In news articles which report directly on extreme weather events as they happen (as opposed to feature pieces which take a deeper look of a situation over a longer period of time), Taiwan is treated as a single entity which has no choice but to attempt to withstand the consequences of climate change, e.g.: Taiwan **hunkers down** as deadly Typhoon Gaemi makes landfall (France24, 2024).

Climate change is also presented as a risk multiplier. For semiconductors, climate change is presented to increasing value chain risk, especially when the 2021 drought combined with the Covid-19 pandemic and the increasing demand for semiconductors:

> Taiwan is being squeezed by a resurgent coronavirus on one side and a yearlong drought that is disrupting agriculture, industry and power supplies on the other. Only one of those forces is likely to go away. The **dual stresses** can be seen at home in sliding stocks, power and water shortages, and abroad as Taiwan's chipmakers struggle to fill a global deficit of semiconductors. **While the government works to rein in the Covid outbreak, the water and energy strains highlight longer-term challenges from the island's unusual vulnerability to climate change.** (Taiwan's Sudden Unraveling Masks a Serious Climate Problem, Bloomberg, 2021).



doi:10.6342/NTU202501242

For biodiversity, climate change is presented as exacerbating other threats created by humans:

> In Taiwan, as elsewhere, their [eels] numbers have dropped because of **overfishing, the loss of their riverside habitats to development and, more recently, climate change**. (In Taiwan's Waters, a Hunt for Tiny, Wriggling 'Gold', New York Times, 2023).

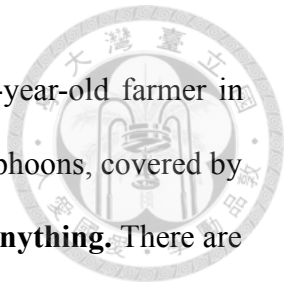
Five key groups of actors are identified in this discourse: Taiwan's government, the semiconductor industry, farmers, Indigenous tribes, and citizens. For these last three groups, emotionally resonant language is used to emphasise their plight in the face of climate change.

Several articles deal exclusively with climate impacts on Indigenous communities' way of life, and quotes from Indigenous individuals dominate the texts. The tribe's way of life is presented as deeply "entwined with nature" (Taiwan tribe despairs as drought shrinks bamboo crop, France24, 2023) and rooted in a specific geography. Emotionally resonant language is used to show how Indigenous communities feel fear and sadness due to the impacts climate change:

> If the flower can't be found or disappears, elder Gao says there is no substitute for it in their rituals. To him such a scenario is inconceivable. But he certainly **fears** the possibility. (Taiwan: The 'God Flower' vanishing because of climate change, BBC, 2023).



doi:10.6342/NTU202501242



> “There is nothing to harvest,” says Wang Wan-quan, a 70-year-old farmer in Nang Feng village in Nantou. “They were all destroyed by typhoons, covered by landslides, and damaged by heavy rain. **We can’t celebrate anything.** There are no crops to celebrate.” (Marooned by Morakot: Indigenous Taiwanese typhoon survivors **long to return home**, Climate Home News, 2021)

Emotionally charged language is also used to emphasise how (non-Indigenous) farmers and citizens are also powerless victims of climate change:

> "Farmers feel really **helpless**," Mr Chuang says, looking **sadly** at the dry irrigation canal running through his fields. (Why the world should pay attention to Taiwan's drought, BBC, 2021)

> “It’s been meltingly hot in Taichung for a while now,” said Huang Ting-Hsiang, 27, a chef who works out of his home and stopped cooking last month for lack of water. “The images of the dangerously low levels at those reservoirs **are scary, but there’s nothing we can do**.” (Taiwan Prays for Rain and Scrambles to Save Water, New York Times, 2021)

While emotionally resonant language is not used to describe the semiconductor industry, climate change is still positioned as a threat to the industry, with its vulnerability underlined through the use of metaphors such as *kryptonite* (the fictional material which renders superman powerless):



doi:10.6342/NTU202501242

> Yet, despite its global dominance, the industry has its **kryptonite**: water. (How Water Scarcity **Threatens** Taiwan's Semiconductor Industry, The Diplomat, 2024)

While these actors all face threats due to climate change, their efforts at adaptation are also featured in the discourse, demonstrating that Taiwanese society still has some - albeit limited - agency in the face of climate change.

These adaptation strategies are often presented as having limited efficacy, especially as climate change is portrayed as continuing to worsen. For example, while switching crops is presented as one adaptation method adopted by Indigenous communities to the impacts of climate change on agriculture, these approaches are not presented as long lasting solutions, as seen through the use of metaphors such as *band-aid solution* which emphasise the temporary nature of many adaptation responses:

> To combat growing water shortages, the state Water Resources Agency announced in November that three new reservoirs would be constructed but some farmers viewed this a **band-aid solution**."If there's no rain, what use is building bigger reservoirs?" asked Huang, the farmer. (Taiwan may face fewer typhoons - but harsher drought - as planet warms, Reuters, 2020)

With regards to agriculture, two differing approaches to adaptation are presented optimistically - one rooted in Indigenous knowledge (Taiwan's Indigenous Farmers Use Local Wisdom to Adapt to Climate Change, Huffington Post, 2015) and the other



doi:10.6342/NTU202501242

pointing to technological innovation (Taiwan's rice farmers use big data to cope with climate change, The Financial Times, 2018).

Other adaptation approaches are viewed as more successful, especially those enacted by the semiconductor industry. In these cases, success in dealing with water shortages caused by drought is linked to companies' ability to continue production, and is generally self-reported by the companies themselves:

> "TSMC has a long-established risk management system, which covers water supply risk," chief executive CC Wei told a conference earlier this month. "Through our existing water-conservation measures, we are able to meet the current reduction requirement from the government **with no impact on operations.**" (Parched Taiwan prays for rain as Sun Moon Lake is hit by drought, The Guardian, 2021)

Overall, despite the outcomes of adaptation approaches being presented in both positive and negative ways, the foundational assumption of this discourse is that the government has primary responsibility for problem-solving with regards to the impacts of climate change. This assumption works to legitimate both the role of governments in addressing climate change and the sovereignty of the Taiwanese government.

In news articles which report on currently occurring extreme weather events, almost all quotes are from government sources, implying that the government is best placed to both comment on and react to emergency climate situations.



doi:10.6342/NTU202501242

Attitudes towards Taiwan's government skew negative in articles centering the experiences of Indigenous communities and farmers. There is a sense that the government neglects both of these groups:

> Elder Gao said that politicians come and visit but **they do not address the serious impact of climate change on the Tsou people's way of life**. (Taiwan: The 'God Flower' vanishing because of climate change, BBC, 2023).

In the case of farmers this neglect is directly linked to the government's prioritisation of industry. As such, in this discourse farmers are often positioned as in competition with the tech industry for government assistance:

> Huang An-tiao, a farmer and chairman of the Tainan Environment Protection Union, a non-governmental group, said **small-scale farmers had been "ripped off" while water-intensive industries like petrochemicals and electronics received enough.** (Taiwan may face fewer typhoons - but harsher drought - as planet warms, Reuters, 2020)

Secondary actors, such as academics and environmental groups, which are not the key subjects of the discourse but are included to provide expert perspectives, also critique government action in addressing both the climate crisis itself and its impacts:

> "Climate change has never been a centre of discussion in our government or society. Although everybody talks about being afraid of climate change, it tends to be **lip service**. They express care, but don't take any action," Mr Hsu [a



doi:10.6342/NTU202501242

climate change expert at government-funded think tank Academia Sinica] says. (Why the world should pay attention to Taiwan's drought, BBC, 2021).

While there are some mentions of positive government action, this comes from quotes from Government representatives rather than those directly impacted impacted:

> "We try to increase their resilience," Lin [Dr Lin Tze-luen, **a spokesman for the executive branch of Taiwan's government**] says, citing the provision of satellite phones to residents who decide to stay, and increased government subsidies for home insurance. ('There are no crops to celebrate': climate crisis wipes out a way of life in Taiwan's mountains, The Guardian, 2023)

Two distinct values regarding climate change and the importance of Taiwan underpin the victimisation discourse. Firstly, the stories highlighting the loss of a way of life due to climate change, particularly those centering Indigenous communities, speak to a **people-centric perspective** which emphasises the moral imperative of effectively addressing climate change. Taiwan as a state is not centered, but rather the experiences of specific vulnerable communities. Through the use of emotionally resonant language, these articles attempt to elicit sympathy in the audience, while also drawing attention to the specific, human impacts of climate change. Elements of Indigenous worldviews - which resonate with aspects of Dysek's radical green consciousness - are imbued in the texts. In these worldviews, the Earth itself is imbued with agency:

> This was **the land taking its revenge** in a country struggling with human-generated land and air degradation. "If you take something from [the



doi:10.6342/NTU202501242

land],” said Lavakavu, “it will ask for something in return.” (Marooned by Morakot, Climate Home News, 2021)

The other prominent ideology underpinning another aspect of this discourse is that which centers the economy and continued economic growth. These **economic-centric** values are embodied by articles which centre the impact of climate change induced extreme weather on industrial production (as made explicit by the headline How Water Scarcity **Threatens** Taiwan’s Semiconductor Industry, The Diplomat, 2024). This can be seen, for example, by the success of adaptation measures being linked to manufacturing operations being able to continue (see above).

From this ideological standpoint, the importance of Taiwan to the world - and to individual consumers - is explicitly linked to its position in semiconductor supply chains as epitomized in the headline *Why Taiwan’s drought means **you** can’t have a new smart TV* (The Age, 2021*)*. Treatment recommendations center on the role of both government and industry, in both reducing emissions and addressing the impacts of climate change-induced extreme weather through better resource management. Some articles position these two values in direct relationship with each other, for example through descriptions of the tension between providing water to either agriculture or industry in times of drought:

“Now they've completely cut our water, **farmers can't find a way out**. You're **focusing entirely on semiconductors**," Mr Chuang says. (Why the world should pay attention to Taiwan's drought, BBC, 2021).



doi:10.6342/NTU202501242

Through a historical-diachronic analysis of the articles in which *victimisation* is the dominant narrative, the 2020-2021 drought emerges as a critical discourse moment, with ten articles published in 2021 directly connected to this event. The historical significance of this event is emphasised through descriptions of the drought as a "once-in-a-century" occurrence (used in 17 articles). This event shifted the *victim* discourse to focus primarily on the impacts of climate change on Taiwan's semiconductor industry, which is presented as of global significance (e.g. Why Taiwan's drought means **you** can't have a new smart TV, The Age, 2021; Why **the world should pay attention** to Taiwan's drought, BBC, 2021). Previously, the focus was primarily people-centred, with articles primarily concerned with the impacts of climate change on farmers and Indigenous communities.

A comparative-synchronic analysis of articles published in May 2021 demonstrates how different publications vary in their framing of the drought. Specialised business publications feature economic-centric articles focused mainly on the impacts on the semiconductor industry, (e.g. No Water No Microchips: What Is Happening In Taiwan?, Forbes, May 31, 2021), while mainstream publications feature articles which cover both the human and economic impacts (e.g. Taiwan Prays for Rain and Scrambles to Save Water, New York Times, May 27, 2021; Parched Taiwan prays for rain as Sun Moon Lake is hit by drought, The Guardian, May 9, 2021). An exception to this pattern is Australian based publications. Mainstream publications ABC and the Age both cover the drought from a semiconductor-centric angle (What does chipageddon have to do with climate change?, ABC, May 7, 2021; Why Taiwan's drought means you can't have a new smart TV, The Age, May 30, 2021).



doi:10.6342/NTU202501242

### 5.2 Discourse of Exclusion

Definition of exclusion (Oxford Languages):
*Noun:* the action of singling someone out for cruel or unjust treatment.

**Box 3: Discourse analysis of Exclusion**

1. **Objects**

   ***Overarching theme:*** Taiwan's exclusion from the U.N.

   ***Events:*** UNFCCC COP Conferences (COP23, COP26, COP28, COP29)

2. **Actors**

   ***Impacted parties:*** Taiwan, mainly represented through national government (especially EPA and MOFA), environmental NGOs, and local government

   ***Antagonistic parties:*** China (CCP)

   ***Supportive parties:*** US, EU, Guatemala, Nauru

3. **Language and rhetoric**

   ***Emotionally charged language:*** anger, unfairness

4. **Discursive strategies**

   ***Positioning***: Taiwan v.s. China, democracy

   ***Legitimation:*** of the international politics of climate change

5. **Ideological standpoints and values**

   ***Pro-Taiwan:*** emphasis on Taiwanese perspectives, emphasis on democracy, exclusion is unfair and undermines UNFCCC, Taiwan action outside of UNFCCC emphasised to show commitment



doi:10.6342/NTU202501242

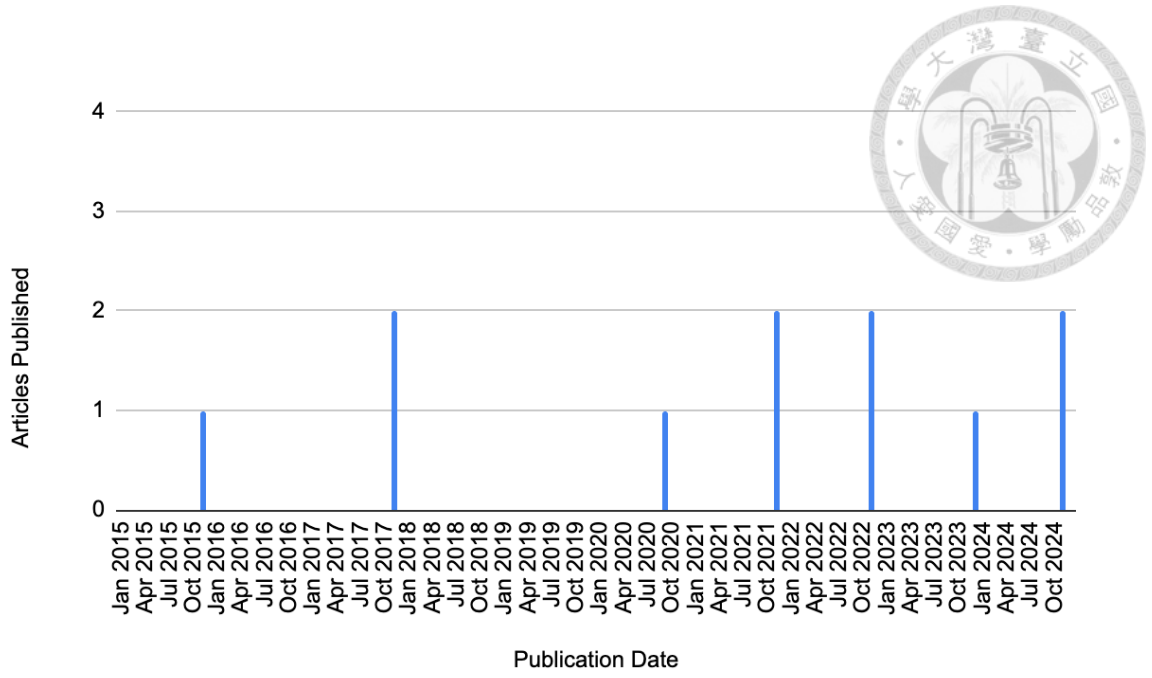



*Figure 10: Discourse of exclusion over time*

Another identity often attributed to Taiwan is that of being excluded from international climate politics due to China's influence. Given their status as the supreme decision-making arenas for global climate governance, it is unsurprising that UNFCCC COPs are the central events for this discourse. Exclusion from other forms of international climate collaboration such as the Global Covenant of Mayors for Climate and Energy shows how this discourse can expand to events other than COPs ('Taiwan is Taiwan': China name dispute moves from birds to climate change, Reuters, 2020).

Central actors within this discourse are nation states, stemming from the discourse's primary location within the international sphere. Taiwan and China are positioned in an antagonistic relationship, with other countries positioned as having a supportive stance towards Taiwan. Generally, these stances are expressed in the discourse through quotes from government representatives.



doi:10.6342/NTU202501242

Taiwan's government is shown as being committed to climate action from the highest levels, with quotes from Presidents Tsai and Lai, as well as various ministers from the EPA and MOFA. Furthermore, the inclusion of quotes from both DPP and KMT lawmakers work to present Taiwan as domestically united on the issue of climate change. As a result, Taiwan's desire for inclusion in UN climate talks is made more sincere and credible.

In contrast with the quotes from Chinese officials which lack emotional resonance, the inclusion of more personal quotes, including that of a Taiwanese youth delegate barred from participating in the opening ceremony of COP26, makes Taiwan's cause more sympathetic to the audience:

> "All we can do is try to find ways to let Taiwan be seen." (Hai-Wei Chang, Taiwan Youth Climate Coalition, quoted in With Taiwan blocked from U.N. climate talks, its emissions go uncounted, Washington Post, 2021)

The discourse is infused with pro-Taiwan values, as shown through the linguistic framing of the antagonistic relationship between China and Taiwan. This framing is manifested through headlines which present China as "blocking," "shutting out," "freezing out" and "excluding" Taiwan, placing the blame for Taiwan's exclusion squarely on China.

Repeated emphasis of Taiwan's democratic status are made across texts, through descriptions like "self-ruled democratic island," "democratically governed Taiwan," "democratic, self-ruled Taiwan." These descriptions not only emphasise the contrast



doi:10.6342/NTU202501242

between Taiwan and China but also aligning Taiwan with global democratic values, likely to resonate with much of the audience:

> "Right now the international community is attaching importance to Taiwan," said Hung Sun-han, a lawmaker with Tsai's ruling Democratic Progressive Party who traveled to Glasgow. "**Both Western and Asian countries have clearly seen Taiwan's efforts to protect our democracy and freedom,**" he said, pointing to the number of young attendees at the summit [COP26] who had approached the delegation, curious about Taiwan. (With Taiwan blocked from U.N. climate talks its emissions go uncounted, Washington Post, 2021).

In several articles, this exclusion is explicitly presented as unfair through quotes from Taiwanese speakers, such as Deputy Environment Minister Shen Chih-hsiu:

> "The climate convention emphasizes that every country should shoulder responsibility" for cutting emissions, Shen said in a telephone interview from Glasgow Friday. "If any country is left out, it's incomplete. **This isn't fair to Taiwan**, which is willing to shoulder the responsibility." (Taiwan Challenges UN Exclusion on Sidelines of COP26 Summit, Bloomberg, 2021).

In other cases, emotionally charged language is used to express Taiwan's anger at China's actions:

> China has ramped up pressure on international groups and companies to refer to democratic, self-ruled Taiwan as being part of China, **to the anger of Taiwan's**



doi:10.6342/NTU202501242

**government and many of its people**. ('Taiwan is Taiwan': China name dispute moves from birds to climate change, Reuters, 2020)

Taiwan's exclusion is presented as undermining the goals of the UNFCCC, further demonstrating the pro-Taiwan values underlying this discourse:

> "Taiwan represents up to 1 percent of global greenhouse gases, so if we are not part of it, UNFCCC has a **loophole**," said Liangyi Chang, Asia Managing Director of the environmental group 350.org. "Taiwan's emissions are the **gray zone** of the COP process." (With Taiwan blocked from U.N. climate talks, its emissions go uncounted, Washington Post, 2021)

Despite its exclusion from international climate summits, Taiwan is presented as continuing to pursue climate action:

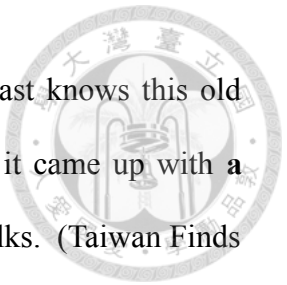
> While Taiwan remains excluded from official participation in COP negotiations due to geopolitical constraints, **it continues to engage in global climate efforts** through regional and international partnerships. (Taiwan may be excluded from COP29, but can still help drive regional action, Nikkei Asia, 2024)

This feeds into the portrayal of Taiwan as the David to China's Goliath, an underdog unwilling to give up even against a much larger opponent:

> **More than 170 countries side with China diplomatically. Taiwan can look to just 20.** As a result, the heavily-industrialized western Pacific island of 23



doi:10.6342/NTU202501242



> million people didn't get into the convention. Taiwan at least knows this old story of being blocked from U.N. agencies, so this month it came up with **a clever way** to get as close as possible to the climate change talks. (Taiwan Finds A Way Into The World Climate Dialogue Despite China, Forbes, 2017).

Taiwan's approach to climate action is also favourably compared with China's on several occasions:

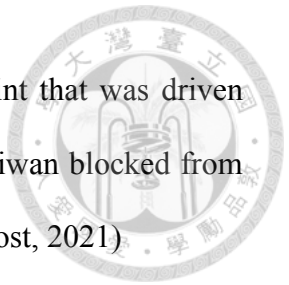
> While China has attempted to portray itself as a climate leader, Taiwan's model -- spanning partnerships with developed and developing nations -- **offers a more collaborative and technology-driven approach**. (Taiwan may be excluded from COP29, but can still help drive regional action, Nikkei Asia, 2024)

> As the talks were getting underway last week, Taiwanese lawmaker Wang Ting-yu quipped on Twitter, **"If Xi Jinping doesn't even bother to show up . . . why do we continue to let China block Taiwan's participation."** (With Taiwan blocked from U.N. climate talks, its emissions go uncounted, Washington Post, 2021)

Other discourses identified in this analysis are also evoked to argue for Taiwan's inclusion in the UN climate system. For example, Taiwan's vulnerability to climate change is emphasised, linking to the *victim* discourse:



doi:10.6342/NTU202501242



> Taiwan is **particularly vulnerable** to climate change, a point that was driven home during energy and water shortages this year. (With Taiwan blocked from U.N. climate talks, its emissions go uncounted, Washington Post, 2021)

The collaborator discourse is also evoked through reference to what other countries can learn from Taiwan's example as another reason to support Taiwan's inclusion:

> Taiwan says it has expertise and resolve to cut carbon dioxide emissions, **perfect for a role in the U.N.-driven process** for global greenhouse gas reductions. (Taiwan Finds A Way Into The World Climate Dialogue Despite China, Forbes, 2017)

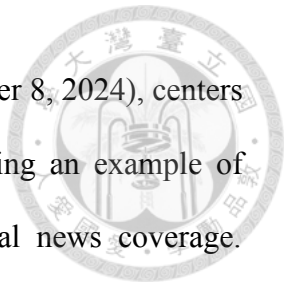
Taiwanese environmental NGOs take a different approach, using the *laggard* discourse to underline that Taiwan's exclusion contributes to a lack of effective climate action on the part of the government:

> The lack of international obligations leaves it up to the government to determine transparency and speed in meeting emissions commitments. "It creates a lot of **loopholes**," said Chao. "They are not feeling the pressure." (With Taiwan blocked from U.N. climate talks, its emissions go uncounted, Washington Post, 2021)

A comparative-synchronic analysis of the two articles published in November 2024 that feature *exclusion* as the dominant discourse shows how Taiwanese perspectives dominated coverage of Taiwan's exclusion from COP29. "Taiwan, excluded from



doi:10.6342/NTU202501242



climate summit, sets up 'war room' to watch talks" (Reuters, November 8, 2024), centers on comments from Environment Minister Peng Chi-ming, providing an example of Taiwanese government narratives successfully shaping international news coverage. Taiwan's role as a major producer of semiconductors, its vulnerability to climate change, and its net-zero goal are all mentioned, in line with MOFA's argument for Taiwan's inclusion (see section 3.2). Furthermore, the headline highlights the idea of a "war room" for watching the talks, presenting Taiwan as taking climate governance very seriously, while also drawing on the widespread framing of climate change as a conflict which must be fought.

