Towards Indigenous involvement in planning: a case study of Pulau Ubin, Singapore

Abstract

Indigenous perspectives are often not taken into account in planning processes, directly impacting

multiple aspects of their lives including their heritage and well-being. This thesis thus seeks to uncover

Indigenous perspectives in the case study of Pulau Ubin, Singapore. Using interviews, document analysis,

and site visits, it compares the discourse of the Ubin Orang Pulau against the state discourse of the

planning of Pulau Ubin, to identify how similarities and differences can be used to advocate for the

involvement of the Ubin Orang Pulau. Results show that leveraging on the existing focus on heritage and

nature conservation may help to bridge the gap between both discourses. This thesis recommends that

planners adopt a pluriversal view of planning and partner the Ubin Orang Pulau in life projects that can

serve to establish the latter as experts in human-nature interaction, as well as demonstrate the relevance of

their heritage to this day.

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Preface

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Introduction

Context

It has been well documented that Indigenous Peoples around the world lack land use rights, even to their traditional lands (Ojong, 2020; Stocks, 2005). It thus follows that they also experience a lack of participation in planning processes (Booth et al., 2011; Porter et al., 2016). At the same time, an increasing number of Indigenous Peoples have been moving to urban areas, for reasons such as the pursuit of education and employment opportunities, forced displacement, and natural disasters. These issues have manifested in an environment where Indigenous people worldwide live in cities removed from their ancestral land, disconnected from traditional ways of life, with no foreseeable ability to regain access or stewardship. There is a pressing need for planners to account for Indigenous Peoples in the midst of these challenges in order to protect their cultural heritage, as well as physical and mental well-being. (United Nations, 2021). As climate change worsens and negatively impacts ecosystems, the relevance of Indigenous knowledge founded on sustainable human-nature interactions has also garnered interest in academic and planning fields. To uncover and include these ways of knowing into official processes, planners must critically engage with the role of power in planning, accepting Indigenous discourses as valid and necessary.

Problem description

Societal relevance

Participatory processes have been a cornerstone in the field of planning, but too often have neglected marginalised groups (Williams, 2004). As a result, powerful or majority groups tend to be the loudest voices in these processes, causing the needs of marginalised groups to be overlooked.

While there are numerous systematically marginalised groups in participatory planning, this master's thesis chooses to focus on the role of Indigenous Peoples in planning. Indigenous knowledge

revolves around relationships between humans and their environment, and the resultant identity of Indigenous Peoples is rooted in their natural environment (Greenwood & Lindsay, 2019). Hence, land use practices directly affect their way of life. According to Amnesty International (2024), despite the existence of international law that prohibits relocation of Indigenous Peoples without free, prior, and informed consent (FPIC), these ancestral lands are often left to the management of governments and private companies who carry out forcible eviction. The systemic marginalisation of Indigenous Peoples globally has culminated in their poverty, ill-health, and lower levels of education, with life expectancy up to 20 years lower as compared to the rest of the population (Amnesty International, 2024). Climate change has further compounded this societal issue. Because Indigenous Peoples enjoy deep ties to the land and often rely on it for sustenance, changing global temperatures and rainfall patterns, along with more frequent and intense natural disasters, have upset the balance of ecosystems around the world, affecting Indigenous Peoples disproportionately (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services [IPBES], 2019).

There is a growing body of research on Indigenous participation in planning, in countries like the United States of America, Canada, and Australia (Booth, 2011; Jojola, 2008; Prusak, 2016; Porter, 2017). However, though the majority of the world's Indigenous population lives in Asia (Errico, 2017), there is little research on Indigenous planning in this region. Reasons for this gap in literature include a lack of a common definition of 'Indigenous Peoples' and a lack of recognition of the rights of this community in many Asian countries (Errico, 2017). Among Southeast Asian countries, only the Philippines and Malaysia recognise the term 'Indigenous Peoples' to represent parts of the population (Tran et al., 2025.) Examples of the rejection of Indigenous Peoples and their rights include the Indonesian government's argument that indigeneity is inapplicable in the country, and how the Lao government outlaws organisations that promote Indigenous rights (Buenavista et al., 2019). In this region, Singapore will be examined as a case study, where Pulau Ubin is a small island off the mainland, and the Ubin Orang Pulau (UOP), its Indigenous Peoples.

In the face of this struggle, Asian Indigenous Peoples possess a multitude of knowledge on the responsible use and stewardship of common land resources (Buenavista et al., 2019). Buenavista et al. outlines the many examples of how forest-dependent Indigenous Peoples have sustainably managed Village Community Forests (VCFs) for generations, relying on the land for both sustenance and for their livelihood, from Bangladesh to China. Though most of them lack official land rights to these resources, Indigenous knowledge and practices imparted through generations allows for sustainable land and resource use. This is a stark contrast to the realities of the world today, where resource extraction has grown more than 3 times since 1970, and extraction of 'natural resources' has caused a more than 90% decline in biodiversity, as well as water scarcity (United Nations Environment Programme, 2019). A systematic review of 169 publications researching the relationship between governance and conservation programmes revealed that these programmes were more effective when helmed by Indigenous Peoples and local communities (Dawson et al, 2021). Similarly, Bawa et al (2007) argue that the key reason for this effectiveness is not the amount of concrete rewards that motivate the Indigenous Peoples, but rather, the acknowledgement of socio-cultural traditions and the ability of these communities to have a say in decision making. In summary, involving Indigenous Peoples and incorporating their knowledge into planning processes has a large potential impact on conservation and sustainable land use practices.

Scientific relevance

To effectively address issues in land use planning, it is important for planners to first engage with Indigenous Peoples, in order to glean a deeper understanding of their knowledge, values, and systems that arise from a direct interaction from the land (Greenwood & Lindsay, 2019). This knowledge can act as a starting point on which to build upon for further knowledge generation and dissemination. However, factors such as cultural differences, competing values, and power dynamics can make it difficult for planners and researchers to establish a relationship with Indigenous Peoples. Lynch (2017, pp. 325-326) recommends a 'two-way system' revolving around sharing perspectives and knowledge, focusing on trust, acknowledgment, and the fortification of Indigenous and other scientific knowledge systems that can

provide 'mutual benefits'. To do this, knowledge co-production has been introduced as a framework for addressing issues such as planning, that involves multiple groups of stakeholders with differing objectives and beliefs and complicated connections (Norström et al., 2019). Proponents of knowledge co-production emphasise collaboration between scientists, policymakers, and Indigenous communities. Hence, the principles of knowledge co-production that were determined to be applicable to this thesis are: context-based, pluralistic, goal-oriented, and interactive. By recognising different epistemologies as equal and integrating Indigenous knowledge with scientific approaches, this approach goes beyond knowledge creation and can build competence, foster relationships, improve social capital, and eventually execute sustainable initiatives. As Norström outlines, research on critical societal transitions show that sustainable initiatives are easy to implement, but have limited capacity to effect true transformative change. In order to achieve this, which in the context of land use planning includes ending the systemic marginalisation of Indigenous Peoples in planning processes, there is also a need to focus on the systems of social change, such as institutional reform and the mechanisms of power.

To break away from planning's colonial and state-led tendencies, planning needs to be politicised as a means to put an end to the historic marginalisation of certain communities—in other words, the role of power in planning cannot be overlooked (Matunga, in Porter et al; 2017). Contemporary urban planning has its roots in imperialism, where colonial administrations enforced their ideologies onto the urban morphology of colonies, with a large focus on improving infrastructure and amenities that mostly benefited their own settlements (Baffoe & Roy, 2023). As a result, local communities suffered from racial segregation and the eviction of the poor to the city periphery, where they received little, if any, sanitation and waste services (King, 2015). As Baffoe and Roy (2023) point out, the effects of colonial planning are still felt today in various post-colonial cities that have not altered their urban morphologies, and where planners follow colonial planning theory. To disengage from colonial ideologies in planning theory, planners need to include context-specific knowledge from local communities. Resisting existing colonial power relations in post-colonial settler states also requires more than the public acknowledgement of Indigenous people and their rights. There is a need to reevaluate relationships, responsibilities, and

accountabilities (Viswanathan, in Porter et al; 2017). To initiate a genuine shift in power that is not rooted in tokenism, planners need to view Indigenous Peoples not as just another participant, but rather a self-determined people with their own legislation and practices (Walker, in Porter et al; 2017). Planners have a role to make a seat at the table for Indigenous Peoples, to give up power, by listening to Indigenous accounts of and in planning (Porter, 2017). Tokenistic participatory processes alone do not shift power relations, for Indigenous accounts are still evaluated according to the terms of the oppressor. Power prioritises knowledge that aligns with its goals, and often disregards or suppresses knowledge that is not in its favour (Flyvbjerg, 2002). In order to challenge dominant systems of power, alternative accounts must be sufficiently utilised to bring other systems of knowledge and narratives of history into the planning arena. Thus, research needs to be carried out according to the principles of the co-production of knowledge systems that address power/knowledge dynamics, in order to arrive at findings that can help Indigenous Peoples gain meaningful involvement in planning and stewardship over their traditional land.