Similarly, the op-ed "Taiwan may be excluded from COP29, but can still help drive regional action" (Nikkei Asia, November 11, 2024) highlights Taiwan's commitment to climate action at both domestic and regional levels, despite its exclusion from UNFCCC climate governance mechanisms. These examples show that, at least in 2024, the exclusion discourse was dominated by pro-Taiwan perspectives, including the argumentation strategies employed by MOFA.

A historical-diachronic analysis of the five Reuters articles exhibiting the *excluded* discourse reveals that the dominance of Taiwanese narratives has not been consistent over time. Three of the articles (Taiwan says shut out of U.N. climate talks due to China pressure, Reuters, November 14, 2017; 'Taiwan is Taiwan': China name dispute moves from birds to climate change, Reuters, September 27, 2020; Taiwan, excluded from climate summit, sets up 'war room' to watch talks, Reuters, November 8, 2024) primarily focus on Taiwanese responses to its exclusion, whereas two of the articles focus on China's complaints over support for Taiwan and Taiwan's participation (China



doi:10.6342/NTU202501242

complains over support for Taiwan at COP27 climate summit, Reuters, November 16, 2022; China raises complaint over Taiwan's participation in COP28, Reuters, December 9, 2023). This demonstrates how the positioning of Taiwan and China in the *excluded* discourse has not remained stable but has shifted over time. Reasons for this perhaps include the varying degrees of success of officials from the two governments in attracting press attention to their statements.



doi:10.6342/NTU202501242

### 5.3 Discourse of Contribution

Definition of contribution (Oxford Languages):

*Noun:* the part played by a person or thing in bringing about a result or helping something to advance

**Box 4: Discourse analysis of Contribution**

1. **Objects**

   ***Climate ambition:*** emissions reductions targets, energy transition targets

   ***Renewable energy:*** offshore wind energy, solar power

   ***Innovation:*** new technology (e.g. electric scooters, waste to building materials, recyclable wind turbines), new processes (e.g. urban mining)

2. **Actors**

   ***Climate ambition:*** Countries (Taiwan, Australia, India, Japan), Taiwan's central government (especially Presidents), semiconductor industry (especially TSMC)

   ***Renewable energy:*** energy industry (especially foreign companies), government

   ***Innovation:*** Taiwanese businesses (e.g. Gogoro, Swancor)

3. **Language and rhetoric**

   ***Metaphors:*** energy jackpot, battleground, stepping stone to Asian markets

4. **Discursive strategies**

   ***Positioning:*** Taiwan as an example other countries can learn from



doi:10.6342/NTU202501242

***Legitimation*** of administrative and technological remedies for climate change; of the central role of the Taiwanese government in addressing climate change

5. **Ideological standpoints and values**

***Problem-solving:*** Climate change as a problem that can be solved through human efforts and innovation

***Ecological modernisation***

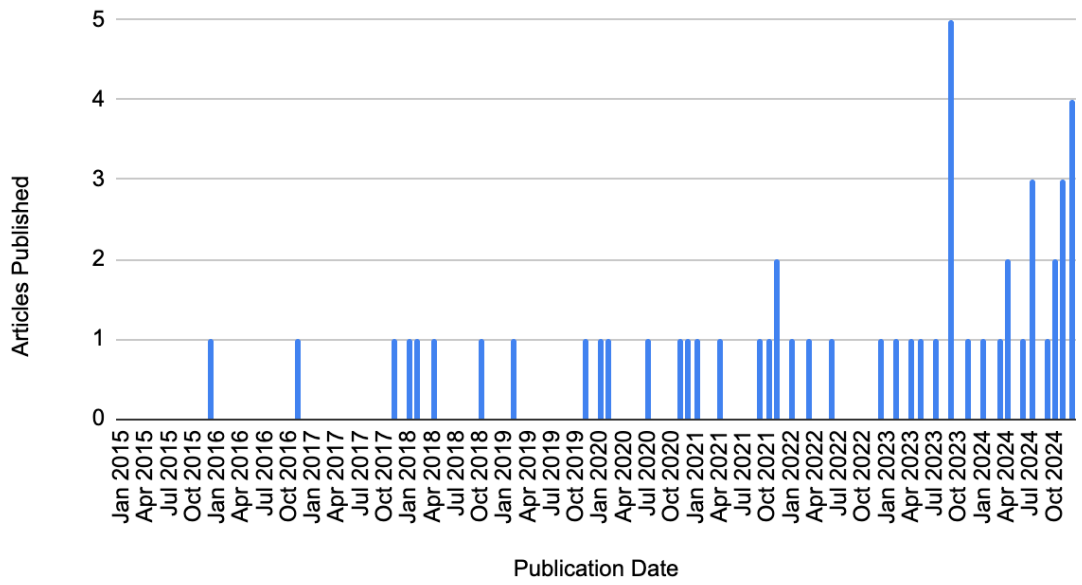
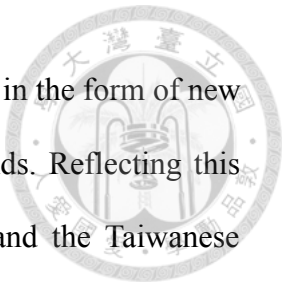



*Figure 11: Discourse of contribution over time*

The *contributor* discourse presents Taiwan as contributing to climate action through mitigation efforts and innovations, with a core message that other countries can learn from Taiwan. Of all the discourses present in the data, the *contributor* discourse covers the broadest range of objects, including emissions reductions and energy transition targets and plans from both the government and the semiconductor industry, Taiwan's



doi:10.6342/NTU202501242



renewable energy experience, international collaboration, innovation in the form of new technologies and processes, environmental education, and ESG funds. Reflecting this broad range, the central actors are similarly varied, from states and the Taiwanese government to the semiconductor and energy industries.

The 2021 announcement of Taiwan's 2050 net-zero goal, followed by the passage of the 2023 Climate Law are central events in establishing Taiwan as a "responsible member of the international community" (Taiwan begins to plan for zero emissions by 2050, Reuters, 2021) and a "key player in Asia's climate policy" (Taiwan commits to net-zero carbon emissions by 2050, Nikkei, 2023).

International collaboration on climate action is another key theme of the *contributor* discourse. At the country level, climate collaboration between states such as Australia, India, and the US are presented as mutually beneficial, for example:

> India and Taiwan have a unique opportunity to forge **a mutually beneficial partnership** in the renewable energy sector, particularly in the solar power domain. Taiwan is home to major solar wafer producers like the TSEC Corporation and Green Energy Technology, which could **significantly contribute** to India's ambitious renewable energy and battery research and development programs. The partnership also has the potential to create an offshore manufacturing base for Taiwan in India, enabling cheaper imports for quicker domestic deployment. (Solar Power: A New Opportunity for India-Taiwan Ties, The Diplomat, 2024)



doi:10.6342/NTU202501242

Collaboration in the form of foreign firms' investment into Taiwan's energy system as a result of its energy transition is the focus of many articles featuring the *contributor* discourse. It is in these articles that the ideology of ecological modernization which underpins the *contributor* discourse is most apparent. For Dryzek (2013), ecological modernization focuses on restructuring the capitalist economy to align with environmental sustainability, emphasizing the profitability of this transition. The development of green technologies, particularly clean energy solutions is prioritised. However, this reconfiguring does not require a completely different approach to the underlying political-economic system of capitalism.

Within the data, this discourse is present in articles which emphasise the energy transition not only as a form of climate change mitigation but also as a means to make profit. Taiwan's experience - and regional leadership - in offshore wind energy development is a strong example of the ecological modernization discourse, with foreign firms seeing Taiwan's energy transition as an opportunity for economic growth:

> Japan's leading power provider took its first major step in developing Asia's promising green-energy market with the completion of Taiwan's first commercial offshore wind farm. "**We expect to learn extensively and grow in this leading place for offshore wind energy,** then expand to Japan and the rest of the world," (Taiwan wind farm gives Japan foothold in Asia's green power game, Nikkei Asia, 2019)

The above quote signals one of the key metaphors applied to Taiwan in the trailblazer narrative - that of a stepping-stone, or battleground, for foreign offshore wind energy



doi:10.6342/NTU202501242

developers. Thanks to Taiwan's "good decision to join the offshore wind industry early," (Taiwan Offshore Wind Developer In Talks Over Potential Acquisition Deals, Bloomberg, 2023), and its subsequent position as a "regional leader" in offshore wind energy (TSMC Commits To 100% Clean Power, Pressuring Chipmaker Rivals To Follow Suit, Forbes, 2020), it is positioned as the starting point for companies wishing to expand their operations into Asia:

> "We see Taiwan as a **stepping stone** into Asia-Pacific," said Matthias Bausenwein, the regional general manager for Orsted, the world's largest owner of offshore wind power sites. (Offshore wind power firms see Taiwan as a **battleground** to expand in Asia, Reuters, 2018)

A historical-diachronic analysis of *contributor* articles that focus on offshore wind development reveals how the discourse has developed over time from optimism at the opportunity presented by Taiwan's plans for renewable energy development:

> … as companies, both in Taiwan and abroad, largely expect the government will stick to its renewables policy, **competition in the market is expected to heat up**. (Taiwan to spend $56bn on renewable energy, Nikkei Asia, November 28, 2016)

To becoming a "stepping stone" for the Asian offshore wind market as discussed above (Offshore wind power firms see Taiwan as a battleground to expand in Asia, Reuters, 2018), and more recently as being an example other countries can learn from - with regards to both positive and negative experiences:



doi:10.6342/NTU202501242

> Although years behind, **Australia hopes to follow Taiwan's lead** and position offshore wind at the heart of plans to replace coal (Taiwan Shows Australia the winds of change, The Age, 2023).
>
> With Victoria so invested in offshore wind, **policymakers will need to ensure they avoid the policy missteps and self-inflicted wounds of Taiwan**. (Taiwan Shows Australia the winds of change, The Age, 2023).

By using offshore wind energy as an example for a historical-diachronic analysis, it is evident that the *contributor* discourse has evolved in relation to the material reality of Taiwan's climate actions, from contributing opportunities through policy announcements, to contributing its experiences (both positive and negative) for other actors to learn from as policy is enacted.

Beyond offshore wind energy, LNG is another core element of Taiwan's energy transition strategy. The anticipated increase in Taiwan's demand for LNG-related infrastructure, alongside other infrastructure required for the energy transition, has been described as an "energy jackpot," with a major international construction firm quoted as saying Taiwan has "very strong" business opportunities (US construction titan Bechtel eyes $10bn Taiwan energy jackpot, Nikkei Asia, 2021).

Taiwanese companies in other sectors are also presented as trailblazers, developing innovations for both climate mitigation and adaptation. For example, the *contributor* discourse is also deeply linked to Taiwan's identity as a vitally important hub for



doi:10.6342/NTU202501242

semiconductor manufacturing, which positions Taiwan's approach to climate issues as having "significant global implications" (Taiwan to adopt tough new carbon cutting targets, environment czar says, Nikkei Asia, 2024). Taiwan's semiconductor industry, led by TSMC is presented as a driver of climate action both domestically and internationally, especially with regards to the transition to renewable energy:

> TSMC, the world's biggest semiconductor maker, has committed to source 100% of its power globally from renewable sources, **putting pressure on its rivals such as Samsung, as well as large power consumers across Asia, to follow suit**. (TSMC Commits To 100% Clean Power, Pressuring Chipmaker Rivals To Follow Suit, Forbes, 2020).

Another example is the transport sector, Taiwanese electric scooter company Gogoro is held up as a successful example of a technology which will not only reduce emissions but also contribute to energy grid stability:

> By tapping into the power of its parked batteries, Gogoro joins a growing number of companies exploring virtual power plants, which can help utilities avoid blackouts during periods of high demand and **reduce the need for electricity generated by fossil fuels.** (Taiwan's Battery-Swapping Stations Now Double As Mini Power Plants, Bloomberg, 2023)

Swancor, a Taiwanese firm which supplies composite materials to wind turbine blade manufacturers, is also portrayed as an innovator working to develop a cutting-edge material which will enable wind turbine blades to be recycled:



doi:10.6342/NTU202501242

> Swancor's Taiwan factory… gives a glimpse at **what this future may look like.** (Recycling Wind Turbine Blades Can Solve the Industry's Biggest Problem, Bloomberg, 2024)

Similarly, Taiwanese companies working to develop processes for urban mining (Why Taiwan Is Becoming a Leader in Urban Mining, TIME, 2024), waste to building materials (These Taiwanese Companies Are Turning Waste Into Building Materials, TIME, 2024), and sensors to help farmers adapt to climate change (Taiwan's rice farmers use big data to cope with climate change, Financial Times, 2018) appear in the discourse as examples of climate-beneficial innovation coming from Taiwan, which can be used as case studies for other areas:

> While the urban mining practices in Taiwan may not be entirely closed-loop, they **present a suggestion**; they are a **live case study** in an environment already facing finite resources and the immediate effects of pollution—because after current global resources reach their limit, the earth itself may become a single urban mine. (Why Taiwan Is Becoming a Leader in Urban Mining, TIME, 2024)

In the realm of environmental education, Taiwan is also presented as "offer[ing] an example of how to teach children about caring for their environment," with Buddhist organizations incorporating environmental awareness into their educational missions (How Taiwan uses Buddhist literature for environmental education, The Conversation, 2020).



doi:10.6342/NTU202501242

### 5.4 Discourse of Lagging

Definition of lagging (Oxford Languages):

*Adjective:* slower than desired or expected

**Box 5: Discourse analysis of Lagging identity**

1. **Objects**

   ***Energy transition:*** Renewable energy (offshore wind, solar), nuclear energy, energy targets and development

   ***Events****:* More stringent LCR, 2050 net zero target announcement

2. **Actors**

   ***Responsible:*** Government, Presidents, Taipower

   ***Impacted:*** Renewable energy developers, tech industry (especially semiconductor industry)

3. **Language and rhetoric**

   ***Metaphors:*** lip service, headwinds, mission impossible,cracks in government policy, downward spiral, hamstrung

4. **Discursive strategies**

   ***Positioning:*** responsibility of addressing climate change (and failure to address climate change) assigned to government

   ***Legitimation:*** of the Taiwanese government's central role in addressing climate change

5. **Ideological standpoints and values**

   *Ecological modernisation*



doi:10.6342/NTU202501242

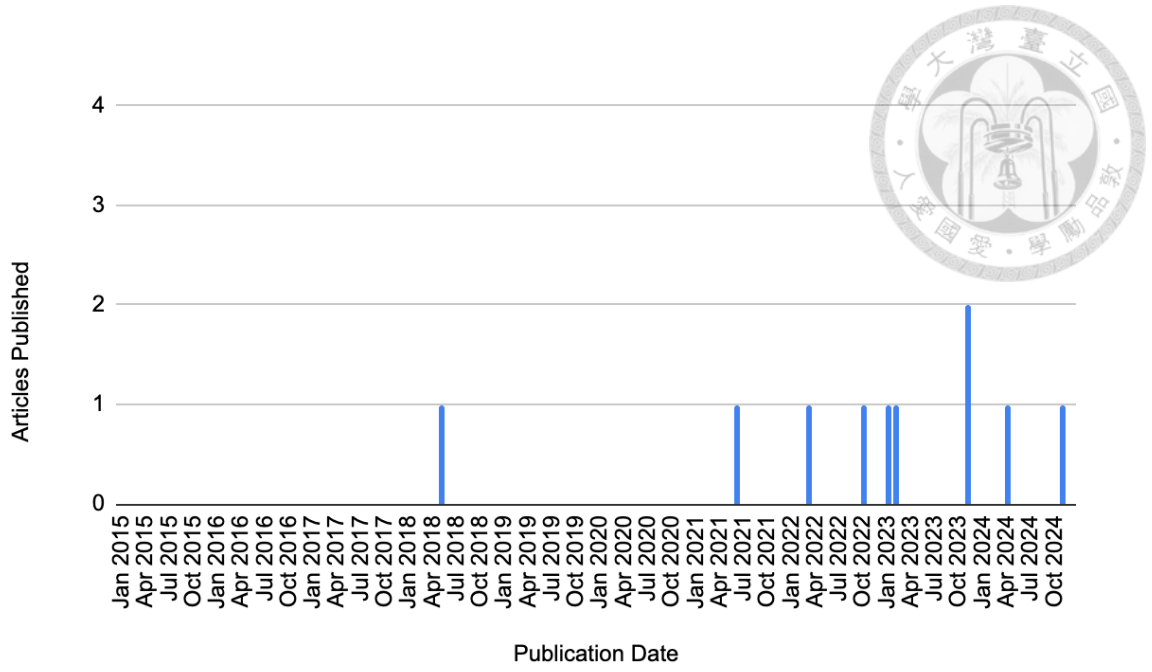



*Figure 12: Lagging discourse over time*

Of the five climate identity discourses identified in the data, *Lagging* is the most critical of Taiwan's climate action. 'Lagging' was selected as the name for this discourse as the word encapsulates both the critiques central to the discourse: that Taiwan's progress on climate and the energy transition is lagging behind its own stated ambition, and that its progress is slower than other countries. Taiwan's *lagging* identity often appears as a secondary discourse in articles where the dominant discourse is *victimisation* or *energy quadrilemma*. For the former, the *lagging* identity is invoked to show Taiwan's government is not taking sufficient action to protect its citizens and industry from the negative impacts of climate change. For the latter, the *lagging* identity is used to underline the challenges posed by Taiwan's energy transition.

The objects central to this discourse are: Taiwan's climate and energy transition goals, especially its 2050 net zero target; and progress (or lack thereof) towards those goals, especially with regards to offshore wind energy development. Central actors in the



doi:10.6342/NTU202501242

discourse can be loosely divided into two camps: those responsible for Taiwan's insufficient progress, and those affected by it. In the first camp are the Taiwanese government, and in particular President Tsai, and in the second are Taiwan's semiconductor industry and renewable energy developers.

Taiwan's overarching climate goals, especially its 2050 net-zero target, are treated more critically in the *lagging* discourse compared to the *contribution* discourse. Reasons provided for this include the argument that Taiwan does "not have a coherent action plan to decarbonise industry" (Taiwan's failure to clean up industry endangers its net zero pledge, Climate Home News, 2023) and that a lack of international pressure on Taiwan has created policy loopholes (see section 5.2 for more).

Events like the opening of a new coal plant in 2018 led to accusations that Taiwan is merely paying "lip service" to energy transformation (Taiwan Takes a Step Back With New Coal Plant, The Diplomat, 2018). This aspect of the discourse is mostly supported through quotes from NGO representatives.

Taiwan's carbon tax policies have also been critiqued, for being "well below the level believed necessary to contain climate change" (Taiwan's Proposed Carbon Tax Looks Too Low to Curb Emissions, Bloomberg, 2022) and for not being compulsory "even though Asian countries including Japan, South Korea, Singapore and China have done so" (Taiwan struggles to balance high-tech and low-carbon ambitions, Nikkei Asia, 2021)



doi:10.6342/NTU202501242

One of the risks of Taiwan's laggardness identified in the discourse is the impact on economic and industrial development:

> "For healthy economic development, the Taiwanese government **must speed up its actions in a climate emergency**," Liu adds. (No Water No Microchips: What Is Happening In Taiwan?, Forbes, 2021)

> Some argue Taiwan's **policy sluggishness will harm its industrial competitiveness**, as rivals elsewhere have impressed potential customers by embracing carbon markets. (Taiwan struggles to balance high-tech and low-carbon ambitions, Nikkei Asia, 2021)

Offshore wind energy is the focus of many articles embodying the *laggard* discourse, likely because of its key role in Taiwan's energy transition strategy to reach net-zero, and because many international companies are involved in the industry (as explored in section 5.3). This second factor makes Taiwan's offshore wind industry particularly relevant to international readers.

While the offshore wind industry is also a key object in the Trailblazer discourse (see section 5.3) with Taiwan's ambitions for the sector being widely praised, a turning point occurs around 2021, when coverage turns more critical. After this, there is a turn in articles towards the *lagging* discourse, with an emphasis on progress towards targets being slower than anticipated, with the most extreme examples describing the industry as in "peril" (Taiwan's Wind Power Ambitions Are in Peril, Bloomberg, 2024) and even



doi:10.6342/NTU202501242

in “crisis” (Japan Firms Exit Taiwan Offshore Wind Projects, Deepening Industry Crisis, Bloomberg, 2023).

Both external and internal causes are given for Taiwan’s failure to live up to its wind power development ambitions. The COVID-19 pandemic and the Russia-Ukraine war are given as causes for delays in construction. However, the greatest attribution is assigned to “policy missteps” (Taiwan Shows Australia the winds of change, The Australian, 2023).

Most notably, local content requirements - described as “rigid” (Japan Firms Exit Taiwan Offshore Wind Projects, Deepening Industry Crisis, Bloomberg, 2023) and “byzantine and inflexible” (Taiwan’s Wind Power Ambitions Are in Peril, Bloomberg 2024) - are presented as increasing costs, consequently leading to worsening delays and even to some developers leaving the market altogether.

Other regulatory changes, such as the cessation of de-facto subsidies, are presented as contributing to the wind industry’s challenges by increasing the power price developers require for profitability above the price industrial consumers are willing to pay. These critiques of policy generally seem to originate from international offshore wind developers, who are platformed through copious quotes, such as:

> Marina Hsu, regional managing director for CIP, another Danish wind investor and developer active in Taiwan, warns that the wind industry is in a “**downward spiral**” as a result of these regulatory changes… “The government basically



doi:10.6342/NTU202501242

designed a **regime that is not working**," says Hsu. (How Taiwan's green power deficit threatens tech industry's bid for net zero, Reuters 2024)

Treatment recommendations target these "cracks in government policy" (Taiwan's Wind Power Ambitions Are in Peril, Bloomberg, 2024), for example by suggesting that the government "water down" local content requirements (Taiwan Shows Australia the winds of change, The Australian, 2023).

A comparative-synchronic analysis of the two articles published in 2024 that cover offshore wind and are dominated by the *lagging* discourse show not only that this discourse is particularly prevalent in business-specialised publications but also that overly-stringent regulations, especially the local content requirement, are seen as the main culprit for Taiwan's laggardly offshore wind development across the articles, which otherwise focus on other reasons for the challenges facing the industry's development in Taiwan (Taiwan's Wind Power Ambitions Are in Peril, Bloomberg, April 17, 2024; Taiwan's promising offshore wind power sector could be blown off course, Nikkei Asia, November 5, 2024).



doi:10.6342/NTU202501242

### 5.5 Discourse of Energy Quadrilemma

Definition of quadrilemma:

*Noun*: A situation where a choice must be made between four options

**Box 6: Discourse analysis of Energy Quadrilemma**

1. **Objects**

   Energy transition towards renewables; Nuclear Phase Out; Semiconductor Industry's energy requirements; security threat from China

   ***Events:*** Fukushima 2011, Nuclear reactor closures, Blackouts, 2024 Taiwan Presidential Election

2. **Actors**

   President Tsai Ing-wen, President Lai Ching-te, Taipower, DPP, KMT, Semiconductor industry, China

3. **Language and rhetoric**

   Difficult choice: struggle to balance, no easy choice

   Energy transition towards renewables: hurdle, headwinds, high-risk gamble, laboured energy transition

   Nuclear Phase Out: thorn in government policy, political headache, squandered potential, self-destructive

4. **Discursive strategies**

   ***Politicisation:*** of nuclear energy

   ***Legitimation:*** of Taiwanese government's central role in addressing climate change

5. **Ideological standpoints and values**



doi:10.6342/NTU202501242

*Securitisation of climate and energy:* existential, assuring Taiwan's de-facto independence

*Ecological modernisation*

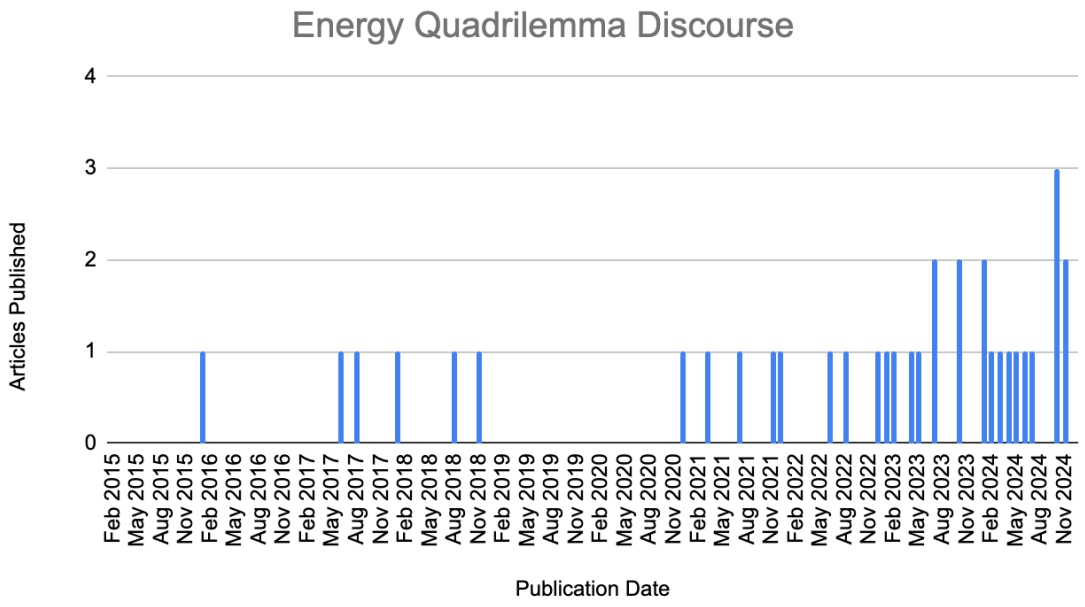



*Figure 13: Energy Quadrilemma discourse over time*

Taiwan's laggardly renewable energy development is one of four key factors driving the *energy quadrilemma* discourse, which presents Taiwan as struggling to balance its decarbonisation ambitions with phasing out nuclear power while producing sufficient power for the semiconductor industry and ensuring national security in the face of threats from China. This discourse is primarily concerned with *risk*, emphasising Taiwan's vulnerability and potential dangers if this quadrilemma remains unsolved, with various treatments recommended.



doi:10.6342/NTU202501242

> The slow ramp-up of renewable energy and the rising use of fossil fuel-fired power as nuclear winds down highlight **a hard central choice for the government**. It wants to prioritize both economic growth and decarbonization, yet it is hard to see how it can do both. (Taiwan struggles to balance high-tech and low-carbon ambitions, Nikkei Asia, 2021)

One of the central risks presented in the discourse is the concern that Taiwan will soon have insufficient (green) energy supply to meet demand, with the risk of undermining economic growth. On the supply side, the discourse emphasises the challenges emerging from Taiwan's "unique" decision to pursue grid decarbonisation at the same time as phasing out nuclear energy. These challenges are compounded by increasing energy demand from the tech industry, growing due to the manufacturing of increasingly advanced semiconductors and the expansion of AI data centres.

This complex situation has led to Taiwan's energy transition plans being described as "mission impossible" (Economy vs. environment: Some Taiwanese consider cashing in their chips, Washington Post, 2023).

Unlike in the *laggard* discourse, articles exhibiting the *energy quadrilemma* discourse generally do not examine the reasons behind the delay in renewables development in great detail, instead focusing on the consequences of this slow progress:

> But new sources could take **years to develop**, making power rationing and blackouts a possibility as the gap narrows between demand and generating



doi:10.6342/NTU202501242

> capacity. (Nuclear Ghost Town Reveals Power Risk for Taiwan's Energy Shift, Bloomberg, 2018)

The difficulties of balancing competing concerns is a characteristic feature of the *energy quadrilemma discourse,* and this is also present in articles exploring the challenges within Taiwan's move towards decarbonisation. For example, one article explores the conflict between the government's planned expansion of natural gas facilities - a key component of its decarbonisation strategy - and environmentalists who oppose it based on ecological concerns:

> The venture is **pitting environmental campaigners against the Tsai Ing-wen-led government**, which has voiced support for the plant as it pivots toward cleaner burning fuels and renewables. (A $2 Billion Energy Project Threatens a 7,000 Year-Old Reef, Bloomberg, 2021)

With regards to Taiwan's nuclear phaseout, several key events are identified in the discourse. The 2011 Fukushima incident is widely referenced as the turning point after which public opinion in Taiwan turned against nuclear power. The closure of reactor 1 at the Maanshan Nuclear Plant and reactor 1 at Kuosheng Nuclear Plant 2 are also identified as key events. Blackouts, such as those that occurred in summer 2022, are also referenced as a means to demonstrate the negative consequences of Taiwan's move away from nuclear power. The 2024 Taiwan presidential election is presented in some articles as an opportunity to re-address this issue.



doi:10.6342/NTU202501242

One of the key discursive strategies employed in this discourse is the politicization of nuclear energy. Rhetorically, this is made evident through descriptions of nuclear power as "a thorn in government policy" (TSMC Leads Rush for Renewables Ahead of Taiwan Energy Vote, Bllomber, 2021) and "a political headache" (Nuclear Ghost Town Reveals Power Risk for Taiwan's Energy Shift, Bloomberg, 2018). Similarly the conflict between Taiwan's leading political parties, the DPP and KMT, on this issue are regularly emphasised in the discourse, including through an interview with former KMT President Ma (Taiwan's Ex-President On China, Nuclear Power And 'The Most Stupid Policy In The World', Huffington Post, 2023). This is somewhat unusual, as the distinctions between the political parties and other domestic political factors are generally overlooked in other discourses.

An explicit support for nuclear energy is dominant in this discourse, with an overall omission of any anti-nuclear perspectives. Descriptions of the Nuclear-Free Homeland policy are overwhelmingly negative: "self-destructive" (Taiwan's Election Has Big Ramifications for Energy Security, The Diplomat, 2024) "squandered potential" (Taiwan Is Retreating From Nuclear Energy. At What Cost?, Huffington Post, 2023) etc. Many of the suggested solutions to solving the energy quadrilemma also revolve around a resurgence of nuclear energy, especially in articles published around the time of Taiwan's 2024 presidential election, which call explicitly for President Lai and the DPP to reconsider their position on nuclear energy:

> Working with the KMT and TPP to launch a **nuclear comeback** would bolster the DPP politically, not harm it. (Taiwan's Lai needs to **rethink** nuclear shutdown plan, Nikkei Asia, 2024)



doi:10.6342/NTU202501242

> Lai's fresh mandate allows him to **renew the national dialogue** on nuclear energy. (Taiwan's Election Has Big Ramifications for Energy Security, The Diplomat, 2024).

Both decarbonisation and the nuclear phase-out are explicitly linked to President Tsai Ing-wen, making her the central actor in this aspect of the discourse. By directly associating both policies with her, the policies are presented as political decisions:

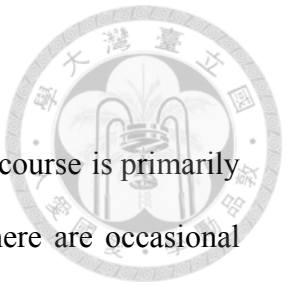
> Taiwanese **President Tsai Ing-wen's push** to have the island generate 20% of its electricity from renewables by 2025 is running into difficulties. (Taiwan's renewables push hit by big tech's appetite for power, Nikkei Asia, 2020)

Another issue identified on the supply side is Taipower's financial situation, although this receives comparatively less attention in the discourse. The political nature of Taipower is emphasised, as its inability to sufficiently raise prices is linked to political pressure to keep prices low, although this is not linked to any specific party. The following quote again shows the essence of the quadrilemma, highlighting the varied threats posed by Taiwan's existing energy system:

> The precarious finances of Taiwan's sole electricity utility are **threatening** the island's clean energy ambitions, **tarnishing** its attractiveness as a manufacturing hub for the world's biggest chipmakers and even **adding to its vulnerability** in the event of a conflict with China. (Taiwan's Troubled Utility Poses Risk to Chipmakers' Green Goals, Bloomberg, 2024)



doi:10.6342/NTU202501242



With regards to the risks of these challenges if left unabated, the discourse is primarily concerned with the economic and national security risks. While there are occasional mentions of electricity shortages impacting households, this is not the focus of any of the articles collected. The semiconductor industry is the primary actor with regards to economic risks, although references are made to the broader impacts on trade if fossil fuel use increases as a result of slow progress in decarbonisation combined with nuclear phaseout, with CBAM offered as a particular example:

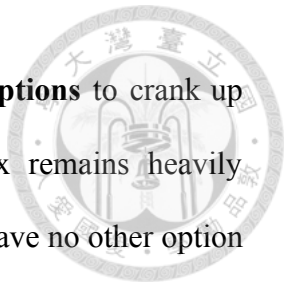
> This [increased use of fossil fuels] would not only delay Taiwan's net-zero goals but also **impact trade**…. "If the EU imposes carbon tariffs, it will seriously impact Taiwan's export competitiveness." (Taiwan nuclear plant closure tests Tsai's energy transition, Nikkei Asia, 2021).

Taiwan's semiconductor industry is described as being "hit" and "strained" by the energy transition, which is presented as causing sudden electricity price jumps and a growing risk of blackouts (Chipmaker TSMC hit by Taiwan's soaring energy prices and growing outages, Financial Times, 2024). A deficit of green energy is presented in the discourse as a risk to Taiwan's industrial competitiveness:

> The adoption of net zero emissions targets by global technology giants like Apple, Google and Microsoft is turning into **a serious problem** for Taiwan's massive chipmaking industry. Pressure to decarbonise the extremely power-hungry production of semiconductors is rising rapidly, but chipmakers based on the island – such as Apple supplier Taiwan Semiconductor



doi:10.6342/NTU202501242



> Manufacturing Company Limited (TSMC) - have **limited options** to crank up the use of renewable electricity, as Taiwan's power mix remains heavily dominated by fossil fuels. TSMC and other suppliers might have no other option but to **move production elsewhere**. (Net zero targets could force Taiwan's chipmakers abroad, CLEW, 2022).

This element of the discourse reveals an underlying ideology: growthism. Growthism is the idea that economic growth must be achieved at all costs, and that there should be no limits to growth. In this case, presenting the energy transition as a challenge to growth (in the form of increased semiconductor production) that must be solved reveals that growth is seen as the priority, to which decarbonisation is secondary. An alternative perspective, such as degrowth, would perhaps argue that the way to solve Taiwan's energy quadrilemma is to focus on decreasing demand, rather than increasing supply.

The fourth aspect of Taiwan's energy quadrilemma is the connection between energy security and national security. Within the discourse, energy security is viewed as a component of national security that is "nearly as nearly as existential as military funding" (For Taiwan, as for Ukraine, Energy Security Is Existential, Wall Street Journal, 2023). This connection is made explicit through a quote from Environment Minister Peng Chi-ming:

> Peng framed energy as not only a climate issue but also a security matter. "A top priority is to ensure **Taiwan's security**, which includes our **energy security and energy stability**," he said. (Taiwan to adopt tough new carbon cutting targets, environment czar says, Nikkei Asia, 2024)



doi:10.6342/NTU202501242

One of the major risks to national security presented in the discourse is Taiwan's increasing reliance on imported fossil fuels as a result of the nuclear phaseout and the laggardness of the energy transition combined with increasing demand for energy, eg.:

> Taiwan's heavy reliance on imported fossil fuels, around 80% of its electricity came from gas, coal and oil in 2022, also leaves it **vulnerable** in the event of an attack or even a naval blockade by China. (Taiwan's Troubled Utility Poses Risk to Chipmakers' Green Goals, Bloomberg, 2024)

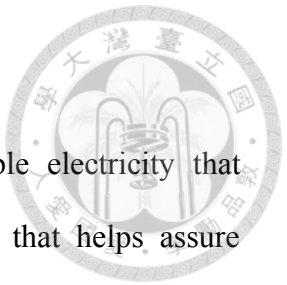
An alternative perspective is also offered, suggesting that increasing energy imports from the US could have a beneficial effect on Taiwan's national security:

> To ensure that Taiwan won't be cut off in a geopolitical crisis, Webster recommends that Taipei **buy more liquefied natural gas from the US** If China's navy were to interdict a U.S.-flagged ship, the US Navy would almost certainly intervene (Taiwan Has a Big National-Security Risk: It Imports 97% of Its Energy, Wall Street Journal, 2023)

The risks posed by the energy transition to the semiconductor industry, as discussed in more detail above, are also linked to national security through the idea of the "silicon shield" - the idea that Taiwan' semiconductor industry is of such global importance that any threat to it (i.e. from a Chinese invasion) will be intolerable to the US. As such, if the semiconductor industry relocates away from Taiwan due to energy pressures, this will increase Taiwan's vulnerability:



doi:10.6342/NTU202501242



> If its plan falters, Taiwan will sacrifice the cheap, reliable electricity that fostered the high-tech manufacturing industry — and one that helps assure **Taiwan's de facto independence**. (Taiwan Is Retreating From Nuclear Energy. At What Cost?, Huffington Post, 2023)

Other risks posed by the energy quadrilemma to national security include the vulnerability of Taiwan's energy grid to Chinese attacks (Taiwan war game exposes vulnerability of energy grid to a China attack, Financial Times, 2024) and the spreading of climate disinformation:

> During the 2024 elections, there were at least eight instances of information manipulation related to electricity prices, with claims that the ruling government's energy policies were inefficient. Notably, IORG highlighted that **Chinese state media had manipulated narratives** to suggest that Taiwan's semiconductor industry was suffering due to rising electricity costs, further exacerbating public discontent. (Climate Disinformation Is Compromising Taiwan's Efforts in Defending Democracy, The Diplomat, 2024)

Taiwan's response to addressing the perceived national security threat posed by its current energy policy is critiqued:

> Critics say **Taiwan's government hasn't taken energy security seriously enough.** "It's a manifestation of Taiwan's lack of preparedness in the face of threat of invasion," says Elbridge Colby, a deputy assistant secretary of defense



doi:10.6342/NTU202501242

in former President Donald Trump's administration. (Taiwan Has a Big National-Security Risk: It Imports 97% of Its Energy, Wall Street Journal, 2023)

Several treatment recommendations to improve Taiwan's energy security - and subsequently national security - are presented in the discourse. The dominant suggestion is to continue to utilize nuclear power:

> Taiwan has only a week's worth of natural gas in storage, and a blockade like the one that followed a controversial visit last summer by then-US House Speaker Nancy Pelosi would send gas barges scrambling away from Taiwanese ports. Coal similarly requires steady imports to the island. Same with oil. And while China can't darken the sun or halt the wind, Taiwan has limited space and resources for solar panels, turbines and batteries, and their supply chains also overwhelmingly run through the mainland. **By contrast, nuclear reactors can pump out steady carbon-free electricity for two years or more without needing fresh uranium fuel.** (Taiwan's Ex-President On China, Nuclear Power And 'The Most Stupid Policy In The World', Huffington Post, 2023)

Alternative recommendations include "building up renewable energy capacities" (Taiwan's frequent blackouts expose vulnerability of tech economy, Nikkei Asia, 2022), although the potential for renewable energy to contribute towards national security (for example by diversifying the grid) are overlooked, suggesting the dominant agenda behind this narrative is pro-nuclear.

The securitisation of energy issues is the core value underlying this discourse, reflecting



doi:10.6342/NTU202501242

both a broader trend towards an interest in non-traditional elements of security, and also Taiwan's identity being strongly linked with its geopolitical status in international news discourses.

In the most recently published articles which embody this discourse, we can see that President Lai appears to be actively responding to this discourse by proposing alternative ways to solve Taiwan's energy quadrilemma. These proposals include importing green energy from neighbouring countries (Taiwan Considers Importing Clean Energy From Nearby Countries, Bloomberg, 2024) and considering the use of nuclear power for backup generation (Taiwan Considers Keeping Nuclear Reactors on Emergency Standby, Bloomberg, 2023).

The *energy quadrilemma* discourse also reveals how underlying economic values shape Taiwan's climate identity. Within the discourse, Taiwan is presented as struggling to sufficiently increase and stabilise its supply of green energy, which threatens semiconductor manufacturing. Increasing the supply of green energy is presented as important due to the needs of the semiconductor supply chain, rather than for environmental (confronting climate change) or health (reducing air pollution) reasons.

The omission of another obvious solution to this problem - reducing energy demand by reducing industrial production - is revealing. This omission not only underscores how Taiwan's climate action is assessed according to the needs of the global economy, rather than ecological or human needs, but also reveals the underlying ideology of growthism present in the discourse: the need for continued production growth is unquestionable.



doi:10.6342/NTU202501242

The ecological modernisation discourse pervades the *energy quadrilemma* discourse, especially in texts focusing on the renewable energy industry and the semiconductor industry. Ecological modernization refers to "a restructuring of the capitalist political economy along more environmentally sound lines, but not in a way that requires an altogether different kind of political-economic system" (Dryzek, 2013). The central premise of ecological modernization is that environmentally friendly transitions present profitable opportunities for businesses. Ecological modernisation ignores potential limits to growth, taking the existence of the capitalist political economy for granted (Dryzek, 2013).



doi:10.6342/NTU202501242

## 6. Implications of Climate Identity Constructions for Taiwan

The above results have four key implications for Taiwan. Firstly, Taiwan's climate identity has been constructed by the international media in diverse ways, with the five identified identity discourses appearing across newspaper types and countries of publication. Secondly, spring 2021 marked a key shift in the discourse, demonstrating how international media coverage of Taiwan develops in response to key events. Thirdly, the Taiwanese government is positioned as the key actor responsible for addressing climate change across the discourses, effectively legitimising the Taiwanese government in the minds of international audiences. Finally, while MOFA's climate diplomacy has successfully influenced some of the international media discourses, other discourses demonstrate the underlying role of international interests, with the result that Taiwan's climate identity is often subordinate to its security and economic identities - especially that of "semiconductor superpower." These implications are discussed in detail in the following sections.



doi:10.6342/NTU202501242

### 6.1 Taiwan's Climate Identities have been Constructed in Diverse Ways

This thesis' investigation into how international media discourses have constructed Taiwan's climate identities has uncovered five distinct identities expressed through discourses: Taiwan as a victim of climate change ***(discourse of victimisation)***, as being excluded from international climate governance ***(discourse of exclusion),*** as being a constructive contributor and collaborator ***(discourse of contribution)***, as a laggard failing to meet expectations ***(discourse of lagging)***, and as facing a quadrilemma in balancing several competing energy concerns ***(discourse of energy quadrilemma)***.

The identification of multiple climate identities present in the discourse supports the constructivist claim that states can possess multiple - and even contradictory - identities and expands this claim into the realm of climate identities. How these identities interact with each other in the discourse - in supportive and contradictory ways - is visualised by figure 14.

For example, The *victimisation* and *contribution* identities are often referenced in the *excluded* discourse, to emphasise why Taiwan should be included in the international climate regime. The *victimisation* discourse is invoked to demonstrate Taiwan's need to learn from others' experiences to minimise its own climate vulnerability. The *contribution* discourse is invoked because it aligns with international climate action, and because others can learn from Taiwan's experience and expertise.

The *lagging* and *energy quadrilemma* discourses reference the *contribution* discourse, but in a way that undermines the *contribution* identity through positioning Taiwan as



doi:10.6342/NTU202501242

having strong ambition and potential to contribute to climate change which is not being met presently. The *lagging* identity is referenced in the *energy quadrilemma* discourse as evidence that Taiwan's energy transition is facing challenges.

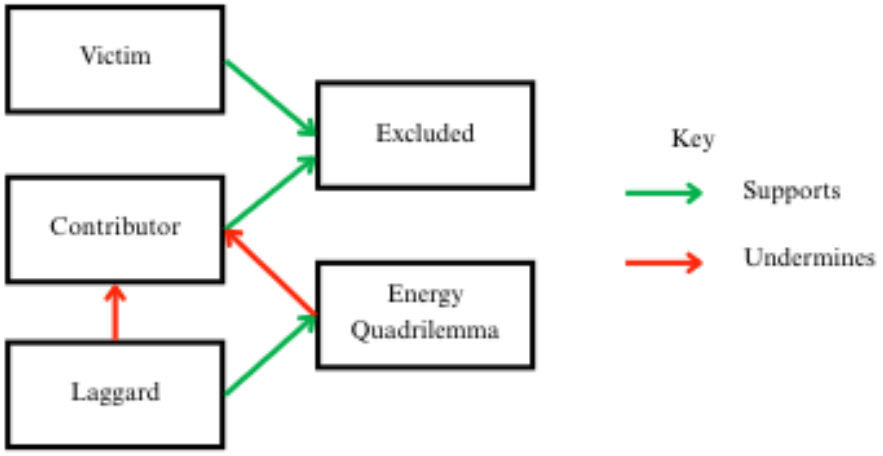



*Figure 14: Relationships between discourses*

While it is beyond the scope of this research project to conduct a thorough statistical analysis of how the identities present in discourses from different categories of news source and different countries differ, several observations can be made. Potential explanations for these observations are given below, although conventions within the media landscapes of different countries and news spheres are likely to play a significant role in the topics covered and the discursive approach used.



doi:10.6342/NTU202501242

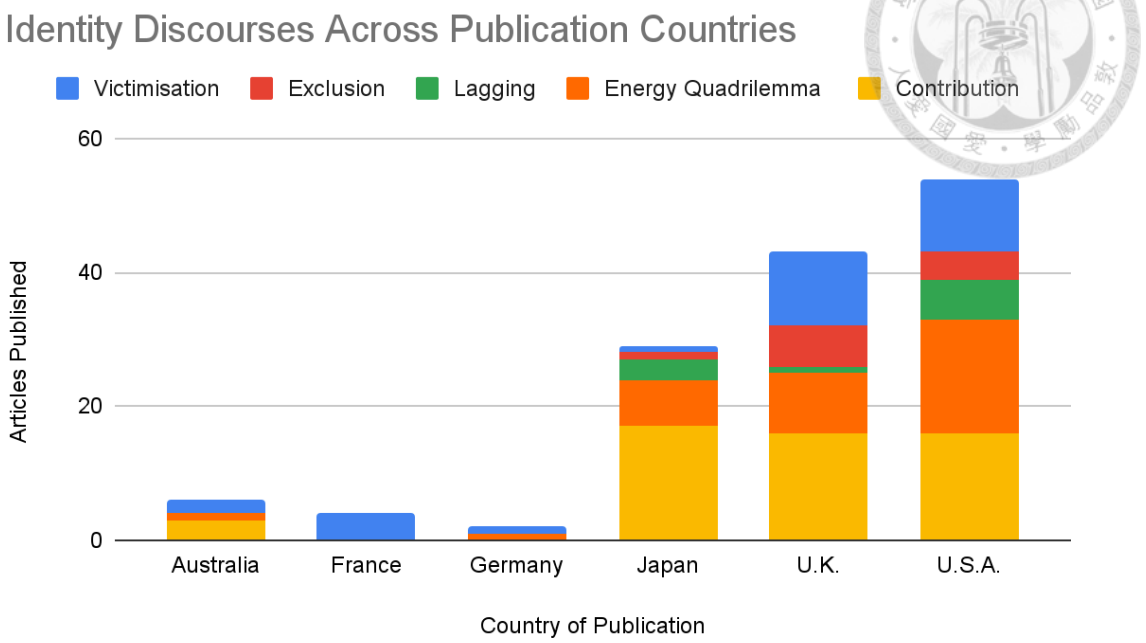



*Figure 15: Climate identity discourses by country of publication*

Figure 15 shows that there are a similar amount of articles in which *contribution* is the dominant discourse published in the US, the UK, and Japan (the three countries with the most publications), showing that audiences of news from these three countries will likely be exposed to positive narratives of Taiwan as a contributor to climate action. The connections between this positive coverage of Taiwan's climate actions and the overall stance of the media in these countries towards Taiwan, especially with regards to the cross-strait relationship, merits further investigation

US publications have the highest occurrence of the *lagging* and *energy quadrilemma* discourses, the two most critical discourses. Out of all the countries included in this research, the US has the greatest influence on Taiwanese policymaking given the importance of the bilateral security relationship. As such, the *energy quadrilemma* discourse reflects the US's vested interest in Taiwan's security issues - including energy



doi:10.6342/NTU202501242

security. Furthermore, the proposed solutions conveyed by American journalists and publications may have a more influential role in shaping policy making in Taiwan, leading to a more critical approach than that taken by publications from other countries.