Knowledge gap

However, there is a knowledge gap in how these findings can be utilised in an Asian context, where the concept of indigeneity is one that mostly goes unrecognised. It follows that Indigenous knowledge, including that regarding planning, is also not admitted to the official field of planning in most Asian countries. This knowledge gap is compounded by the remnants of colonialism which is still perpetuated by existing legal structures in post-colonial states around the world, many of which are in Asia (Stahn, 2020). The role of planners as politicised advocates in official arenas of planning need to be expounded upon, as not only do they have the potential to aid legitimacy in participation, they can also play a part in the recognition of Indigenous rights that surpass the field of planning. Hence, there is a gap not only in exploring the different discourses of Indigenous Peoples in Asia, but how these findings can be properly utilised to initiate a shift in power relations, in post-colonial states where planning mostly remains a top-down process.

There also exists an implicit paradox regarding the role of Indigenous Peoples in planning—growing interest in participatory processes and knowledge co-production is inherently at odds with a decolonial approach of full autonomy and self-determination of Indigenous Peoples. Though Indigenous participation in planning may sound promising, too often it is tokenistic, contributing perspectives that are quickly labelled as diverse so as to check it off the list (Porter, 2017). Merino (2018, p. 75) warns that the outcome is often a proliferation of 'weak participatory channels', (ab)used by authorities to point to as proof of inclusion, but without an imperative to adapt them into policies. On the other hand, the right to self-determination, a person's right to choose and live out their own destiny, is closely tied to sovereignty in the case of Indigenous Peoples, as it translates to land acknowledgment that connects place with heritage and the validation of Indigenous institutions (Barry & Porter, 2011). The Indigenous fight for self-determination thus is closely linked to planning and the ability to own and manage their ancestral lands. While self-determination is often lauded as the end goal of planning for and with Indigenous Peoples, it is too often unrealistic to expect this to be achieved in a short timeframe. Both participation and self-determination, while appearing to sit at different ends of the scale, face challenges in legitimising the role of Indigenous Peoples in planning.

This tension has manifested as an apparent knowledge gap in the field of planning. Though there has been much research about both Indigenous participation in planning and Indigenous autonomy, there has been limited research conducted with the aim of critically engaging with both approaches. This master's thesis builds on the work of Orbach (2011), who suggests a two-pronged approach. Firstly, Orbach argues for the repoliticised empowerment of Indigenous Peoples, pushing for planners to be actively involved in the political sphere and advocating for the right to self-determination and autonomy. Here, autonomy is defined as 'a state of control, by an indigenous community or nation, over all aspects of local life, including the initiation, design, implementation, management and evaluation of programs and projects... power over one's very understanding of the world'. That said, Orbach acknowledges the limitations of this approach in advocating for the rights of Indigenous people and their rights in planning, especially when opposed by established and powerful political and economic institutions. Here she

proposes her second prong: planners must also engage with Indigenous Peoples, partnering with them as they take on life projects that require them to take ownership and active involvement in planning for their own future—a term that was developed in 2004 by Bruno Barras, a leader of the Yshiro-Ebitoso people of Paraguay, and Mario Blaser, an anthropologist. The role of a planner here is not one who 'gives' power as a 'trustee' (Vincent, 2004), but as an ally who offers 'knowledge, resources, and technical skills' (Orbach, 2011). Though this framework is promising, and remains as one of the only frameworks that address both autonomy and participation, research has yet to be conducted on how it may be used in practice. Given that Orbach also focuses on Indigenous Peoples on the American continent, it is also unclear how this framework holds up in an Asian context, which is a knowledge gap that is explicit in the concluding notes of her paper.