Japanese publications published significantly fewer articles in which the *victim* discourse is dominant. The only Japanese publication included in the study, Nikkei Asia, is a business-focused publication, and as shown by figure 16, this sub-set of publications published fewer articles containing the *victim* discourse overall.

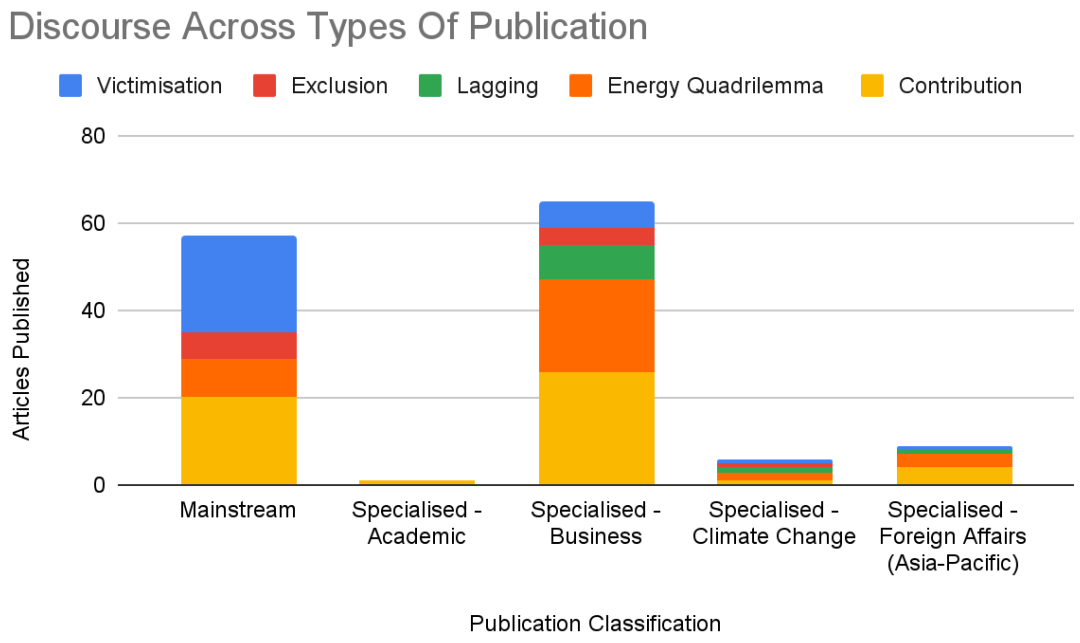



*Figure 16: Climate identity discourses by type of publication*



doi:10.6342/NTU202501242

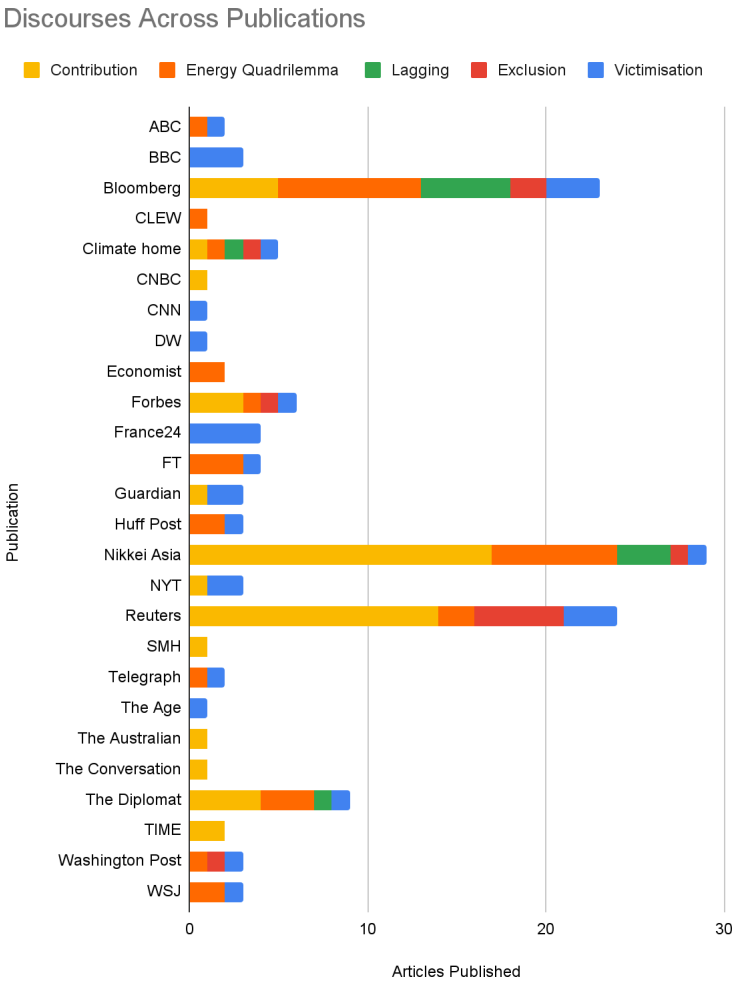



*Figure 17: Climate identity discourses across publications*

With regards to the type of publication, mainstream articles were dominated by the *victimisation* and *contribution* discourses, and no *lagging* articles were recorded. This reflects the global media's focus on the societal dimensions of climate change and how humans are working to combat it (Hase et al., 2021).

Articles published in specialised business publications were dominated by the *contribution* and *energy quadrilemma* discourses, likely because the climate action of the Taiwan government, and both Taiwanese and international companies, and the



doi:10.6342/NTU202501242

threats posed to the semiconductor industry by Taiwan's energy quadrilemma most closely align with the interests of business-focused readers.

The *lagging* discourse only appears in specialised publications, suggesting that these publications have more interest in evaluating the success - or otherwise - of energy and climate policy compared to mainstream publications, showcasing more critical and analytical approaches.

The discourses present in each publication may also be influenced by the publication's overall stance on the cross-strait relationship, such as whether it leans more pro-China or more pro-Taiwan. Investigating this possibility would require further research into the positionality of each media publication, such as Zhang's (2010) analysis of the New York Times' coverage of Taiwanese independence, which found the full complexity of the issue was not covered, but rather interpreted in line with dominant American interests and themes.

A range of identity discourses appear in articles across time, country of publication, and type of publication, with no clear overall trends emerging. This implies that international audiences are exposed to a diverse range of ideas about Taiwan's climate identity, regardless of which of these publications they read. There is no universal understanding of Taiwan's climate identity, with different - and even competing - conceptualisations emerging from a range of factors including evolving material realities and underlying ideological standpoints.



doi:10.6342/NTU202501242

### 6.2 Temporal Trends: Discourse Shift Starting in Spring 2021

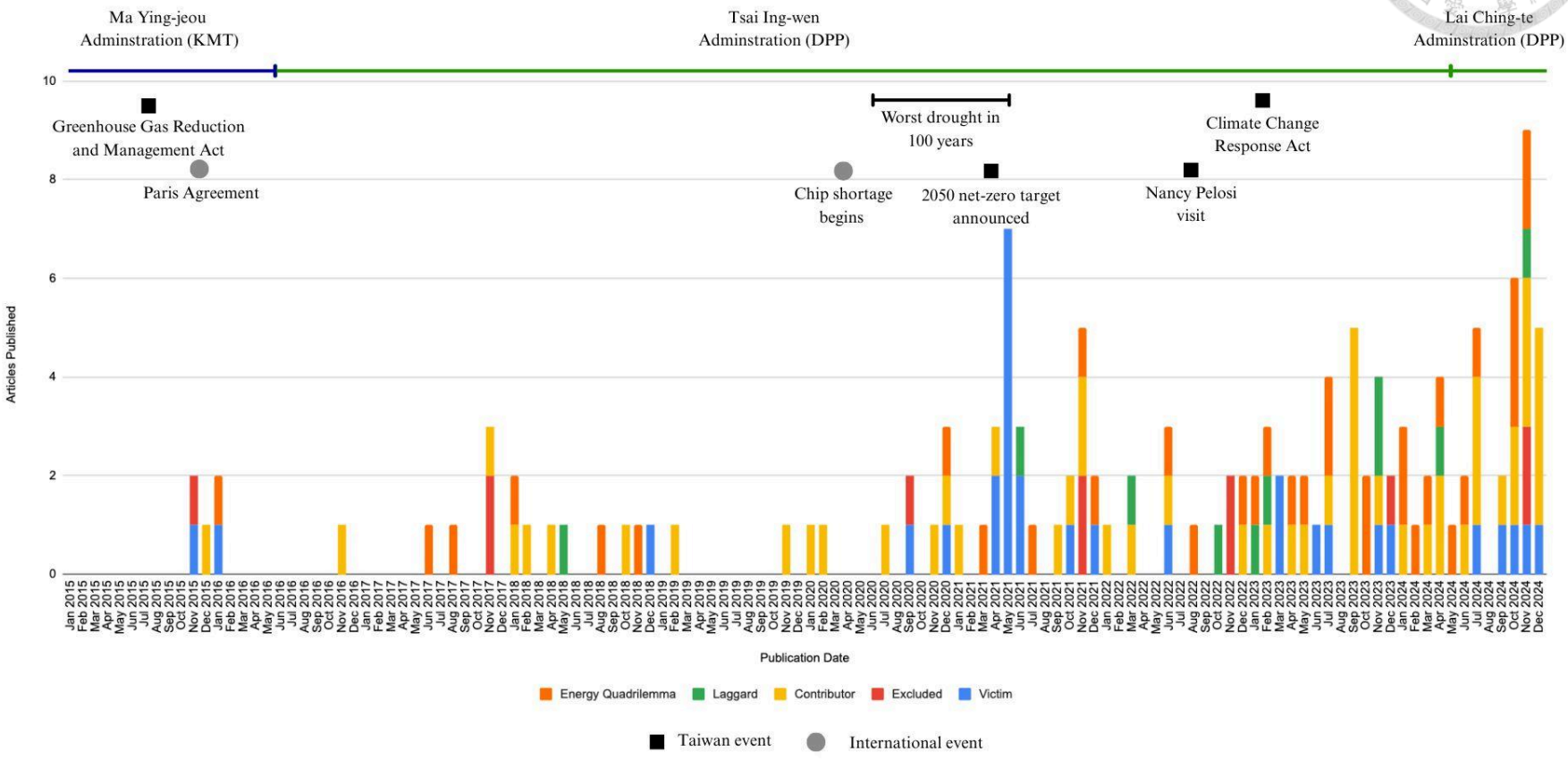
Figure 18 tracks the appearance of the five discourses over time, in relation to several key events both within Taiwan and internationally. Spring 2021 (April/May) marks a key turning point in the discourse. Before spring 2021, the total number of articles published in a single month never exceeded three, with regular months-long gaps with no articles published. After spring 2021, there are significantly fewer months where nothing is published, and multiple months saw publications of three or more articles. This increase in publishing is the result of several factors, explored below. These factors show how the international media's conceptions of Taiwan's climate identity have shifted as a result of technological, geopolitical, and social changes.

The global chip shortage was triggered by the COVID-19 pandemic in 2020, which caused a simultaneous increase in demand for and decrease in supply of semiconductors, as stay-at-home orders led to a surge in demand for electronic devices such as laptops and iPads, while semiconductor manufacturing sites faced staff shortages and even closures (Wishart-Smith, 2024). This challenge was intensified by pre-existing US trade restrictions on China, neon gas shortages caused by the Russian invasion of Ukraine, and extreme weather related disruptions, notably the 2020-2021 drought in Taiwan. The spike in the *victim* narrative seen between April - June 2021 is directly linked to the drought and its impact on Taiwan's semiconductor industry.



doi:10.6342/NTU202501242

*Figure 18: Timeline of media discourses and key events*






doi:10.6342/NTU202501242

Figure 19 shows how the articles focused on the semiconductor industry only appeared in the data set starting from summer 2020, with a significant spike in summer 2021, followed by continued interest in the time period since. This demonstrates how increased global media interest in semiconductors has contributed to the discourse shift in coverage of Taiwan and climate-related issues starting in Spring 2021.

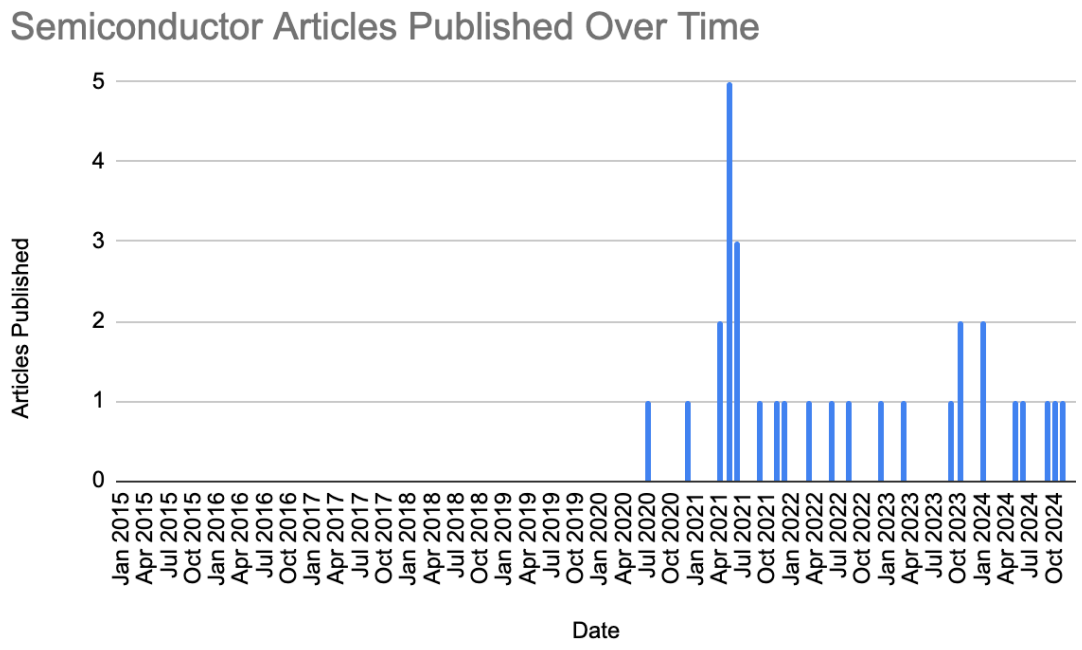



*Figure 19: Articles covering the semiconductor industry over time*

In the years since, rapid developments in AI technologies, which rely on advanced chips, has also led to increased international importance being placed on the semiconductor supply chain, and subsequently TSMC and Taiwan. A Google trends search conducted by the author provides supporting evidence by showing interest in the search terms “TSMC” and “Taiwan chips” increased from 2021, as shown in figures 20 and 21.



doi:10.6342/NTU202501242


*Figure 20: Interest in "TSMC," 2015-2024 (Google trends, 2025)*


*Figure 21: Interest in "Taiwan Chips," 2015-2024 (Google trends, 2025)*

US-China tensions escalated during this period, with former Speaker of the House Nancy Pelosi's August 2022 visit notably intensifying frictions. China responded to the visit by launching military exercises around Taiwan, and suspending cooperation with the US on a range of issues - including a climate change working group (Lo, 2022). These developments thrust Taiwan - in particular, its resilience to a Chinese attack - back into the media spotlight.



doi:10.6342/NTU202501242

Finally, anecdotal evidence suggests many foreign journalists relocated to Taiwan between 2020-2022, when China's borders were closed due to the Covid-19 pandemic, consequently leading to an increase in Taiwan-focused reporting (Pape, 2024).

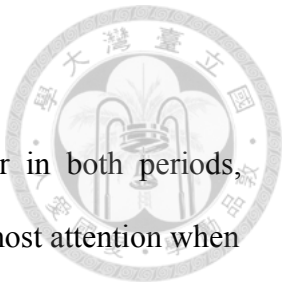
These factors - the chips shortage and subsequent increased interest in semiconductor supply chains, heightened US-China tensions with Taiwan as a focal point, and the movement of international journalists to Taiwan as a result of the COVI-19 pandemic - have all contributed to increasing overall international interest in Taiwan since 2021. Not only has climate change coverage increased as a result of this new media focus, but the coverage also reflects these factors, with security and semiconductors becoming key subjects of climate change reportage - as will be explored in section 6.4.

This increased attention presents both opportunities and challenges for Taiwan's climate diplomacy. More attention from the international media, which has historically overlooked Taiwan (Rawnsley, 2014) means more opportunities to showcase Taiwan's climate action to the international public and achieve its goals of increased recognition and international space. However, it also creates more risks - as seen in the *laggard* dialogue. If Taiwan's climate policy is presented as insufficient, this could undermine Taiwan's climate diplomacy by making MOFA narratives less credible to international audiences.

Aside from the *victim* discourse, a few other temporal trends emerge. Occurrences of the *laggard* discourse significantly increased in the post-summer 2021 period, when President Tsai's climate policies - especially the deployment of offshore wind - began to fail to reach their promised milestones.



doi:10.6342/NTU202501242



The *exclusion* discourse remains tied to the month of November in both periods, demonstrating that Taiwan's exclusion from the UNFCCC receives most attention when COPs are underway.



doi:10.6342/NTU202501242

## 6.3 Underlying Values: a State-Centric View of Climate Action Bolsters Taiwan's Legitimacy

Irrespective of discourses, the vast majority of the collected articles share underlying values regarding the nature of climate change and how it ought to be addressed. Across the data, there is an acceptance of anthropogenic climate change as a scientific fact, although scientific uncertainties about the connection between specific extreme weather events and climate change persist. This suggests that the overall discourse on climate change has moved beyond the tendency to position its existence as a "debate" in the name of balanced reporting, a phenomenon found in many earlier investigations of news coverage of climate change (e.g. Brüggemann and Engesser, 2017). Instead, climate change is universally presented as a threat to Taiwan's society and economy, and human action is presented as a means to mitigate this risk.

Across the discourses, the responsibility for solving climate change through both mitigation and adaptation measures is placed on the government in a domestic context and states in an international context. This legitimises both the international climate governance system, and the Taiwanese government's centrality in problem-solving.

Drawing on Entman's theorisation of the significance of framing as a strategic political tool, treatment recommendation is of particular relevance to understanding the political power of discourse (Entman, Matthes, and Pellicano, 2009). By promoting their preferred course of action as a solution, elites are able to directly encourage support for (or opposition to) a particular course of (policy) action.



doi:10.6342/NTU202501242

This logic holds true for discourse analysis: proposed solutions reveal underlying values. Most of the remedies proposed across the climate identity discourses call for government action, even when the central actor of a story is industry or citizens. As such, one of the core underlying values of the collected data is a state-centric approach to climate action. Positioning the Taiwanese government as the key party responsible for dealing with climate change imbues it with agency and legitimacy in the minds of readers.

This state-centric approach also works to legitimise Taiwan as a separate entity to China, despite the majority of articles not referring to Taiwan as a country, instead using ambiguous terms like "island." Many articles also include a small paragraph stating that the PRC claims Taiwan as part of its sovereign territory, although these sections generally are not linked to the key content of the text and instead read like a box ticking exercise for the publication to preclude any pushback from Chinese authorities.

Within this state-centric approach, the figure of the President occupies a central position across the discourses. Taiwan's climate policy is frequently linked to President Tsai Ing-wen (e.g. "Tsai's energy transition"), connecting her legitimacy with the success (or otherwise) of these policies in the minds of international audiences.

Similarly, President Lai Ching-te, who's election coincided with the the last few months of the data collection period, is positioned as having a central role in shaping the future direction of Taiwan's climate policy, with one article directly calling on Lai to "rethink" the nuclear-free homeland policy (Taiwan's Lai needs to rethink nuclear shutdown plan, Nikkei Asia, 2024).



doi:10.6342/NTU202501242

A focus on the President as the primary decision maker suggests that international audiences may receive an oversimplified picture of Taiwan's complex political landscape, in which the histories and priorities of competing political parties, and factions within political parties are overlooked

Positioning the President in such a central role also risks feeding into the media's documented obsession with charismatic climate heroes - in which responsibility for solving climate change lies with one person (e.g. Greta Thunberg), thereby eliding the collective responsibility for climate action shared by all members of society.



doi:10.6342/NTU202501242

## 6.4 Shaping Taiwan's Climate Identities: the Effects of MOFA's Climate Diplomacy and International Interests

To understand the consequences of Taiwan's climate diplomacy strategy on international perceptions of Taiwan, it is useful to compare media discourses with those promoted by MOFA. Similarities imply that MOFA's climate diplomacy has had some influence in shaping international discourses, while divergences suggest the influence of other interests. Section 6.3.1 explores the varying alignment between the international and MOFA discourse, while 6.3.2 assesses the role of alternative interests.



doi:10.6342/NTU202501242

### 6.4.1 MOFA Discourses

*Contribution* and *exclusion* are the two media discourses most closely aligned with MOFA's narratives. Articles featuring these discourses often include quotes from government representatives, consequently directly showcasing government narratives:

> "This isn't fair to Taiwan, which is willing to shoulder the responsibility."
> "We want to be contributors, not trouble-makers" (former Deputy Environment Minister Shen Chih-hsiu quoted in Taiwan Challenges UN Exclusion on Sidelines of COP26 Summit, Bloomberg, 2021).