Hence, this master's thesis aims to address these gaps through uncovering Indigenous knowledge relevant to planning, and examine how this knowledge can be utilised alongside official planning discourse to achieve a more inclusive and holistic plan. The discovery and dissemination of knowledge that has not previously been admitted into official planning processes can act as a comparison to official state-led processes, pointing out gaps that can further improve planning. Planning can never be perfect, and is characterised by a lack in total inclusivity, unpredictable political and economic factors, and unforeseen societal needs and wants (Beunen et al., 2013; Gunder, 2010; Hillier, 2002; Madanipour et al., 2001). State-led planning is characterised by a dominant knowledge system and values, and in doing so, misses the opportunity to reflect and improve—how can you start to improve, if you do not know what it is you are lacking in? Bringing in alternative epistemologies and comparing their similarities and differences can highlight potential areas of improvement in planning, benefiting more areas of society. This thesis posits that a shift in power can be utilised to empower Indigenous groups in planning processes. It also seeks to contribute to reconciling the gap between Indigenous participation and autonomy in planning, by exploring how the two may work together in a framework that both advocates for the recognition of Indigenous rights and hence their right to self-determination, supported by the collaboration of planners in projects that are deemed as desirable by Indigenous Peoples, for their benefit. Ultimately, this thesis aims to supplement the often long and arduous process of campaigning for full Indigenous self-determination and autonomy, by still building upon Indigenous knowledge and values in planning that can benefit Indigenous Peoples.

Objective

The research objective is thus to identify and compare discourses from the Ubin Orang Pulau and the Singaporean state on the planning of Pulau Ubin, facilitating the transfer of knowledge and thus power in order to advocate for the involvement of the Ubin Orang Pulau in the planning of Pulau Ubin.

The main research question is: How can similarities and differences in discourses be utilised to advocate for the participation of the Ubin Orang Pulau, in the planning of Pulau Ubin?

Research questions

Main research question

- How can similarities and differences in discourses be utilised to advocate for the participation of the Ubin Orang Pulau, in the planning of Pulau Ubin?

 Sub-research questions
- What is the discourse of the planning of Pulau Ubin from the perspective of the Ubin Orang Pulau living on the Singapore mainland?
- What is the discourse of the planning of Pulau Ubin from the perspective of the state?
- What are the similarities between the two discourses?
- What are the differences between the two discourses?
- How can governmental planners advocate for the Ubin Orang Pulau, in the planning of Pulau Ubin?
- How can the Ubin Orang Pulau advocate for themselves, in the planning of Pulau Ubin?

Theoretical framework

Theory

Power/knowledge

Foucault's *power/knowledge theory* (1979) posits that knowledge systems and operations of power directly affect one another. He argues that knowledge systems arise from and are inherently present in exertions of power. Power is also not something that can be owned by a group in society but is seen as something relational, and resembles a network that exists in society.

In this vein, there is no singular universal truth, and humans experience reality differently according to contextualised power/knowledge interactions. These different experiences produce different discourses that determine how people experience the world and express themselves. Institutions of power create and maintain discourses in order to exercise power. Discourse therefore not only refers to spoken and written communication, but also includes practices, institutions and systems that change over time. In the Foucaldian view of discourse, it is also equally as important what is not said and who is not involved. All these are taken into account to construct a comprehensive discourse that works together in the form of a discursive formation, reinforcing power/knowledge relations and shaping how people experience reality. The Foucaldian approach can be interpreted as a struggle for power in society, through different discourses. Societal changes can thus be attributed to the changing influences of the various discourses (Sharp & Richardson, 2001). In this paper, the definition of discourse follows that of Hajer (1995)—'a specific ensemble of ideas, concepts and categorisations that are produced, reproduced and transformed in a particular set of practices through which meaning is given to physical and social realities'.

In examining power/knowledge, the concept of *intersectionality* lends a deeper layer of analysis. Introduced by Black feminist scholar Kimberlé Crenshaw in 1989, intersectionality proposes that individuals may face multifaceted forms of marginalisation due to their multiple social identities that include race, class, and gender. It explains how resultant connected power relations have an effect on

social relations, both on a larger societal scale and on a smaller scale within the realm of individual experiences (Collins & Bige, 2020). In addition, research that incorporates intersectionality does so through an integrative analysis of the interaction at both individual and institutional level, and is more than just combining these layers of analyses (Hancock, 2007). An intersectional analysis recognises that social phenomena such as the marginalisation of a certain group cannot be simply, and reductionistically, attributed to one social group, or one particular institution. Tying back to Foucauldian theory, intersectionality supports how power cannot be owned, but operates in relation, dependent on genealogical discourses of multiple experiences of the world.

Equity planning

Equity planning places planners in an activist role within the government, advocating for social equity and helping the marginalised (Krumholz, 1982). Developed by Norm Krumholz during his stint at the Cleveland City Planning Commission from 1969-1979, equity planning is similar to Davidoff's (1965) advocacy planning in that it prioritises reducing social inequalities from within public institutions. Core aspects of equity planning involve an emphasis on creating a shared meaning of important terms and plans, as well as the need for meaningful and substantial engagement with members of affected communities to understand their expectations of both planner and plan (Zapata & Bates, 2015). In 2015, Krumholz further expanded on his argument that advancing equity cannot happen in a vacuum, but is dependent on pressure from social movements. Viewed through this lens, it is more apparent now than ever that equity planners can play a pivotal role in effecting transformational change. As introduced by Krumholz in his book 'Advancing Equity Planning Now' in 2018, the eight principles of equity planning is that it (1) surpasses focusing on the built environment and explicitly addresses social issues; (2) requires planners who are strong and bold leaders; (3) is founded on a specified objective to guide resource allocation; (4) must help decision-making processes through the use of quality data and professional presentations; (5) hinges on the development of long-term relationships and a commitment to

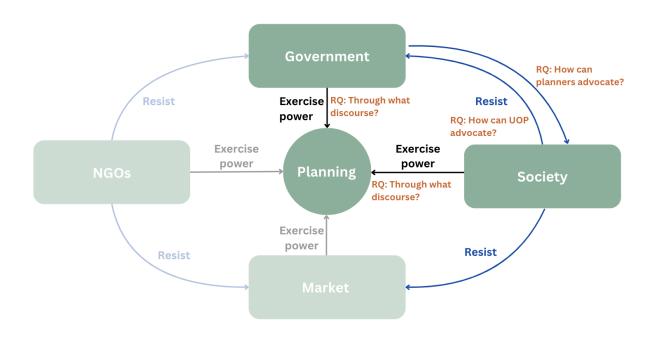
solving equity issues; (6) requires planners to be politically involved, beyond the planning arena; (7) will attract other planners to want to work at equity planning organisations; and (8) can produce change.

Equity planning is compatible with power/knowledge theory because both theories view the generation and expression of knowledge by marginalised groups to be a way to contest power. As equity planning requires planners to shift power relations from inside public institutions, it also considers the role of institutions in evaluating knowledge and determining its dissemination. By finding out more about the knowledge of the UOP, it is the goal of this thesis to highlight the advantages of advocating for them in official planning processes and help to shift power relations between the dominant planning group—the government—and the UOP. Through accounting for their discourses and knowledge in official planning processes, marginalised groups can resist dominant knowledge systems and therefore also resist power, and 'reconceptualise social relations of domination and resistance' (Collins, 2000).

In discussing the importance of recognising different epistemologies, it is also apt to introduce the concept of *pluriversality*, which was introduced by Mignolo (2018). Pluriversality differs from the plurality of knowledge because it goes beyond the mere recognition of the existence of different knowledge systems, by offering a 'decolonial way of dealing with forms of knowledge and meaning' beyond Western frameworks that have now become the universal framework for handling knowledge (p. 2). Mignolo explains it as a way to challenge the way we think about the world, so that we may conceive of its epistemologies not as solitary stand-alone units but as a network connected by threads of power left behind by colonialism. Linking this to planning, I posit that equity planning is not about simply acknowledging that there are different ways of knowing that result in different planning goals and beliefs, but there is also a need to look inward, to challenge their own dominant knowledge systems that have been imparted by powerful institutions such as educational ones. Only then can there be a shift in power where these different knowledge systems are seen as equal.

Operationalisation

Figure 1 *Presumed Current of Power and Resistance Among Urban Planning Actors*



Note. Adapted from Rafieian & Jahanzad, 2015: Page: 255 as cited in Moghadam & Rafieian., 2019).

This figure illustrates actors and how each of them exercises power in planning, as adapted from Rafieian and Jahanzad (2015). The four major groups of society are indicated in the green rectangles, who all exercise power in planning through discourse, indicated by black arrows labelled 'exercise power'. Although the role of non-governmental organisations (NGOs) and the market do not belong in the scope of this thesis, they have not been omitted from the original figure in order to show the full network of power relations among actors, according to the original figure. Indigenous Peoples belong to the umbrella group of 'society'. As power is relational, the figure also shows the current power dynamics between each group, with the arrows labelled 'resist'. With Foucauldian power/knowledge theory, power is exercised through discourse, and society resists the exertion of power by the government.