The *contribution* discourse highlights examples of Taiwanese companies' climate-friendly innovations (e.g. Taiwan's Battery-Swapping Stations Now Double As Mini Power Plants, Bloomberg, 2023; TSMC Leads Rush for Renewables Ahead of Taiwan Energy Vote, Bloomberg, 2021). Showcasing the private sector's contributions to climate action is also a key element of MOFA's *responsible stakeholder* identity discourse (e.g. Taiwan Rides into a Low-Carbon Future [video], 2016), and many of the companies used as case studies (e.g. Gogoro, TSMC's RE100 membership) are the same across both media and MOFA discourses.

Taiwan's climate targets are often praised as ambitious in the *contribution* discourse (e.g. Taiwan steps up climate leadership with ambitious reforms, Nikkei Asia, 2023) and this discourse also features positive accounts of Taiwan's development of the offshore wind sector (e.g. Taiwan's wind industry braves cross-strait risks in clean energy boom, Reuters, 2023). MOFA's *responsible stakeholder* discourse uses these as examples of



doi:10.6342/NTU202501242

how Taiwan's domestic policy aligns with the UN climate regime and how Taiwan is contributing to climate action more broadly (e.g. Riding the Wind [video], 2019; Taiwan and Renewable Energy: Powering the Planet for a Green Future, MOFA, 2021).

However, MOFA's *constructive partner* discourse, which focuses primarily on Taiwan's outward action supporting its allies' climate efforts (e.g. Our Pale Blue Dot [video], 2024), is not evident in the media discourses. In contrast, the *contribution* discourse showcases examples of other countries', and especially foreign companies', roles in Taiwan's energy transition (e.g. Japan's Mitsui, Canada's Northland to build 1 GW offshore wind farm in Taiwan, Reuters, 2023). This difference highlights that when it comes to climate collaboration, international media are more interested in showcasing stories which feature companies of significance to their audience, while Taiwan's aid-based climate measures are not considered newsworthy.

The *exclusion* discourse also aligns with the MOFA discourse that Taiwan is unjustly excluded from the UN, and thus global climate governance. Many of the articles which feature this discourse reflect MOFA's position that this exclusion is not only unfair to Taiwan, but also undermines the UNFCCC's stated goals. In both the media and MOFA discourses relating to this exclusion, China is identified as the main culprit, and Taiwan is presented as proactive on climate change despite its exclusion.

Taiwan Day, held in 2021 on the sidelines of COP26 in Glasgow, is an example of a MOFA event which directly shaped positive news coverage of Taiwan's climate action. Coverage of the event (e.g. With Taiwan blocked from U.N. climate talks, its emissions go uncounted, Washington Post, 2021) aligns with MOFA narratives by emphasising the


doi:10.6342/NTU202501242

unfairness of Taiwan's exclusion, presenting Taiwan favourably in comparison to China, and highlighting Taiwan's contributions towards climate action. Taiwan's multi stakeholder approach to climate diplomacy is also in evidence in coverage of the event, with quotes from civil society and opposition representatives included in coverage. This shows that MOFA has successfully been able to shape Taiwan's climate identity in the international media in line with its aims.

While Taiwan's vulnerability to climate is used as one reason why its exclusion for the UNFCCC is unjust, generally the MOFA discourses employed during the scope of this research project do not focus on Taiwan's victimhood. However, many of the collected media articles contained the *victim* discourse, focusing on the challenges climate change poses to Taiwan's society and economy. These articles are often critical of the Taiwanese government's preparedness and responses to climate change-related disasters. Contrasting presentations of the 2009 Typhoon Morakot highlight in MOFA and media discourses illustrate these differences.

Typhoon Morakot's devastating impacts on Taiwan lead to an increased emphasis on climate diplomacy in the Ma era, with Ma referencing the disaster to highlight Taiwan's vulnerability to climate change and advocate for meaningful participation in the UNFCCC. (Chen, 2020). However, since that period, climate diplomacy narratives have not focused on Taiwan's victimhood. A focus on Taiwan's vulnerability was not a compelling narrative for international audiences as Taiwan's more developed economy puts it in a better position to recover from climate-change related disasters compared to its neighbours in Southeast Asia.



doi:10.6342/NTU202501242

Instead, Taiwan's climate diplomacy discourses have increasingly moved towards an emphasis on Taiwan's agency and ability to contribute towards global climate action (as exemplified by the "Taiwan Can Help" slogan). The impacts of Typhoon Morakot are explicitly discussed in the 2017 MOFA video *Change begins in the heartland*, although the narrative foregrounds Taiwan's success in recovering and rebuilding from the disaster, and positions Taiwan's experience as an example other countries could learn from.

*Change begins in the heartland* (2017) presents an uplifting version of events, in which an impacted community has successfully - and sustainably - rebuilt after Morakot. In contrast, the article *Marooned by Morakot: Indigenous Taiwanese typhoon survivors long to return home* (Climate Home News, 2021) presents the Taiwanese government as overlooking the needs of an Indigenous community impacted by the typhoon, leaving them stranded away from their original homes years after the disaster.

The *lagging* and *energy quadrilemma* discourses also portray Taiwan's climate action in a very different light to the discourses employed by MOFA. The international media identities have been constructed in response to different material realities which have evolved over time. This is most clearly seen through a comparison between the *contribution* and *lagging* narratives. When the Tsai administration announced its climate and renewable energy targets, these were widely praised as ambitious, and Taiwan was positioned as a positive contributor to global climate action. However, when Taiwan began to miss these targets, especially in the case of renewable energy development, there was a discourse shift towards the *lagging* and *energy quadrilemma* identities.



doi:10.6342/NTU202501242

Such a shift in the discourse reaffirms the argument made by Tseng et. al (2023) that Taiwan's bid for meaningful participation in international climate governance is a "doomed prospect" as long as the gap between overcommitted contributions and ineffective governance remains. For Taiwan to achieve its goal of greater international recognition through its contributions to climate action, ambitious targets are not sufficient - they must be matched by tangible progress, including emissions reductions and renewable energy deployment.



doi:10.6342/NTU202501242

### 6.4.2 International Interests and Values

The discrepancies between the MOFA and international media discourses presents an opportunity to unpack the international interests and values which also shape representations of Taiwan's climate identity. Interests include: a desire to encourage readers to take action against climate change by highlighting its devastating impacts and risks; promoting nuclear energy; linking climate change to economic and security dimensions.

As noted above, many of the articles portray Taiwan as a victim of climate change, while MOFA narratives do not communicate this identity. The human-centric aspect of the *victimisation* discourse contains many examples of emotionally resonant language (explored in more detail in section 5.1 above), highlighting the significant negative impact of climate change on vulnerable communities. The economy-centric aspect uses the language of risk to underline the potential threats climate change poses to Taiwan's semiconductor industry, and subsequently global supply chains.

Representing Taiwan as a climate victim is part of a wider discourse which aims to highlight the impacts of climate change to readers in an attempt to encourage them to take action against it. This is achieved through an appeal to morality, by evoking sympathetic responses to the plights of others, and through appeals to more self-interested reasons by connecting climate change to economic and technological risks.



doi:10.6342/NTU202501242

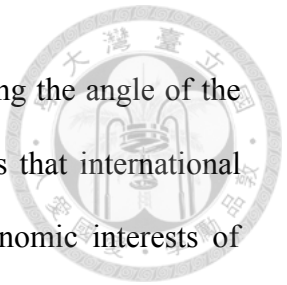
Another interest shaping the portrayal of Taiwan's climate identity can be revealed through an examination of a recurring treatment recommendation, which, as discussed above, can help uncover elite influences. One recurring solution proposed for Taiwan's energy quadrilemma is to reverse the Nuclear Free Homeland policy. This proposed remedy reveals the underlying pro-nuclear values which are being communicated to international audiences in an attempt to influence the Taiwanese government. The reasons behind the promotion of pro-nuclear values merit further analysis which is beyond the scope of this research, but could be linked to the vested economic interests of the international nuclear industry and countries which wish to export nuclear technology.

In many cases, Taiwan's climate identity is subordinate to its economic and security identities in international discourses. From the collected data, it is clear that economic (primarily related to semiconductors) and security topics drive international media interest in Taiwan, with climate change related issues increasingly viewed through these lenses. Taiwan's climate policy, especially with regards to energy generation, is frequently discussed in relation to economics and national security.

Taiwan's renewable energy policy is discussed primarily through an economic lens, with other issues such as the impacts of offshore wind development on fishing communities and marine wildlife overlooked. Renewable energy development in Taiwan is frequently presented in the discourse as creating opportunities for foreign companies to profit, as seen through the "stepping stone" metaphor (see section 5.3 above).



doi:10.6342/NTU202501242



This economic focus is likely a result of the editorial interests driving the angle of the articles, especially for business focused publications. It underscores that international interest in Taiwan's climate action often revolves around the economic interests of publication countries, including how their companies might benefit from Taiwan's climate policies or, conversely, how those policies could threaten business interests.

The security dimensions of energy issues frequently appear in international media coverage. Taiwan's energy transition towards renewables and natural gas and away from nuclear is often securitised, including how the transition could increase Taiwan's vulnerability to Chinese hostility in the form of a blockade and suggestions for mitigating this increased vulnerability. A less direct but still potent impact of Taiwan's energy transition is also explored in the discourse: the potential weakening of the "silicon shield."

The "silicon shield" theory argues that Taiwan's critical role in global semiconductor production helps deter Chinese aggression, as any disruption to Taiwan's chip output would have severe global economic impacts, likely prompting intervention from major powers like the United States. With regards to climate change and the energy transition, the discourse highlights the potential threat to Taiwan's security if semiconductor manufacturers relocate outside of Taiwan due to insufficient water supply or an insufficient and unstable supply of green energy.

This not only reflects a broader trend towards a focus on non-traditional security threats but also suggests that Taiwan's precarious security status is a dominant identity to which other identities, such as climate identities, are subordinate. Interestingly, the potential



doi:10.6342/NTU202501242

security impacts of climate change more broadly (e.g. strain on the military responding to increased weather etc) are underexplored in the media discourses. This suggests that Taiwan is primarily viewed with regards to its position in the US-China relationship and its importance to global semiconductor supply chains, with its national security viewed in these terms.

The international interests discussed above not only influence how global audiences perceive Taiwan's climate identity, but can also be seen as an attempt to influence Taiwan's policy. This is made evident in articles which directly address Taiwan's leaders (e.g. *Taiwan's Lai needs to rethink nuclear shutdown plan*, Nikkei Asia, 2024) but is also inherent in articles which suggest a particular course of action to be taken by the government.

While it is unclear to what extent media discourse has an impact on policy outcomes, in comparison to direct diplomacy and official exchanges, Lai's recent actions, including considering keeping nuclear energy as an emergency energy source and agreeing to increased gas imports from the US, seem to directly respond to some of the suggestions made in the media discourses.

Interactions between Taiwan's climate diplomacy discourses and international media discourses are complex, with both sides attempting to use discourses of Taiwan's climate identity to influence the other. MOFA directly tries to influence international media portrayals of Taiwan's climate action, while the media employs specific - often critical - portrayals of Taiwan to attempt to influence the Taiwan's government to adopt preferred policy approaches.



doi:10.6342/NTU202501242

## 7. Conclusion: Insights and Opportunities for Taiwan's Climate Diplomacy

Much of the existing literature concerned with states' climate identities and approaches to climate diplomacy explore these topics primarily through their engagement in the main forum for global climate governance: UNFCCC COP negotiations. By taking Taiwan as its object of study, this thesis presents an alternative approach to investigating the climate identities of states, including those excluded from the UN regime, by focusing on the internal and external discourses which shape these identities in the minds of international audiences.

The following sections review the major findings of this thesis, before sharing some potential policy learnings and directions for future research.



doi:10.6342/NTU202501242

## 7. 1 Major Findings

To understand Taiwan's official approach to climate diplomacy, including tools and narratives, a contextual review of English-language MOFA documents and videos was conducted. 19 documents and 12 videos were reviewed (listed in appendices one and two). Through these communications with international audiences, MOFA attempts to construct a climate identity for Taiwan which presents it as a responsible stakeholder aligned with the UN climate regime, who uses its technology leadership and innovation to assist other countries as a constructive partner, and despite these efforts is unfairly excluded from the UNFCCC.

A discourse analysis of 138 articles from 26 digital publications originating from six countries, spanning the ten year period between 2015-2024 was conducted to understand how Taiwan's climate identity is constructed in international media. This analysis revealed five climate identities constructed in the discourse. The five identities uncovered by the analysis - *victimisation, exclusion, contribution, lagging,* and *energy quadrilemma* - are summarised below.

The *victimisation* identity presents Taiwan as grappling with the challenges presented by climate change, with a particular focus on the struggles faced by people and the semiconductor industry. Extreme weather events, primarily droughts and typhoons, which disrupt lives and livelihoods are the central events of this discourse. The 2020-2021 drought emerges as a critical discourse moment, with the discourse subsequently shifting towards greater focus on the threats climate change poses to the



doi:10.6342/NTU202501242

chip industry, alongside the impacts on farmers, Indigenous tribes, and ordinary citizens.

Emotionally resonant language is used to emphasise the plight of these last three groups, as they face fear, uncertainty, and the loss of ways of life. People-centric stories that center the experiences of these groups are used to illustrate the shared global moral imperative to effectively address climate change.

Articles which centre the impact of climate change on industrial production embody a different value: that of the importance of continued economic growth. From this ideological standpoint, the importance of Taiwan to the world is explicitly linked to its position in semiconductor supply chains

Across people-centric and economic-centric articles, the Taiwanese government is positioned as the actor responsible for addressing climate change and its resulting impacts, legitimating both the central role of the state in climate action and the sovereignty of the Taiwanese government. However, this also raises reputational challenges for the government, as Indigenous communities and farmers are presented as feeling neglected by the government, which is seen as prioritizing industrial interests - particularly the semiconductor sector - over their needs.

The *exclusion* identity presents Taiwan as being blocked from participation in the UNFCCC because of China's influence. UNFCCC COPs are the central event in this discourse, although the discourse does extend to other examples of Taiwan's exclusion



doi:10.6342/NTU202501242

from international climate collaboration. Nation states are the central actors in this discourse, with Taiwan and China positioned in an antagonistic relationship.

Pro-Taiwan values underpin much of the *exclusion* discourse, presenting its exclusion as unfair, and even as undermining the goals of the UNFCCC. China is negatively framed as "blocking" Taiwan's participation. While Chinese perspectives are included through quotes from officials, Taiwan's cause is made more sympathetic by the inclusion of perspectives from a wider range of actors, including youth COP delegates. Through these quotes, and other emotionally resonant language, audiences are encouraged to empathise with Taiwan's situation.

Furthermore, Taiwan's bid for inclusion in UN climate talks is made credible by presenting Taiwan as committed to climate action from the highest levels, demonstrated by the inclusion of Presidential quotes, and across partisan lines, through the inclusion of quotes from both DPP and KMT representatives. Repeated references to Taiwan's democratic status not only emphasise the contrast between Taiwan and China but also align Taiwan with global democratic values.

The *contribution* identity presents Taiwan as contributing towards climate action both domestically (e.g. through ambitious climate targets and renewable energy investments) and internationally (e.g. through collaboration with other countries). While the central objects and actors in this discourse are highly varied, the underpinning narrative positions Taiwan as being an example that other countries can learn from. The 2021 announcement of Taiwan's 2050 net-zero goal, followed by the passage of the 2023



doi:10.6342/NTU202501242

Climate Law are central events in the discourse, positioning Taiwan as a key player in regional climate policy.

International collaboration at the country level is often speculative, highlighting examples of how partnerships between Taiwan and countries including the US, Australia, and India, could provide mutual benefit, with the other countries able to learn from Taiwan's experience and expertise. Foreign firms' involvement in Taiwan's energy system as a result of its energy transition is presented as a more tangible form of international collaboration, in which Taiwan's offshore wind energy development policy is seen as an opportunity for foreign companies to develop their experience, prepare for expansion into the rest of Asia, and most importantly, make a profit. These articles are underpinned by an ideology of ecological modernization, which focuses on restructuring the capitalist economy to align with environmental sustainability, emphasizing the profitability of this transition (Dryzek, 2013).

Taiwanese companies in other sectors are presented as trailblazers, innovating solutions for both climate mitigation and adaptation. The semiconductor industry is presented as of central importance in driving climate action both within Taiwan and across the global industry. Other examples of Taiwan's contributions to climate innovation include electric scooter company Gogoro, Swancor's development of a cutting-edge material which will enable wind turbine blades to be recycled, and Buddhist organisation's approach to environmental education.

The *lagging* discourse presents Taiwan's climate action as insufficient compared to its own targets and to other countries. Taiwan's laggard identity often appears as a



doi:10.6342/NTU202501242

secondary discourse in articles where the dominant discourse is *victimisation* or *energy quadrilemma*. The risks of this insufficient progress are mainly framed in terms of threatening economic and industrial development. Taiwan's insufficient progress towards its climate and energy transition goals is the key object of this discourse. Central actors in the discourse can be divided into those responsible for Taiwan's unsatisfactory progress, and those affected by it. In the first group is the Taiwanese government, whose policies are blamed for stagnating progress, and in the second are renewable energy developers who are presented as struggling to align with policies, and consequently the semiconductor industry who lack sufficient renewable energy as a result.

2021 was a turning point in which articles covering Taiwan's offshore wind energy industry shifted away from the *contribution* discourse towards the *lagging* discourse, with Taiwan's progress towards its wind power goals presented as insufficient - and even as in crisis. Policy missteps are positioned as the main reason for this situation, with significant blame being placed on the local content requirement regulation, reflecting the viewpoints of international companies. The responsibility and ability to solve this issue is assigned to the Taiwanese government.

The *energy quadrilemma* discourse presents Taiwan as facing difficulties balancing competing priorities: the energy transition towards renewables, nuclear phaseout, increasing energy demand from (the semiconductor) industry, and national security. This discourse primarily focuses on risk, highlighting Taiwan's vulnerability and the potential consequences of failing to resolve this quadrilemma, while proposing various approaches to address the issue. The key risk is Taiwan's potential inability to meet



doi:10.6342/NTU202501242

growing energy demand, particularly for green energy, in the face of rising energy demand from industry, which threatens the semiconductor industry and subsequently national security.

The *lagging* discourse is evoked alongside blackouts (such as those that occurred in summer 2022) to demonstrate that Taiwan's current energy transition and nuclear phaseout strategies, both explicitly linked to President Tsai Ing-wen, are insufficient and risky. Nuclear energy is presented as a political issue, and support for nuclear energy dominates this discourse, as seen through the overall omission of any anti-nuclear perspectives and the promotion of the continued use of nuclear energy as a solution to the quadrilemma.

With regards to the risks of energy shortages, the *energy quadrilemma* discourse is mainly concerned with economic and national security risks, rather than the impacts on other areas such as households. The semiconductor industry is presented as the primary actor threatened by the energy quadrilemma, with the energy transition presented as a challenge to increased semiconductor production. This reveals the underlying ideology of growthism: that there should be no limits to industrial and economic growth, with decarbonisation of secondary importance to growth.

The risks posed by the energy quadrilemma to the semiconductor industry are also presented as a threat to national security through the silicon shield concept - the idea that Taiwan' semiconductor industry is of such global importance that any threat to it (i.e. from a Chinese invasion) will be intolerable to the US. Furthermore, increased reliance on imported fossil fuels is also presented as a risk to national security,



doi:10.6342/NTU202501242

increasing Taiwan's vulnerability to Chinese interference, including naval blockades. Again, nuclear energy is the dominant solution presented in the discourse. Recent announcements that President Lai is considering the use of nuclear energy as an emergency backup and importing green energy from neighbouring countries suggests that the *energy quadrilemma* discourse has had some influence on political decision making.

Identifying these five discourses reveals that Taiwan's climate identity has been constructed in diverse ways, supporting the constructivist claim that states possess multiple identities. These identities are not necessarily independent of each other, but can be evoked to support, or undermine, other identities. As Taiwan's identities are constructed in diverse ways across time, countries, and types of newspapers, global audiences are exposed to a range of portrayals of Taiwan.

2021 is a defining turning point for the construction of Taiwan's climate identities. Not only were significantly more articles relating to Taiwan and climate change published from 2021-2024 in comparison to 2015-2020, but other discursive shifts also occurred, including the shift towards more economic-centric focus in the *victimisation* discourse after the 2021 drought and the emergence of the *lagging* discourse as Taiwan moved from an era of policy announcements to an era of insufficient progress towards its climate goals.

Several factors influenced this discourse shift in 2021. The global chip shortage triggered by the COVID-19 pandemic brought the semiconductor industry - and subsequently Taiwan - to international attention. Global interest in the semiconductor



doi:10.6342/NTU202501242

supply chain also led to increased concern over the impacts of climate change - such as the drought - and Taiwan's energy transition could have on future production. The pandemic also led to more international journalists being located in Taiwan as China imposed strict border restrictions.

Furthermore, this time period also coincided with worsening relations between the US and China, with Taiwan's role in this fraught relationship brought into the spotlight thanks to the visit of former Speaker of the US House of Representatives Nancy Pelosi in August 2022, which intensified tensions between the two powers.

These combined geopolitical, economic, and social factors created a turning point in how international media reported on Taiwan, with increased coverage of climate issues and a shift towards including economic and security narratives in climate coverage. Increased media attention presents opportunities for Taiwan to promote its climate action to international audiences, but also risks international criticism as demonstrated by the *lagging* discourse, and increased external pressure to change policy direction on issues such as nuclear energy.

Across the discourses, climate change is presented as a problem which can primarily be addressed through state-led policy making. These underlying state-centric values not only legitimate the current international climate governance model, but also boost Taiwan's legitimacy as a state in the minds of readers. Taiwan's climate action is also strongly linked with Presidential legitimacy, boosting - or undermining - the President's international reputation.



doi:10.6342/NTU202501242

Through comparison with the MOFA-propagated discourses, it is clear that international media constructions of Taiwan's international climate identities are influenced by both MOFA's climate diplomacy narratives and other international interests. The *contribution* and *exclusion* discourses strongly align with the MOFA discourses, showing that Taiwan's climate diplomacy approach has had some success in shaping its international climate identity.

However, the *victimisation, lagging*, and *energy quadrilemma* discourses reveal how other international interests work to shape Taiwan's climate identity. The *victimisation* discourse works to encourage audiences to take action on climate change, while the *lagging* discourse aims to influence the Taiwanese government. The *energy quadrilemma* discourse not only pushes nuclear energy as a solution, but also highlights that Taiwan's international climate identity remains subordinate to its economic and security identities. Climate issues are frequently presented through the lens of the semiconductor supply chain and the Chinese threat to national security, topics which dominate external interest in Taiwan.



doi:10.6342/NTU202501242

### 7.2 Learnings for Enhancing Taiwan's Global Climate Diplomacy

The following recommendations could assist Taiwan in bolstering its international climate identity.

Firstly, there is a need to bridge the gap between climate ambitions and action, to effectively counter the *lagging* discourse and increase the credibility of existing MOFA discourses. Tseng et. al (2023, 4) argue that this gap exists as "appropriateness logic has so far dominated Taiwan's climate action," meaning climate policies have been promulgated primarily as an attempt to cultivate a particular identity as part of its aspiration of international participation. As a result, policy consequences have been ignored, leading to ineffective policy implementation. This gap has also led to the failure of politicians and government to implement the mitigation and adaptation measures recommended by climate change research projects undertaken in Taiwan (Lee et. al, 2021).

As the *lagging* discourse demonstrates, this approach has been somewhat self-defeating: Taiwan's perceived inability to match its ambition with material action has led to negative coverage in international media, as embodied in the *lagging* discourse. Taiwan's development of the blue carbon ecosystem measure provides one example of how effective governance which is not only concerned with international reputation but also with effective policy outcomes can deliver increased opportunities for meaningful international participation and recognition for Taiwan (Tseng et. al, 2023).



doi:10.6342/NTU202501242

Secondly, as China is often presented as an emerging climate leader, Taiwan needs to prove its own climate credentials in its climate diplomacy narratives in alternative ways, as it is challenging to out-perform China on topics such as renewable energy investment due to the issue of scale. Highlighting the differences between Taiwan and China's climate governance approaches is one way to differentiate the two. Guy et al. (2023) characterise Taiwan as a climate technocracy, exhibiting "high levels of state capacity and research body autonomy, as well as substantial policymaking authority afforded to climate-motivated bureaucrats" (Guy et al., 2023, 190). In contrast, China is characterised as a climate developmentalist which has attempted to incorporate "climate mitigation measures into broader schemes for state-led development" (ibid).

The success of Audrey Tang, Taiwan's Cyber Ambassador-at-large and previously the first Digital Minister of Taiwan, in promoting digital democracy to international audiences suggests one way forward: showcasing Taiwan's cutting-edge approaches to democratic participation (Huang, 2023).

From a climate perspective, this could be achieved by highlighting the success of Taiwan's 2020 "Energy White Paper" which harnessed collective social momentum through citizen engagement and other collaborative measures, part of Taiwan's "paradigm shift" towards including social factors in the energy transition, (Lin, quoted in Wu, 2025). By enhancing the democratization of Taiwan's climate action - such as through a greater emphasis on deliberative democracy - Taiwan can showcase the advantages of democratic governance in addressing climate change, contrasting it with authoritarianism, through its diplomatic efforts.



doi:10.6342/NTU202501242

Thirdly, leveraging Taiwan's dominant position in the semiconductor supply chain and potential leadership in the AI era in climate diplomacy narratives will likely bring increased international attention to Taiwan. This interest already exists, as seen through articles presenting TSMC as a trailblazer in renewable energy development (as explored in section 5.3, e.g.: TSMC Commits To 100% Clean Power, Pressuring Chipmaker Rivals To Follow Suit, Forbes, 2020). Taiwan's government has already strategically utilized the semiconductor industry as a form of leverage and soft power, enabling the expansion and strengthening of unofficial ties, and subsequently reinforcing Taiwan's legitimacy (Chiu, 2024). Integrating the semiconductor industry could bolster the appeal of Taiwan's climate diplomacy. The recent "chip in with Taiwan" slogan suggests this approach is beginning to be adopted by MOFA.

Finally, Taiwan is in a unique position to demonstrate the security benefits of proactive climate and energy policies to the world. Lin, writing in as early as 2008, recognised the need for Taiwan to elevate its strategic approach by considering climate change from a national security perspective (Lin, 2008, 173). While some steps have been taken in this direction, such as President Lai's establishment of the National Committee on Climate Change, this strategic approach has not yet been highlighted in Taiwan's public climate diplomacy efforts. By positioning energy security as a fundamental aspect of national security, Taiwan can leverage international interest in its security to gain more attention for its climate actions while also demonstrating the co-benefits of climate action to the world.



doi:10.6342/NTU202501242

## 7.3 Empirical and Theoretical Contributions

Empirically, this research has revealed the diverse and often conflicting ways Taiwan's climate identities are constructed in international media discourses, highlighting their implications for its global image. A key contribution of these findings is the provision of insights for the enhancement of Taiwan's climate diplomacy strategy. Beyond filling a significant gap in political research into Taiwan and climate change, this research underscores the transformative potential of strategic climate action in redefining Taiwan's role on the international stage.

Theoretically, this research provides an alternative approach to studying the outcomes of climate diplomacy through investigating external climate identity constructions. While much of the existing research on states' climate roles and identities focuses on their behaviour during UNFCCC climate negotiations, by selecting Taiwan as a case study this research has adopted a novel approach. Analysing the discourses present in international news coverage of a country's climate actions provides rich insights into identity construction, and identities differ across topics, time, and publications due to a range of factors.



doi:10.6342/NTU202501242

## 7.4 Directions for Future Research

Future research could further explore the roles and motivations of specific actors in shaping Taiwan's climate identity, with a particular focus on journalists. Investigating how and why journalists develop specific narratives about Taiwan's climate action could provide deeper insights into the media's role in constructing and perpetuating identity discourses. For instance, exploring the material role of MOFA and other governmental bodies in shaping journalist's perspectives of Taiwan - for example through the influence of official press tours, or due to the increased presence of journalists in Taiwan due to the COVID-19 pandemic - would be a valuable extension of this research.

Another promising line of inquiry lies in further examining the international interests which shape discourses surrounding Taiwan's identity. For example, it would be interesting to uncover the motivations behind the promotion of nuclear power in many of the articles examined in this thesis. Are these narratives driven by vested economic interests, for example the US's desire to expand the adoption of small-scale modular reactors (Musaddique, 2025)? Similarly, a broader investigation into how environmental reportage is shaped by the overarching positions of specific media on the Taiwan-China relationship would reveal how broader geopolitical attitudes shape coverage of climate issues and answer the question of why the discourses uncovered in this research have emerged.

Research into actual public perceptions of Taiwan's climate action across diverse countries and demographic groups would allow a greater understanding of how public



doi:10.6342/NTU202501242

opinion is shaped by the discourses identified in this research. This would add an important dimension of the intersections between public opinion and climate diplomacy: how do perceptions of Taiwan's climate action influence its ability to engage internationally through diplomatic exchanges, trade partnerships, and other forms of international collaboration?

Finally, this thesis provides a foundation for comparative research into domestic and international media coverage of Taiwan's climate action. Such a comparison could uncover how these two media spheres interact, and potentially identify factors driving differences in narrative framing.



doi:10.6342/NTU202501242

## 8. References


Arlt, D., Hoppe, I., & Wolling, J. (2011). Climate change and media usage: Effects on problem awareness and behavioural intentions. *International Communication Gazette*, *73*(1-2), 45-63. https://doi.org/10.1177/174804851038674

Bäckstrand, K., Kuyper, J. W., Linnér, B. O., & Lövbrand, E. (2017). Non-state actors in global climate governance: from Copenhagen to Paris and beyond. Environmental Politics, 26(4), 561-579. https://doi.org/10.1080/09644016.2017.1327485

Baum, M. A., & Potter, P. B. (2008). The relationships between mass media, public opinion, and foreign policy: Toward a theoretical synthesis. *Annu. Rev. Polit. Sci.*, *11*(1), 39-65. https://doi.org/10.1146/annurev.polisci.11.060406.214132

Biedermann, R. (2017). Taiwan's polycentric strategy within the environmental regime complex on climate change. *ASIEN: The German Journal on Contemporary Asia*, (143), 25-46. https://doi.org/10.11588/asien.2017.144.14911

Bogert, J. M., Buczny, J., Harvey, J. A., & Ellers, J. (2024). The effect of trust in science and media use on public belief in anthropogenic climate change: A meta-analysis. *Environmental Communication*, *18*(4), 484-509. https://doi.org/10.1080/17524032.2023.2280749

Bolstad, P., & Victor, D. (2024). The growing divide in media coverage of climate change. *Brookings*. Retrieved April 2025, from https://www.brookings.edu/articles/the-growing-divide-in-media-coverage-of-climate-change/

Broadbent, J., Yun, S. J., Ku, D., Ikeda, K., Satoh, K., Pellissery, S., Swarnarkar, P., Lin, T., & Jin, J. (2013). Asian societies and climate change: The variable diffusion of global norms. *Globality Studies Journal, 34.* https://gsj.stonybrook.edu/article/asiansocietiesandclimatechangethevariablediffusionofglobalnorms/

Brüggemann, M., & Engesser, S. (2017). Beyond false balance: How interpretive journalism shapes media coverage of climate change. *Global Environmental Change*, *42*, 58-67. https://doi.org/10.1016/j.gloenvcha.2016.11.004

Carvalho, A. 2000. Discourse analysis and media texts: a critical reading of analytical tools. *Oral Presentation*. https://hdl.handle.net/1822/3137

Carvalho, A. (2007). Ideological cultures and media discourses on scientific knowledge: re-reading news on climate change. *Public understanding of science*, *16*(2), 223-243. https://doi.org/10.1177/0963662506066775




doi:10.6342/NTU202501242

Carvalho, A. (2010). Media (ted) discourses and climate change: a focus on political subjectivity and (dis) engagement. *Wiley Interdisciplinary Reviews: Climate Change*, *1*(2), 172-179. https://doi.org/10.1002/wcc.13

Cheng, F. (2022). Taiwan Addresses Climate Change: Policy Learning, Formulation and Implementation. *East Asian Policy,* pp.38-55. https://researchmap.jp/fangting_cheng/published_papers/39151565/attachment_file.pdf

Chen, M. (2020). *Climate Change Politics in Taiwan: Understanding Taiwan's Voluntary Climate Action*. (Doctoral dissertation). Technische Universität München. https://nbn-resolving.org/urn:nbn:de:bvb:91-diss-20201221-1555257-1-6

Chen, N., & Fell, D. (2021). Tongzhi diplomacy and the queer case of Taiwan. In *Taiwan's economic and diplomatic challenges and opportunities*. 194-214. Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9781003091639-12/tongzhi-diplomacy-queer-case-taiwan-chen-nai-chia-dafydd-fell

Chiou, C. (2024). Foreign Ministry urges global support for Taiwan's inclusion in COP29. *Radio Taiwan International*. Retrieved April 2025, from https://en.rti.org.tw/news/view/id/2011935

Chiu, N. (2024). Made in Taiwan: Exploring the emergence of TSMC in Taiwan's pursuit of nation branding. *Jackson School Journal of International Studies*, *12*(1), 7-26. https://jsis.washington.edu/humanrights/wp-content/uploads/sites/25/2024/08/Volume-12-Edition-1.pdf#page=7

Chong, D., & Druckman, J. N. (2007). Framing theory. *Annu. Rev. Polit. Sci.*, *10*(1), 103-126. https://doi.org/10.1146/annurev.polisci.10.072805.103054

Chou, K. T., & Liou, H. M. (2020). Climate change governance in Taiwan: The transitional gridlock by a high-carbon regime. In *Climate change governance in Asia* (pp. 27-56). Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9780429276453-4/climate-change-governance-taiwan-kuei-tien-chou-hwa-meei-liou

Council of the European Union. (2018). *Council conclusions on climate diplomacy*. Retrieved December 2024, from https://data.consilium.europa.eu/doc/document/ST-6125-2018-INIT/en/pdf

Constitution of the Republic of China (Taiwan). (1947).

D'angelo, P., & Kuypers, J. A. (2010). Introduction: Doing news framing analysis. In *Doing news framing analysis* (pp. 17-30). Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9780203864463-7/introduction-news-framing-analysis-paul-angelo-jim-kuypers



doi:10.6342/NTU202501242

deLisle, J. (2021). Taiwan's quest for international space in the Tsai era: adapting old strategies to new circumstances. In *Taiwan in the era of Tsai Ing-wen* (pp. 239-283). Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9780429356469-10/taiwan-quest-international-space-tsai-era-adapting-old-strategies-new-circumstances-jacques-delisle

Djerf-Pierre, M., Cokley, J., & Kuchel, L. J. (2016). Framing renewable energy: A comparative study of newspapers in Australia and Sweden. *Environmental Communication*, *10*(5), 634-655. https://doi.org/10.1080/17524032.2015.1056542

Dryzek, J. S. (2013). *The politics of the earth: Environmental discourses*. Oxford university press.

Eckersley, R., 2004. *The green state: rethinking democracy and sovereignty*. mit Press.

Eckersley, R. (2016). National identities, international roles, and the legitimation of climate leadership: Germany and Norway compared. *Environmental politics*, *25*(1), 180-201. https://doi.org/10.1080/09644016.2015.1076278

Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of communication*, *43*(4), 51-58. https://doi.org/10.1111/j.1460-2466.1993.tb01304.x

Entman, R. M. (2007). Framing bias: Media in the distribution of power. *Journal of communication*, *57*(1), 163-173. https://doi.org/10.1111/j.1460-2466.2006.00336.x

Entman, R. M., Matthes, J., & Pellicano, L. (2009). Nature, sources, and effects of news framing. In *The handbook of journalism studies* (pp. 195-210). Routledge.

Entman, R. M., & Usher, N. (2018). Framing in a fractured democracy: Impacts of digital technology on ideology, power and cascading network activation. *Journal of communication*, *68*(2), 298-308. https://doi.org/10.1093/joc/jqx019

Falkner, R. (2016). The Paris Agreement and the new logic of international climate politics. *International Affairs*, *92*(5), 1107-1125. https://doi.org/10.1111/1468-2346.12708

Gamson, W. A., & Modigliani, A. (1989). Media discourse and public opinion on nuclear power: A constructionist approach. *American journal of sociology*, *95*(1), 1-37. https://doi.org/10.1086/229213

Gilboa, E. (2008). Searching for a theory of public diplomacy. *The annals of the American academy of political and social science*, *616*(1), 55-77. https://doi.org/10.1177/0002716207312142

Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. Harvard University Press.



doi:10.6342/NTU202501242

Google. (2025). *Google Trends*. Retrieved April 2025, from https://trends.google.com/

Guy, J., Shears, E., & Meckling, J. (2023). National models of climate governance among major emitters. *Nature Climate Change*, 13(2), 189-195. https://doi.org/10.1038/s41558-022-01589-x

Gupta, J., & Ringius, L. (2001). The EU's climate leadership: reconciling ambition and reality. *International Environmental Agreements*, *1*, 281-299. https://doi.org/10.1023/A:1010185407521

Grano, S. A. (2019). Climate change politics: Can these raise Taiwan's international recognition? *Taiwan Insight*. Retrieved February 2025, from https://taiwaninsight.org/2019/04/25/climate-change-politics-can-these-boost-raise-taiwans-international-recognition/

Hajer, M., & Versteeg, W. (2005). A decade of discourse analysis of environmental politics: Achievements, challenges, perspectives. *Journal of environmental policy & planning*, *7*(3), 175-184. https://doi.org/10.1080/15239080500339646

Hase, V., Mahl, D., Schäfer, M. S., & Keller, T. R. (2021). Climate change in news media across the globe: An automated analysis of issue attention and themes in climate change coverage in 10 countries (2006–2018). Global Environmental Change, 70, 102353. https://doi.org/10.1016/j.gloenvcha.2021.102353

Holsti, K. J. (1970). National role conceptions in the study of foreign policy. *International studies quarterly*, *14*(3), 233-309. https://doi.org/10.2307/3013584

Hsu, A., Moffat, A. S., Weinfurter, A. J., & Schwartz, J. D. (2015). Towards a new climate diplomacy. *Nature Climate Change*, *5*(6), 501-503. https://doi.org/10.1038/nclimate2594

Huang, T. (2023). Taiwan's Audrey Tang travels to Lithuania for digital diplomacy. *Taiwan News*. Retrieved April 29, 2025, from https://www.taiwannews.com.tw/news/4776349

Hurri, K., 2020. Rethinking Climate Leadership: Annex I Countries. *Expectations for China's Leadership Role in the Post-Paris UN Climate Negotiations'(Environmental Development, Vol. 35, 2020)*. https://doi.org/10.1016/j.envdev.2020.100544

Jobin, P. (2024). The National Committee on Climate Change: Also a security issue. *Taiwan Insight*. Retrieved April 2025, from https://taiwaninsight.org/2024/08/28/the-national-committee-on-climate-change-also-a-security-issue/

Lammy, D. (2024). The Kew lecture: Foreign secretary's speech on the climate crisis. *Speech*. Retrieved December 2024 from



doi:10.6342/NTU202501242

https://www.gov.uk/government/speeches/foreign-secretarys-foreign-policy-speech-on-the-climate-crisis

Lee, S. W. (2011). The theory and reality of soft power: Practical approaches in East Asia. In *Public diplomacy and soft power in East Asia* (pp. 11-32). New York: Palgrave Macmillan US.

Lee, C. C., Huang, K. C., Kuo, S. Y., Cheng, C. K., Tung, C. P., & Liu, T. M. (2023). Climate change research in Taiwan: beyond following the mainstream. *Environmental Hazards*, *22*(1), 79-97. https://doi.org/10.1080/17477891.2022.2074954

Li, L., Wolters, S., & Fuqiang, Y. (2017). China and its climate leadership in a changing world: From passive follower to constructive shaper of the global order. *Climate Diplomacy*. Retrieved April 2025 from https://climate-diplomacy.org/sites/default/files/2020-10/China%20and%20its%20Climate%20Leadership%20in%20a%20Changing%20World_adelphi%202017_ENG.pdf

Lippmann, W. (1922). Public opinion. New York: Free Press.

Lin, T. (2008). 台灣氣候變遷政策之論述分析. 公共行政學報, (8), pp.153-175. https://doi.org/10.30409/JPA.200809_(28).0005

Liu, J. C. E., & Chao, C. W. (2023). Politics of climate change mitigation in Taiwan: International isolation, developmentalism legacy, and civil society responses. *Wiley Interdisciplinary Reviews: Climate Change*, *14*(4), e834. https://doi.org/10.1002/wcc.834

Lo, J. (2022). US-China climate working group cancelled after Pelosi's Taiwan visit. *Climate Home News*. Retrieved April 2025 from https://www.climatechangenews.com/2022/08/08/us-china-climate-working-group-cancelled-after-pelosis-taiwan-visit/

Lumivero. (2023). *NVivo* (Version 14) [Computer software]. Retrieved from https://lumivero.com/products/nvivo/

Mabey, N., Gallagher, L., & Born, C. (2013). Understanding climate diplomacy. *E3G (Third Generation Environmentalism)*, 1-72. https://cdkn.org/sites/default/files/files/E3G-Understanding-Climate-Diplomacy.pdf

Mabon, L., & Shih, W. Y. (2021). Is there a case for recognising Taiwan at the international science-policy interface for climate change?. *Frontiers in Climate*, *3*, 750443. https://doi.org/10.3389/fclim.2021.750443

Meadowcroft, J. (2005). From welfare state to ecostate. In J. Barry & R. Eckersley (Eds.), *The state and the global ecological crisis* (pp. 3–23). Cambridge, MA: MIT Press.

Musaddique, S. (2025). Trump to help nuclear energy renaissance, Tema ETFs' Khodjamirian says. *CNBC*. Retrieved April 28, 2025, from



doi:10.6342/NTU202501242

https://www.cnbc.com/2025/02/06/trump-to-help-nuclear-energy-renaissance-tema-etfs-khodjamirian.html

Oberthür, S., & Dupont, C. (2021). The European Union's international climate leadership: towards a grand climate strategy?. *Journal of European Public Policy*, *28*(7), 1095-1114. https://doi.org/10.1080/13501763.2021.1918218

Ostrom, E. (2017). Polycentric systems for coping with collective action and global environmental change. In *Global justice* (pp. 423-430). Routledge.

Pape, L. (2024). From the margins into the spotlight: Lessons from the increase in international media attention on Taiwan. *CommonWealth Magazine*. Retrieved April 2025 from https://english.cw.com.tw/article/article.action?id=3680

Peng, C. (2024). Taiwan's commitment to climate action. *The Diplomat*. Retrieved April 2025, from https://thediplomat.com/2024/11/taiwans-commitment-to-climate-action/

Pew Research Center. (2024). News platform fact sheet. *Pew Research Center*. Retrieved February 4, 2025, from https://www.pewresearch.org/journalism/fact-sheet/news-platform-fact-sheet/

Rawnsley, G. D. (2014). Taiwan's soft power and public diplomacy. *Journal of Current Chinese Affairs*, *43*(3), 161-174. https://doi.org/10.1177/186810261404300307

RE100. (2020). World's largest semiconductor foundry joins RE100 and calls on peers to step up on renewable energy. *RE100*. Retrieved April 29, 2025, from https://www.there100.org/our-work/press/worlds-largest-semiconductor-foundry-joins-re100-and-calls-peers-step-renewable

Sampei, Y., & Aoyagi-Usui, M. (2009). Mass-media coverage, its influence on public awareness of climate-change issues, and implications for Japan's national campaign to reduce greenhouse gas emissions. *Global environmental change*, *19*(2), 203-212. https://doi.org/10.1016/j.gloenvcha.2008.10.005

Shyu, C. W. (2014). Development of Taiwanese government's climate policy after the Kyoto protocol: Applying policy network theory as an analytical framework. *Energy policy*, *69*, 334-346. https://doi.org/10.1016/j.enpol.2014.02.017

Soroka, S. N. (2003). Media, public opinion, and foreign policy. *Harvard International Journal of Press/Politics*, *8*(1), 27-48. https://doi.org/10.1177/1081180X02238783

Taipei Representative Office in the UK. (2021). *Taiwan's contribution to the fight against climate change showcased at COP26 Taiwan Day.* Retrieved May 2025, from https://www.roc-taiwan.org/uk_en/post/8650.html

Taiwan Today. (2024). MOFA releases short supporting UN participation campaign. *Taiwan Today*. Retrieved April 2025, from



doi:10.6342/NTU202501242

https://www.taiwantoday.tw/Politics/Top-News/258119/MOFA-releases-short-supporting-UN-participation-campaign

Tang, Z. (2011). Burgeoning democracy or threatening security? the ambiguous voice of the American press on Taiwan's independence. *Critical Sociology*, 37(6), 837-852. DOI: 10.1177/0896920510379444

Tseng, H. Y. K., Kao, S. M., & Tseng, H. S. (2023). Rationalizing Taiwan's climate action based on oceans: ineffective governance, aspiring international participation, unrealized universal values, and a new window of blue carbon ecosystem measure. *Frontiers in Marine Science*, *10*, 1268122. https://doi.org/10.3389/fmars.2023.1268122

Weldes, J. (1996). Constructing national interests. *European journal of international relations*, *2*(3), 275-318. https://doi.org/10.1177/1354066196002003001

Wendt, A. (1992). Anarchy is what states make of it: the social construction of power politics. *International organization*, *46*(2), 391-425. https://doi.org/10.1017/S0020818300027764

Wetherell, M., Taylor, S., & Yates, S. J. (Eds.). (2001). *Discourse theory and practice: A reader*. Sage.

Wishart-Smith, H. (2024). The semiconductor crisis: Addressing chip shortages and security. *Forbes*. Retrieved April 2025 from https://www.forbes.com/sites/heatherwishartsmith/2024/07/19/the-semiconductor-crisis-addressing-chip-shortages-and-security/

Wu, X.-E. (2023). The urgency of change motivated by climate change. *EnergyOMNI*. Retrieved April 25, 2025, from https://www.energy-omni.com/en/product/detail/AT005007

Wurzel, R. K., Liefferink, D., & Torney, D. (2019). Pioneers, leaders and followers in multilevel and polycentric climate governance. *Environmental Politics*, *28*(1), 1-21. https://doi.org/10.1080/09644016.2019.1522033



doi:10.6342/NTU202501242



doi:10.6342/NTU202501242

**Appendix One: MOFA Documents**

| Document Title | URL | Publication Date | Reference Code |
|---|---|---|---|
| ROC Ministry of Foreign Affairs holds 2016 UNFCCC NGO Forum | https://en.mofa.gov.tw/News_Content.aspx?n=1331&s=34234 | 2016-09-05 | MOFA 2016 |
| MOFA hosts seminar on climate diplomacy, low-carbon development | https://en.mofa.gov.tw/News_Content.aspx?n=1328&sms=273&s=33836 | 2016-08-18 | MOFA 2016A |
| Combating Climate Change-Taiwan Can Help | https://en.mofa.gov.tw/News_Content.aspx?n=1575&s=34810 | 2018-09-13 | MOFA 2018 |
| The right to live in a stable climate | https://en.mofa.gov.tw/News_Content.aspx?n=1578&s=34846 | 2018-12 | MOFA 2018A |
| Seminar on Climate Change and Sustainable Development | https://en.mofa.gov.tw/News_Content.aspx?n=1578&s=91734 | 2019-07 | MOFA 2019 |
| Combating Climate Change—Taiwan Can Help | https://en.mofa.gov.tw/News_Content.aspx?n=1575&s=95254 | 2019-10-31 | MOFA 2019A |
| Ministry of Foreign Affairs releases short film ‘Riding the Wind’, on Taiwan’s implementation of the United Nations Framework Convention on Climate Change | https://en.mofa.gov.tw/News_Content.aspx?n=1331&s=91705 | 2019-11-25 | MOFA 2019B |
| Protecting the Earth from ecological crisis | https://en.mofa.gov.tw/News_Content.aspx?n=1578&s=34848 | 2019-07-17 | MOFA 2019C |
| MOFA supports EQPF participation in the Green Cross | https://en.mofa.gov.tw/News_Con | 2019-10 | MOFA 2019D |



doi:10.6342/NTU202501242

| | | | |
|---|---|---|---|
| International biennial meeting | tent.aspx?n=1578&sms=322&s=91731 | | |
| Taiwan and Renewable Energy: Powering the Planet for a Green Future | https://en.mofa.gov.tw/News_Content.aspx?n=1575&s=96852 | 2021-11-02 | MOFA 2021 |
| Opening remarks by Minister Jaushieh Joseph Wu at the GCTF virtual conference—Green Energy: A Way to a Clean and Sustainable Earth | https://en.mofa.gov.tw/News_Content.aspx?n=1575&sms=321&s=96421 | 2021-08-11 | MOFA 2021A |
| MOFA rebuttal to false claim at COP27 by China's Special Representative for Climate Change Affairs, Xie Zhenhua, that China made appropriate arrangements for Taiwan to participate in climate change process | https://en.mofa.gov.tw/News_Content.aspx?n=1328&s=99013 | 2022-11-10 | MOFA 2022 |
| MOFA and NGO jointly hold Climate Justice Leaders' Seminar, share Taiwanese women's efforts in fighting climate change | https://en.mofa.gov.tw/News_Content.aspx?n=1331&s=97563 | 2022-03-15 | MOFA 2022A |
| TaiwanICDF holds high-profile side events and exhibitions at Our Ocean Conference in Palau | https://en.mofa.gov.tw/News_Content.aspx?n=1328&s=97711 | 2022-04-15 | MOFA 2022B |
| Opening remarks by Minister Jaushieh Joseph Wu at the 2023 Pacific Climate Change Forum | https://en.mofa.gov.tw/News_Content.aspx?n=1575&s=115136 | 2023-07-19 | MOFA 2023 |
| Climate Action with Taiwan | https://en.mofa.gov.tw/News_Content.aspx?n=1575&s=116263 | 2023-10-02 | MOFA 2023A |
| MOFA sincerely thanks Germany for speaking up for Taiwan at UNFCCC COP28 closing plenary session | https://en.mofa.gov.tw/News_Content.aspx?n=1328&s=116206 | 2023-12-20 | MOFA 2023B |
| Public, private Taiwanese actors participate in UNFCCC COP28, highlight Taiwan's contribution to net-zero world | https://en.mofa.gov.tw/News_Content.aspx?n=1329&s=116190 | 2023-12-15 | MOFA 2023C |



doi:10.6342/NTU202501242

| | | | |
|---|---|---|---|
| Prerecorded opening remarks by Minister Jaushieh Joseph Wu for the screening of the documentary film Melting Greenland | https://en.mofa.gov.tw/News_Content.aspx?n=1575&sms=321&s=116273 | 2023-09-25 | MOFA 2023D |



doi:10.6342/NTU202501242

**Appendix Two: *Trending Taiwan* Videos**

| Title | Upload Date | URL |
|---|---|---|
| Shedding Light on Taiwan's Solar Energy Sector | September 18, 2015 | https://www.youtube.com/watch?v=SofYMxniYrQ&list=PLo3wVO5SvL6hG7lYcb2-9Mh4ZvlVQVMpM&index=16 |
| Taiwan Rides into a Low-Carbon Future | Feb 2, 2016 | https://www.youtube.com/watch?v=6bMPsStCuVs&list=PLo3wVO5SvL6hG7lYcb2-9Mh4ZvlVQVMpM&index=15 |
| Taiwan a partner for a better world | September 1, 2017 | https://www.youtube.com/watch?v=lapVhuVvz20&list=PLo3wVO5SvL6hG7lYcb2-9Mh4ZvlVQVMpM&index=14 |
| Change begins in the heartland | November 3, 2017 | https://www.youtube.com/watch?v=DRW9Q2R9y8g&list=PLo3wVO5SvL6hG7lYcb2-9Mh4ZvlVQVMpM&index=13 |
| An SDG a day | September 7, 2018 | https://www.youtube.com/watch?v=rxjAQqDPMGI&list=PLo3wVO5SvL6hG7lYcb2-9Mh4ZvlVQVMpM&index=12 |
| A promise to the Land | Nov 5, 2018 | https://www.youtube.com/watch?v=4KUr0MqJyeY&list=PLo3wVO5SvL6hG7lYcb2-9Mh4ZvlVQVMpM&index=2 |
| Riding the wind | Dec 5, 2019 | https://www.youtube.com/watch?v=9oGisHmvhnE&list=PLo3wVO5SvL6hG7lYcb2-9Mh4ZvlVQVMpM&index=9 |
| A Green Promised Land | November, 2021 | https://www.youtube.com/watch?v=rdGp41YJHFU&list=PLo3wVO5SvL6hG7lYcb2-9Mh4ZvlVQVMpM&index=8 |
| Building better, building green | Feb 18, 2022 | https://www.youtube.com/watch?v=SR6DYWCJZQE&list=PLo3wVO5SvL6hG7lYcb2-9Mh4ZvlVQVMpM&index=6 |
| Pathway to net-zero | Nov 7, 2022 | https://www.youtube.com/watch?v=KhELyiMvAfk&list=PLo3wVO5SvL6hG7lYcb2-9Mh4ZvlVQVMpM&index=5 |



doi:10.6342/NTU202501242

| | | |
|---|---|---|
| Green action Taiwan ! | Nov 23, 2023 | https://www.youtube.com/watch?v=06fbCI5IqfI&list=PLo3wVO5SvL6hG7lYcb2-9Mh4ZvlVQVMpM&index=4 |
| Our Pale Blue Dot | Nov 11, 2024 | https://www.youtube.com/watch?v=0uwrV2q2JYc&list=PLo3wVO5SvL6hG7lYcb2-9Mh4ZvlVQVMpM&index=3 |



doi:10.6342/NTU202501242

## Appendix Three: Corpus of Analysed Articles

| ID | Publication | Headline | Publication Date | Author | Website link |
|---|---|---|---|---|---|
| 1 | BBC | Taiwan: The 'God Flower' vanishing because of climate change | December 7, 2023 | Nuala McGovern | https://www.bbc.co.uk/news/world-asia-67342419 |
| 2 | BBC | Typhoon Doksuri: Taiwan cancels Han Kuang military drills | July 25, 2023 | Derek Cai | https://www.bbc.com/news/world-asia-66286479 |
| 3 | BBC | Why the world should pay attention to Taiwan's drought | April 20, 2021 | Cindy Sui | https://www.bbc.com/news/world-asia-56798308 |
| 4 | Bloomberg | Taiwan's Banks Face Mandatory Climate Stress Tests Next Year | June 8, 2022 | Miaojung Lin and Chien-Hua Wan | https://www.bloomberg.com/news/articles/2022-06-08/taiwan-s-banks-face-mandatory-climate-stress-tests-next-year |
| 5 | Bloomberg | Taiwan Challenges UN Exclusion on Sidelines of COP26 Summit | November 6, 2021 | Miaojung Lin and Samson Ellis | https://www.bloomberg.com/news/articles/2021-11-06/taiwan-challenges-un-exclusion-on-sidelines-of-cop26-summit |
| 6 | Bloomberg | Taiwan's Sudden Unraveling Masks a Serious Climate Problem | May 25, 2021 | Adam Majendie and Raymond Wu | https://www.bloomberg.com/news/articles/2021-05-24/taiwan-s-sudden-unraveling-masks-a-serious-climate-problem?embedded-checkout=true |
| 7 | Bloomberg | China Points to Offer of Climate Aid to Boost Taiwan Claims | November 10, 2022 | Bloomberg News | https://www.bloomberg.com/news/articles/2022-11-10/china-hails-offer-of-climate-assistance-to-boost-claim-to-taiwan |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 8 | Bloomberg | A $2 Billion Energy Project Threatens a 7,000 Year-Old Reef | March 2, 2021 | Cindy Wang and Stephen Stapczynski | https://www.bloomberg.com/news/articles/2021-03-02/the-7-000-year-old-reef-threatening-a-2-billion-energy-project?embedded-checkout=true |
| 9 | Bloomberg | Taiwan Fund Tops ESG Charts for 2023 Despite China Risks | January 9, 2024 | Sheryl Tian Tong Lee and Betty Hou | https://www.bloomberg.com/news/articles/2024-01-08/world-beating-esg-etf-s-bet-on-niche-sector-takes-off?embedded-checkout=true |
| 10 | Bloomberg | Taiwan Offshore Wind Developer In Talks Over Potential Acquisition Deals | November 30, 2023 | Sing Yee Ong | https://www.bloomberg.com/news/articles/2023-11-30/taiwan-offshore-wind-developer-sre-targeting-asian-acquisitions?embedded-checkout=true |
| 11 | Bloomberg | Mitsui to Invest in $6.5 Billion Offshore Wind Project in Taiwan | September 22, 2023 | Bloomberg News | https://www.bloomberg.com/news/articles/2023-09-22/mitsui-to-invest-in-6-5-billion-offshore-wind-project-in-taiwan?embedded-checkout=true |
| 12 | Bloomberg | Taiwan Considers Keeping Nuclear Reactors on Emergency Standby | May 29, 2023 | Cindy Wang and Stephen Stapczynski | https://www.bloomberg.com/news/articles/2023-05-29/taiwan-mulls-unusual-move-to-keep-nuclear-reactors-on-emergency-standby?embedded-checkout=true |
| 13 | Bloomberg | TSMC Leads Rush for Renewables Ahead of Taiwan Energy Vote | December 9, 2021 | Cindy Wang | https://www.bloomberg.com/news/articles/2021-12-08/tsmc-leads-rush-for-renewables-ahe |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| | | | | | ad-of-taiwan-energy-vote?embedded-checkout=true |
| 14 | Bloomberg | Japan Firms Exit Taiwan Offshore Wind Projects, Deepening Industry Crisis | November 17, 2023 | Sing Yee Ong | https://www.bloomberg.com/news/articles/2023-11-16/japan-firms-exiting-taiwan-offshore-wind-projects-deepens-industry-crisis?embedded-checkout=true |
| 15 | Bloomberg | Taiwan's Wind Power Ambitions Are in Peril | April 17, 2024 | Tim Culpan | https://www.bloomberg.com/opinion/articles/2024-04-16/taiwan-s-wind-power-ambitions-are-in-peril?embedded-checkout=true |
| 16 | Bloomberg | Taiwan's Battery-Swapping Stations Now Double As Mini Power Plants | April 19, 2023 | Coco Liu | https://www.bloomberg.com/news/articles/2023-04-19/taiwan-s-battery-swapping-stations-now-double-as-mini-power-plants |
| 17 | Bloomberg | Recycling Wind Turbine Blades Can Solve the Industry's Biggest Problem | March 7, 2024 | Dan Murtaugh and Spe Chen | https://www.bloomberg.com/news/features/2024-03-07/taiwanese-company-makes-recyclable-wind-turbine-blades-to-solve-waste-issue |
| 18 | Bloomberg | Taiwan's Troubled Utility Poses Risk to Chipmakers' Green Goals | January 27, 2024 | Sing Yee Ong | https://www.bloomberg.com/news/articles/2024-01-27/taiwan-s-troubled-utility-poses-risk-to-chipmakers-green-goals?embedded-checkout=true |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 19 | Bloomberg | Taiwan’s Proposed Carbon Tax Looks Too Low to Curb Emissions | October 6, 2022 | Samson Ellis and Chien-Hua Wan | https://www.bloomberg.com/news/articles/2022-10-06/taiwan-s-proposed-carbon-tax-looks-too-low-to-curb-emissions?embedded-checkout=true |
| 20 | Bloomberg | Flood Risk Replaces Drought as Rains Fill Taiwan Reservoirs | June 23, 2021 | Raymond Wu and Cindy Wang | https://www.bloomberg.com/news/articles/2021-06-22/flood-risk-replaces-drought-as-rains-fill-taiwan-reservoirs?embedded-checkout=true |
| 21 | Bloomberg | Nuclear Ghost Town Reveals Power Risk for Taiwan's Energy Shift | August 6, 2018 | Dan Murtaugh, Miaojung Lin, and Samson Ellis | https://www.bloomberg.com/news/articles/2018-08-05/nuclear-ghost-town-reveals-power-risk-for-taiwan-s-energy-shift?embedded-checkout=true |
| 22 | Bloomberg | Taiwan Lays Plans for $59 Billion in Renewable-Energy Finance | June 19, 2017 | Miaojung Lin and Lianting Tu | https://www.bloomberg.com/news/articles/2017-06-18/taiwan-lays-plans-for-59-billion-in-renewable-energy-finance?embedded-checkout=true |
| 23 | Bloomberg | Taiwan Vows $32 Billion Clean Energy Spree as It Lags on Targets | March 30, 2022 | Cindy Wang | https://www.bloomberg.com/news/articles/2022-03-30/taiwan-vows-32-billion-clean-energy-spree-as-it-lags-on-targets?embedded-checkout=true |
| 24 | Bloomberg | Taiwan Aims for Deeper Emissions Reduction Cuts of 30% by 2030 | December 30, 2024 | Stephen Stapczynski and Cindy Wang | https://www.bloomberg.com/news/articles/2024-12-30/taiwan-aims-for-deeper-emissions-reduction-cuts-of-30-by-2030 |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 25 | Bloomberg | Taiwan Considers Importing Clean Energy From Nearby Countries | October 15, 2024 | Debby Wu and Sing Yee Ong | https://www.bloomberg.com/news/articles/2024-10-15/taiwan-mulls-importing-clean-energy-from-nearby-countries |
| 26 | Bloomberg | Taiwan Shuts Second-to-Last Nuclear Plant in Controversial Shift | July 27, 2024 | Sing Yee Ong | https://www.bloomberg.com/news/articles/2024-07-27/taiwan-shuts-second-to-last-nuclear-plant-in-controversial-shift |
| 27 | Climate home news | Taiwan election points to nuclear phase-out by 2023 | January 14, 2016 | Megan Darby | https://www.climatechangenews.com/2016/01/14/taiwan-election-points-to-nuclear-free-future/ |
| 28 | Climate home news | Taiwan aims to lead mainland China with climate plan | November 4, 2015 | Alex Pashley | https://www.climatechangenews.com/2015/11/04/taiwan-aims-to-lead-mainland-china-with-climate-plan/ |
| 29 | Climate home news | As Taiwan models net zero scenarios, campaigners push for 2050 target | December 14, 2020 | Joe Lo | https://www.climatechangenews.com/2020/12/14/taiwan-models-net-zero-scenarios-campaigners-push-2050-target/ |
| 30 | Climate home news | Marooned by Morakot: Indigenous Taiwanese typhoon survivors long to return home | December 17, 2021 | Joe Henley | https://www.climatechangenews.com/2021/12/17/marooned-by-morakot-indigenous-taiwanese-typhoon-survivors-long-to-return-home/ |
| 31 | Climate home news | Taiwan's failure to clean up industry endangers its net zero pledge | January 31, 2023 | Chia-Wei Chao and Benjamin Yang | https://www.climatechangenews.com/2023/01/31/taiwan-failure-clean-up-industry-endangers-net-zero-pledge-opinion/ |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 32 | CNN | The chipmaking factory of the world is battling Covid and the climate crisis | June 10, 2021 | Eric Cheung | https://edition.cnn.com/2021/06/10/tech/taiwan-chip-shortage-covid-climate-crisis-intl-hnk/index.html |
| 33 | Economist | A massive blackout prompts questions about Taiwan's energy policy | August 17, 2017 | No author listed | https://www.economist.com/asia/2017/08/17/a-massive-blackout-prompts-questions-about-taiwans-energy-policy |
| 34 | Economist | Taiwan, the world's chipmaker, faces an energy crunch | May 16, 2024 | No author listed | https://www.economist.com/asia/2024/05/16/taiwan-the-worlds-chipmaker-faces-an-energy-crunch |
| 35 | FT | Chipmaker TSMC hit by Taiwan's soaring energy prices and growing outages | November 5, 2024 | Kathrin Hille | https://www.ft.com/content/cfd77e84-5d5b-47ae-96bd-9973b1c18662 |
| 36 | FT | Taiwan war game exposes vulnerability of energy grid to a China attack | March 17, 2024 | Kathrin Hille | https://www.ft.com/content/9ac24303-aef9-4a73-825d-c32366a9cde6 |
| 37 | FT | Taiwan green shift defies energy security fears | January 2, 2018 | Edward White | https://www.ft.com/content/6b429f2e-e3c6-11e7-97e2-916d4fbac0da |
| 38 | FT | Taiwan's rice farmers use big data to cope with climate change | December 9, 2018 | Kathrin Hille | https://www.ft.com/content/9f5438fa-ee2d-11e8-89c8-d36339d835c0 |
| 39 | Guardian | 'There are no crops to celebrate': climate crisis wipes out a way of life in Taiwan's mountains | November 20, 2023 | Helen Davidson and Chi-hui Lin | https://www.theguardian.com/environment/2023/nov/20/there-are-no-crops-to-celebrate-climate-crisis-wipes-out-a-way-of-life-in-taiwans-mountains |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 40 | Guardian | Parched Taiwan prays for rain as Sun Moon Lake is hit by drought | May 9, 2021 | Helen Davidson | https://www.theguardian.com/environment/2021/may/09/parched-taiwan-prays-for-rain-as-sun-moon-lake-is-hit-by-drought |
| 41 | Guardian | Australia wants deeper energy ties to help Taiwan decarbonise, amid China tensions | October 23, 2021 | Daniel Hurst | https://www.theguardian.com/australia-news/2021/oct/24/australia-wants-deeper-energy-ties-to-help-taiwan-decarbonise-amid-china-tensions |
| 42 | Huff Post | Taiwan's Ex-President On China, Nuclear Power And 'The Most Stupid Policy In The World' | February 2, 2023 | Alexander C. Kaufman | https://www.huffpost.com/entry/taiwan-president-nuclear_n_63d432bfe4b01a43638e0321 |
| 43 | Huff Post | Taiwan Is Retreating From Nuclear Energy. At What Cost? | January 27, 2023 | Alexander C. Kaufman | https://www.huffpost.com/entry/taiwan-nuclear-power-plants_n_63d2e635e4b01a43638cc6b1 |
| 44 | Huff Post | Taiwan's Indigenous Farmers Use Local Wisdom to Adapt to Climate Change | November 9, 2015 | The GroundTruth Project and Pei-Hua Yu | https://www.huffpost.com/entry/taiwans-indigenous-farmer_b_8512614 |
| 45 | Nikkei Asia | Marubeni enters Taiwan renewable energy market via acquisition | February 27, 2020 | KENTA ANDO | https://asia.nikkei.com/Business/Energy/Marubeni-enters-Taiwan-renewable-energy-market-via-acquisition |
| 46 | Nikkei Asia | Taiwan wind farm gives Japan foothold in Asia's green power game | November 13, 2019 | SUGURU KURIMOTO | https://asia.nikkei.com/Business/Energy/Taiwan-wind-farm-gives-Japan-foothold-in-Asia-s-green-power-game |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 47 | Nikkei Asia | Taiwan wind project gets boost from Japan government and banks | January 6, 2020 | SHIORI GOSO | https://asia.nikkei.com/Business/Energy/Taiwan-wind-project-gets-boost-from-Japan-government-and-banks |
| 48 | Nikkei Asia | Marubeni begins $1.2bn gas power project in Taiwan | February 20, 2019 | YUJI OHIRA | https://asia.nikkei.com/Business/Companies/Marubeni-begins-1.2bn-gas-power-project-in-Taiwan |
| 49 | Nikkei Asia | Gogoro wins the Nikkei Asian Review Award for Excellence | January 11, 2018 | DEBBY WU and CHENG TING-FANG | https://asia.nikkei.com/Business/Gogoro-wins-the-Nikkei-Asian-Review-Award-for-Excellence |
| 50 | Nikkei Asia | Taiwan weighs going fully electric, starting with motorbikes | November 30, 2017 | KENSAKU IHARA | https://asia.nikkei.com/Business/Taiwan-weighs-going-fully-electric-starting-with-motorbikes |
| 51 | Nikkei Asia | Taiwan nuclear plant closure tests Tsai's energy transition | July 5, 2021 | Tim Ferry | https://asia.nikkei.com/Business/Energy/Taiwan-nuclear-plant-closure-tests-Tsai-s-energy-transition |
| 52 | Nikkei Asia | Taiwan's frequent blackouts expose vulnerability of tech economy | August 30, 2022 | LAULY LI and CHENG TING-FANG | https://asia.nikkei.com/Business/Technology/Taiwan-s-frequent-blackouts-expose-vulnerability-of-tech-economy |
| 53 | Nikkei Asia | TSMC says up to 2% of revenue will go to green initiatives | March 23, 2022 | CHENG TING-FANG and LAULY LI | https://asia.nikkei.com/Spotlight/Supply-Chain/TSMC-says-up-to-2-of-revenue-will-go-to-green-initiatives |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 54 | Nikkei Asia | U.S. construction titan Bechtel eyes $10bn Taiwan energy jackpo | November 2, 2021 | LAULY LI and CHENG TING-FANG | https://asia.nikkei.com/Business/Energy/U.S.-construction-titan-Bechtel-eyes-10bn-Taiwan-energy-jackpot |
| 55 | Nikkei Asia | TSMC struggles to keep new hires, warns of power supply risk | June 30, 2022 | CHENG TING-FANG and LAULY Li | https://asia.nikkei.com/Business/Tech/Semiconductors/TSMC-struggles-to-keep-new-hires-warns-of-power-supply-risks |
| 56 | Nikkei Asia | TSMC misses sustainability goals as it ramps up chip output | June 30, 2021 | CHENG TING-FANG and LAULY LI | https://asia.nikkei.com/Business/Tech/Semiconductors/TSMC-misses-sustainability-goals-as-it-ramps-up-chip-output |
| 57 | Nikkei Asia | Taiwan to adopt tough new carbon cutting targets, environment czar says | October 16, 2024 | THOMPSON CHAU and LAULY LI and CHENG TING-FANG | https://asia.nikkei.com/Editor-s-Picks/Interview/Taiwan-to-adopt-tough-new-carbon-cutting-targets-environment-czar-says |
| 58 | Nikkei Asia | Taiwan's Delta pursues green hydrogen to feed clean energy demand | December 12, 2024 | LAULY LI | https://asia.nikkei.com/Business/Technology/Taiwan-s-Delta-pursues-green-hydrogen-to-feed-clean-energy-demand |
| 59 | Nikkei Asia | EU-Taiwan WTO offshore wind agreement paves way for dealmaking | November 19, 2024 | JENS KASTNER | https://asia.nikkei.com/Business/Energy/EU-Taiwan-WTO-offshore-wind-agreement-paves-way-for-dealmaking |
| 60 | Nikkei Asia | Taiwan's Lai needs to rethink nuclear shutdown plan | April 22, 2024 | Jordan McGillis | https://asia.nikkei.com/Opinion/Taiwan-s-Lai-needs-to-rethink-nuclear-shutdown-plann |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 61 | Nikkei Asia | Taiwan's promising offshore wind power sector could be blown off course | November 5, 2024 | Tim Daiss | https://asia.nikkei.com/Opinion/Taiwan-s-promising-offshore-wind-power-sector-could-be-blown-off-course |
| 62 | Nikkei Asia | Taiwan's top power cable maker ventures into offshore wind | July 8, 2024 | LAULY LI and CHENG TING-FANG | https://asia.nikkei.com/Spotlight/Supply-Chain/Taiwan-s-top-power-cable-maker-ventures-into-offshore-wind |
| 63 | Nikkei Asia | Taiwan's GlobalWafers gears up for further global expansion | October 2, 2024 | CHENG TING-FANG and LAULY LI | https://asia.nikkei.com/Editor-s-Picks/Interview/Taiwan-s-GlobalWafers-gears-up-for-further-global-expansion |
| 64 | Nikkei Asia | Mitsui to join Taiwan offshore wind project with Canadian utility | September 22, 2023 | Nikkei staff writers | https://asia.nikkei.com/Business/Energy/Mitsui-to-join-Taiwan-offshore-wind-project-with-Canadian-utility |
| 65 | Nikkei Asia | Taiwan may be excluded from COP29, but can still help drive regional action | November 11, 2024 | Wen-Ling Tu and Tsaiying Lu | https://asia.nikkei.com/Opinion/Taiwan-may-be-excluded-from-COP29-but-can-still-help-drive-regional-action |
| 66 | Nikkei Asia | Japan's JERA to sell interest in Taiwan wind power | February 10, 2023 | RYO MUKANO | https://asia.nikkei.com/Business/Energy/Japan-s-JERA-to-sell-interest-in-Taiwan-wind-power |
| 67 | Nikkei Asia | Taiwan braces for drought in key chip hubs again | March 24, 2023 | LAULY LI | https://asia.nikkei.com/Business/Business-Spotlight/Taiwan-braces-for-drought-in-key-chip-hubs-again |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 68 | Nikkei Asia | Taiwan to spend $56bn on renewable energy | November 28, 2016 | KENSAKU IHARA | https://asia.nikkei.com/cms/Politics/Taiwan-to-spend-56bn-on-renewable-energy |
| 69 | Nikkei Asia | Taiwan's renewables push hit by big tech's appetite for power | December 18, 2020 | RIK GLAUERT | https://asia.nikkei.com/Spotlight/Environment/Taiwan-s-renewables-push-hit-by-big-tech-s-appetite-for-power |
| 70 | Nikkei Asia | TSMC moves up 100% green energy goal by 10 years | September 15, 2023 | CHENG TING-FANG and KATHERINE CREEL | https://asia.nikkei.com/Business/Tech/Semiconductors/TSMC-moves-up-100-green-energy-goal-by-10-years |
| 71 | Nikkei Asia | Taiwan struggles to balance high-tech and low-carbon ambitions | November 1, 2021 | CHENG TING-FANG and LAULY LI | https://asia.nikkei.com/Spotlight/Environment/Climate-Change/Asia-s-climate-crisis/Taiwan-struggles-to-balance-high-tech-and-low-carbon-ambitions |
| 72 | Nikkei Asia | Taiwan steps up climate leadership with ambitious reforms | November 13, 2023 | THOMPSON CHAU | https://asia.nikkei.com/Editor-s-Picks/Interview/Taiwan-steps-up-climate-leadership-with-ambitious-reforms |
| 73 | Nikkei Asia | Taiwan commits to net-zero carbon emissions by 2050 | February 15, 2023 | THOMPSON CHAU | https://asia.nikkei.com/Spotlight/Environment/Climate-Change/Taiwan-commits-to-net-zero-carbon-emissions-by-2050 |
| 74 | NYT | Taiwan Prays for Rain and Scrambles to Save Water | May 27, 2021 | Amy Chang Chien and Mike Ives | https://www.nytimes.com/2021/05/28/world/asia/taiwan-drought.html |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 75 | NYT | In Taiwan's Waters, a Hunt for Tiny, Wriggling 'Gold' | March 31, 2023 | Amy Chang Chien and Tiffany May | https://www.nytimes.com/2023/03/31/world/asia/taiwan-eels.html |
| 76 | NYT | Electric Scooters, and a Network | December 7, 2015 | Chris Horton | https://www.nytimes.com/2015/12/08/business/energy-environment/electric-scooters-and-a-network.html |
| 77 | Reuters | How Taiwan's green power deficit threatens tech industry's bid for net zero | June 5, 2024 | Ben Payton | https://www.reuters.com/sustainability/climate-energy/how-taiwans-green-power-deficit-threatens-tech-industrys-bid-net-zero-2024-06-04/ |
| 78 | Reuters | Taiwan aims to shed dirty power reputation with big wind push | September 28, 2023 | Gavin Maguire | https://www.reuters.com/markets/commodities/taiwan-aims-shed-dirty-power-reputation-with-big-wind-push-maguire-2023-09-28/ |
| 79 | Reuters | Google buys stake in Taiwan solar power firm owned by BlackRock | July 1, 2024 | Simon Jessop and Susanna Twidale | https://www.reuters.com/sustainability/climate-energy/google-buys-stake-taiwan-solar-power-firm-owned-by-blackrock-2024-07-01/ |
| 80 | Reuters | Taiwan, excluded from climate summit, sets up 'war room' to watch talks | November 8, 2024 | Reuters | https://www.reuters.com/world/asia-pacific/taiwan-excluded-climate-summit-sets-up-war-room-watch-talks-2024-11-08/ |
| 81 | Reuters | Orsted says Taiwan wind project to power TSMC on track for 2025 finish | April 24, 2024 | Reuters | https://www.reuters.com/business/energy/orsted-says-taiwan- |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| | | | | | wind-project-power-tsmc-track-2025-finish-2024-04-24/ |
| 82 | Reuters | Japan's Mitsui, Canada's Northland to build 1 GW offshore wind farm in Taiwan | September 22, 2023 | Yuka Obayashi | https://www.reuters.com/business/energy/japans-mitsui-canadas-northland-build-1-gw-offshore-wind-farm-taiwan-2023-09-22/ |
| 83 | Reuters | Orsted sells 50% stake in Taiwan wind farm for $1.64 bln | December 11, 2024 | Reuters | https://www.reuters.com/business/energy/orsted-sells-50-stake-greater-changhua-4-wind-farm-164-bln-2024-12-11/ |
| 84 | Reuters | Taiwan's CPC buys first crude with carbon offset from SOCAR | June 12, 2022 | Reuters | https://www.reuters.com/markets/commodities/taiwans-cpc-buys-first-crude-with-carbon-offset-socar-2022-06-12/ |
| 85 | Reuters | Taiwan starts receiving LNG from Cheniere, to get 30 shipments annually | January 10, 2021 | Reuters | https://www.reuters.com/article/business/energy/taiwan-starts-receiving-lng-from-cheniere-to-get-30-shipments-annually-idUSL1N2JL02N/ |
| 86 | Reuters | Germany's EnBW expands into Taiwan in renewables push | February 12, 2018 | Reuters | https://www.reuters.com/article/markets/germanys-enbw-expands-into-taiwan-in-renewables-push-idUSL8N1Q21HD/ |
| 87 | Reuters | Taiwan c.bank to incorporate climate change risks into forecasting | December 31, 2022 | Reuters | https://www.reuters.com/markets/asia/taiwan-cbank-incorporate-climate-change-risks-into-forecasting-2022-12-30/ |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 88 | Reuters | Taiwan says shut out of U.N. climate talks due to China pressure | November 14, 2017 | Jess Macy Yu | https://www.reuters.com/article/us-taiwan-china-climatechange/taiwan-says-shut-out-of-u-n-climate-talks-due-to-china-pressure-idUSKBN1DE0W9/ |
| 89 | Reuters | Taiwan is Taiwan': China name dispute moves from birds to climate change | September 27, 2020 | Ben Blanchard | https://www.reuters.com/article/business/environment/taiwan-is-taiwan-china-name-dispute-moves-from-birds-to-climate-change-idUSKBN26I08B/ |
| 90 | Reuters | Focus: Taiwan's wind industry braves cross-strait risks in clean energy boom | May 11, 2023 | Sarah Wu | https://www.reuters.com/business/energy/taiwans-wind-industry-braves-cross-strait-risks-clean-energy-boom-2023-05-10/ |
| 91 | Reuters | Chipmaker TSMC aims for net zero emissions by 2050 | September 16, 2021 | Reuters | https://www.reuters.com/technology/chipmaker-tsmc-aims-net-zero-emissions-by-2050-2021-09-16/#:~:text=TAIPEI%2C%20Sept%2016%20(Reuters),Tsai%20Ing%2Dwen%20in%20April. |
| 92 | Reuters | Entering AI era, Taiwan chip industry urges renewables push | October 27, 2023 | Sarah Wu | https://www.reuters.com/technology/taiwan-chip-industry-pushes-government-speed-up-renewables-2023-10-27/ |
| 93 | Reuters | China complains over support for Taiwan at COP27 climate summit | November 16, 2022 | Reuters | https://www.reuters.com/business/cop/china-complains-over-support-taiwan-cop27-climate-summit-2022-11-15/ |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 94 | Reuters | Taiwan plant hunters race to collect rare species before they're gone | September 21, 2020 | Ann Wang | https://www.reuters.com/article/world/wider-image-taiwan-plant-hunters-race-to-collect-rare-species-before-theyre-go-id USKCN26C0T4/#:~:text=TAITUNG%2C%20Taiwan%20(Reuters)%20%2D,climate%20change%20and%20human%20encroachment. |
| 95 | Reuters | In Taiwan tea country, a scramble to adapt to extreme weather | October 15, 2021 | Ann Wang | https://www.reuters.com/business/environment/taiwan-tea-country-scramble-adapt-extreme-weather-2021-10-13/#:~:text=A%20once%2Din%2Da%2D,year%2Dold%20Chien%20told%20Reuters. |
| 96 | Reuters | China raises complaint over Taiwan's participation in COP28 | December 9, 2023 | Reuters | https://www.reuters.com/world/china-raises-complaint-over-taiwans-participation-cop28-2023-12-09/ |
| 97 | Reuters | Taiwan may face fewer typhoons - but harsher drought - as planet warms | December 22, 2020 | Sally Jensen | https://www.reuters.com/article/world/taiwan-may-face-fewer-typhoons-but-harsher-drought-as-planet-warms-idUSKBN28W00C/ |
| 98 | Reuters | Taiwan begins to plan for zero emissions by 2050 | April 22, 2021 | Reuters | https://www.reuters.com/business/environment/taiwan-begins-plan-zero-emissions-by-2050-2021-04-22/ |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 99 | Reuters | Taiwan fund to issue $2.3 bln climate change pension mandate, Asia's first -official | January 6, 2022 | Selena Li | https://www.reuters.com/business/taiwan-pension-fund-awards-23-bln-esg-mandate-hsbc-morgan-stanley-3-others-2022-06-24/ |
| 100 | Reuters | Offshore wind power firms see Taiwan as a battleground to expand in Asia | April 30, 2018 | Stine Jacobsen | https://www.reuters.com/article/us-taiwan-windpower/offshore-wind-power-firms-see-taiwan-as-a-battleground-to-expand-in-asia-idUSKBN1I11IV/ |
| 101 | Washington Post | Typhoon Kong-rey makes landfall in Taiwan with high winds, heavy rain | October 31, 2024 | Pei-Lin Wu, Vic Chiang, Vivian Ho and Ian Livingston | https://www.washingtonpost.com/weather/2024/10/31/taiwan-typhoon-kong-rey-landfall-rain/ |
| 102 | Washington Post | With Taiwan blocked from U.N. climate talks, its emissions go uncounted | November 9, 2021 | Lily Kuo and Alicia Chen | https://www.washingtonpost.com/world/asia_pacific/taiwan-china-emissions-cop26-climate/2021/11/09/534f8724-4038-11ec-9404-50a28a88b9cd_story.html |
| 103 | Washington Post | Economy vs. environment: Some Taiwanese consider cashing in their chips | October 9, 2023 | Meaghan Tobin, Vic Chiang and Pei-Lin Wu | https://www.washingtonpost.com/world/2023/10/09/taiwan-tsmc-chip-manufacturer-fab/ |
| 104 | WSJ | The Chip Shortage Is Bad. Taiwan’s Drought Threatens to Make It Worse. | April 16, 2021 | Stephanie Yang | https://www.wsj.com/articles/the-chip-shortage-is-bad-taiwans-drought-threatens-to-make-it-worse-11618565400 |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 105 | WSJ | For Taiwan, as for Ukraine, Energy Security Is Existential | April 13, 2023 | Nathaniel Taplin | https://www.wsj.com/articles/for-taiwan-energy-security-would-be-more-perilous-than-ukraine-30de8e84 |
| 106 | WSJ | Taiwan Has a Big National-Security Risk: It Imports 97% of Its Energy | July 7, 2023 | Sha Hua | https://www.wsj.com/articles/taiwan-has-a-big-national-security-risk-it-imports-97-of-its-energy-f1faced |
| 107 | France24 | Taiwan hunkers down as deadly Typhoon Gaemi makes landfall | 24/07/2024 | France24/AFP | https://www.france24.com/en/live-news/20240724-taiwan-shuts-down-as-deadly-typhoon-gaemi-approaches |
| 108 | France24 | Taiwan says 2024 was hottest year on record | 31/12/2024 | France24/AFP | https://www.france24.com/en/live-news/20241231-taiwan-says-2024-was-hottest-year-on-record |
| 109 | France24 | Typhoon Kong-rey makes landfall in Taiwan, killing at least 2 | 01/11/2024 | France24/AFP | https://www.france24.com/en/asia-pacific/20241101-typhoon-kong-rey-makes-landfall-in-taiwan-killing-at-least-2 |
| 110 | France24 | Taiwan tribe despairs as drought shrinks bamboo crop | 02/06/2023 | France24/AFP | https://www.france24.com/en/live-news/20230602-taiwan-tribe-despairs-as-drought-shrinks-bamboo-crop |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 111 | The Australian | Taiwan Shows Australia the winds of change | July 21, 2023 | Colin Packham | https://www.theaustralian.com.au/business/renewable-energy-economy/lessons-australia-must-learn-from-taiwans-transition-to-windpowered-generation/news-story/d9bf4f5666810f00129fc36e7f8059b7?amp&nk=407445d01530423dd99a13c7bb874d82-1690003728 |
| 112 | SMH | ‘It’s just an announcement’: Taiwan says Australia should legislate net-zero target | 08/11/2021 | Eryk Bagshaw | https://www.smh.com.au/world/asia/it-s-just-an-announcement-taiwan-says-australia-should-legislate-net-zero-target-20211105-p596di.html |
| 113 | The Age | Why Taiwan’s drought means you can’t have a new smart TV | May 30, 2021 | Eryk Bagshaw | https://www.theage.com.au/world/asia/why-taiwan-s-drought-means-you-can-t-have-a-new-smart-tv-20210524-p57uq1.html |
| 114 | Forbes | Taiwan Finds A Way Into The World Climate Dialogue Despite China | Nov 21, 2017 | Ralph Jennings | https://www.forbes.com/sites/ralphjennings/2017/11/21/how-taiwan-is-edging-into-the-u-n-climate-talks-despite-china/ |
| 115 | Forbes | TSMC Commits To 100% Clean Power, Pressuring Chipmaker Rivals To Follow Suit | Jul 27, 2020 | Mike Scott | https://www.forbes.com/sites/mikescott/2020/07/27/tsmc-commits-to-100-clean-power-pressuring-chipmaker-rivals-to-follow-suit/ |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 116 | Forbes | No Water No Microchips: What Is Happening In Taiwan? | May 31, 2021 | Emanuela Barbiroglio | https://www.forbes.com/sites/emanuelabarbiroglio/2021/05/31/no-water-no-microchips-what-is-happening-in-taiwan/?sh=1d133c5c22af&utm_source=/blog/teamlink-linkedin |
| 117 | Forbes | Shares Of Fubon-Backed Solar Farm Developer Slump In First Trading On Taiwan's Main Board | September 26, 2024 | Shanshan Kao | https://www.forbes.com/sites/shanshankao/2024/09/26/shares-of-fubon-backed-solar-farm-developer-slump-in-first-trading-on-taiwans-main-board/ |
| 118 | Forbes | Three Of Taiwan's Top Solar Companies Merge To Rally Against Competition From China | Oct 17, 2018 | Ralph Jennings | https://www.forbes.com/sites/ralphjennings/2018/10/17/three-of-taiwans-top-solar-companies-merge-to-rally-against-competition-from-china/ |
| 119 | Forbes | Pro-Nuclear Activists Win Landslide Electoral Victory In Taiwan | Nov 24, 2018 | Michael Shellenberger | https://www.forbes.com/sites/michaelshellenberger/2018/11/24/pro-nuclear-activists-win-landslide-electoral-victory-in-taiwan/ |
| 120 | CNBC | Google invests in BlackRock-backed Taiwanese solar developer to boost energy capacity amid AI boom | July 1, 2024 | Sheila Chiang | https://www.cnbc.com/2024/07/01/google-invests-in-blackrock-backed-solar-developer-in-taiwan-amid-ai-boom.html |
| 121 | Telegraph | Trucks of fresh water used to feed Taiwan's semiconductors as crops left to die in punishing drought | 23 May 2021 | Nicola Smith John Liu | https://www.telegraph.co.uk/news/2021/05/23/trucks-fresh-water-used-feed-taiwans-semiconductors-crops-left/ |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 122 | Telegraph | Taiwan to deploy drone defences around power plants amid fears of Chinese attack | 03 February, 2024 | Nicola Smith | https://www.telegraph.co.uk/world-news/2024/02/03/taiwan-drone-defences-power-plants-fears-china-attack/ |
| 123 | ABC | Taiwan is only months away from shutting off all nuclear power, but some question whether the tech powerhouse is ready | October 25, 2024 | Kathleen Calderwood, Xin-yun Wu and Fletcher Yeung | https://www.abc.net.au/news/2024-10-25/taiwan-shutting-nuclear-power-questions-if-ready/104488556 |
| 124 | ABC | What does chipageddon have to do with climate change? | May 7, 2021 | Madeleine Morris and Nate Byrne | https://www.abc.net.au/news/2021-05-07/what-does-chipageddon-have-to-do-with-climate-change/13327926 |
| 125 | DW | Scores of deaths from cold snap in Taiwan | January 25, 2016 | DW | https://www.dw.com/en/deadly-cold-snap-sweeps-across-asia/a-19001957 |
| 126 | The Conversation | How Taiwan uses Buddhist literature for environmental education | November 30, 2020 | Natasha Heller | https://theconversation.com/how-taiwan-uses-buddhist-literature-for-environmental-education-129970 |
| 127 | The Diplomat | Taiwan Takes a Step Back With New Coal Plant | May 12, 2018 | Lisa Tsai | https://thediplomat.com/2018/05/taiwan-takes-a-step-back-with-new-coal-plant/ |
| 128 | The Diplomat | Taiwan's Role in Driving Climate Action and Regional Sustainability | November 1, 2024 | Tsaiying Lu, Meng-Hui Lin, Chen-Yen Chang, Elizabeth Frost, and Yu-Ping Yang | https://thediplomat.com/2024/11/taiwans-role-in-driving-climate-action-and-regional-sustainability/ |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| 129 | The Diplomat | Taiwan's Energy (In)security: Between Green Ambitions vs. Fossil Fuel Realities | July 20, 2023 | Vladimira Lickova | https://thediplomat.com/2023/07/taiwans-energy-insecurity-between-green-ambitions-vs-fossil-fuel-realities/ |
| 130 | The Diplomat | Climate and Energy Security: Opportunities for Taiwan Under Trump | December 18, 2024 | Elizabeth Frost and Meng-Hui Lin | https://thediplomat.com/2024/12/climate-and-energy-security-opportunities-for-taiwan-under-trump/ |
| 131 | The Diplomat | Climate Disinformation Is Compromising Taiwan's Efforts in Defending Democracy | October 31, 2024 | Elena Yi-Ching Ho | https://thediplomat.com/2024/10/climate-disinformation-is-compromising-taiwans-efforts-in-defending-democracy/ |
| 132 | The Diplomat | Taiwan's Election Has Big Ramifications for Energy Security | January 31, 2024 | Yicheng Zhang and Morgan Peirce | https://thediplomat.com/2024/01/taiwans-election-has-big-ramifications-for-energy-security/ |
| 133 | The Diplomat | Solar Power: A New Opportunity for India-Taiwan Ties | November 08, 2024 | Anushka Saxena and Rakshith Shetty | https://thediplomat.com/2024/11/solar-power-a-new-opportunity-for-india-taiwan-ties/ |
| 134 | The Diplomat | Energy at the Crux of Australia-Taiwan Relations | June 24, 2024 | Grant Wyeth | https://thediplomat.com/2024/06/energy-at-the-crux-of-australia-taiwan-relations/ |
| 135 | The Diplomat | How Water Scarcity Threatens Taiwan's Semiconductor Industry | September 19, 2024 | Kevin Zhang | https://thediplomat.com/2024/09/how-water-scarcity-threatens-taiwans-semiconductor-industry/ |
| 136 | CLEW | Net zero targets could force Taiwan's chipmakers abroad | 16 Dec 2022 | Kwangyin Liu | https://www.cleanenergywire.org/news/net-zero-targets-coul |



doi:10.6342/NTU202501242

| | | | | | |
|---|---|---|---|---|---|
| | | | | | d-force-taiwans-chipmakers-abroad |
| 137 | TIME | Why Taiwan Is Becoming a Leader in Urban Mining | 26 Apr 2024 | Lillygol Sedaghat and Cory Howell Hamada | https://time.com/6957989/taiwan-urban-mining/ |
| 138 | TIME | These Taiwanese Companies Are Turning Waste Into Building Materials | November 4, 2024 | Lillygol Sedaghat and Cory Howell Hamada | https://time.com/7172075/waste-construction-taiwan/ |



doi:10.6342/NTU202501242



doi:10.6342/NTU202501242