This master's thesis posits that newly validated knowledge from Indigenous Peoples in society shifts the current power dynamic. As power is portrayed to be a relational current in society by Foucault, validating new knowledge can create new ways of understanding official planning processes and thus shift power to the marginalised group, accounting for their discourses in planning. By bringing to light alternative forms of knowledge and the advantages of incorporating this knowledge, official planners are incentivised to engage in equity planning, advocating for marginalised groups, further enabling the shift in power.

Because equity planners work from within the government, Indigenous knowledge is adopted into their systems of knowing and their priorities as they exercise power in the realm of planning. As a result, official planning processes are able to account for the needs of Indigenous Peoples. Considering the struggle for legitimacy faced by many Asian Indigenous Peoples as referenced to above, this approach not only aids legitimacy in public participation, it also advocates for the recognition of indigeneity as an institution, and with it, all its accordant rights. The operationalisation of equity planning and power/knowledge hence offers a promising approach to go beyond planning and participatory processes.

In the figure above and the operationalisation of this thesis, it is important to note that the discovery of counter-hegemonic discourses challenges dominant discourses, resisting the power of the dominant group. Though on the surface, official planning processes remain state-led in many Asian countries for the foreseeable future, the adoption of Indigenous knowledge into official planning considerations does offer a way to reduce the role of government in planning, empowering Indigenous people (Moghadam, 2005). I posit that Indigenous Peoples can exercise power in official planning, provided that Indigenous knowledge and discourse is legitimised and considered by officials in planning who are simultaneously aware of and embarking on political change for their right to self-determination.

Methodology

As this case study revolved around advocating for Indigenous Peoples and processing data gathered from them, there was a need to account for the bias often present in discourse analysis, that

could result from a researcher's personal bias on what information to analyse and then present in the final report (Jacobs, 1999). It was my goal that the selection of discourses and key themes reflected that of the community. This paper thus followed the 4 principles for knowledge co-production in sustainability research: context-based, pluralistic, goal-oriented, interactive (Norström et al., 2020). According to Norström et al., these principles aim to address sustainability challenges that involve numerous groups of stakeholders with differing cultural backgrounds, culminating in different objectives and preferences. Although this thesis was not knowledge co-production, I chose to adhere to these principles so that the methodology would help to produce that findings would be able to act as a foundation for further collaboration between the state and the UOP. As Tengö et al. (2014) has stated, knowledge co-production also involves all stages of knowledge generation. Identifying these discourses can hopefully be a starting point for knowledge co-production in the planning of Ubin.

Context-based refers to the need to place co-production processes within the 'social, economic, and ecological contexts in which they are embedded', taking into account specific limitations and possibilities. It also points to the need to consider the different needs of the various communities affected. In this thesis, this principle was addressed by having a particular focus on heritage and nature conservation. Prior research on Indigenous Peoples and their needs had already revealed their close relationship with nature that spanned shelter, sustenance, and heritage. Since I had been to Pulau Ubin before, and had used the National Parks Board (NParks)-provided tourist information for suggestions on recreation, I was already aware that there was a heavy focus on both nature conservation and heritage conservation. This knowledge allowed me to deductively arrive at these themes, which ensured that interview questions were formulated in a way that prompted respondents to elaborate on such topics. The selection of this case study also arose from news articles that concerned the restoration of *kampung* (Malay word for village) houses on the island, and from following the blog of a UOP that was already advocating for his community's inclusion in planning. Next, I also took the political environment of Singapore into account, which is generally strict on what the state deems as insurgent acts—for example, protests without official permits are illegal (Public Order Act, 2009). These insurgent acts are often

prosecuted, too. For instance, three women were charged in court for organising a process that delivered letters in support of Palestine to the President's office (Koh, 2024). A Spanish couple on holiday in Singapore were also detained for holding up signs denouncing the owner of a football club (Marsh, 2024). The Protection from Online Falsehoods and Manipulation Act (POFMA) also enables the prevention of communication that could cause 'a diminution of public confidence... by the Government' (Protection from Online Falsehoods and Manipulation Act, 2019). With this knowledge, additional care was taken not to ask, respond, or publish anything that could potentially be regarded as inflammatory to the government. Though responses from interviewees were entirely up to them and thus out of my hands. I made sure that pre-interview briefings framed the purpose of the thesis in a way that was for the collective benefit, through the discovery of different points of view about the planning of Pulau Ubin. Additionally, the selection of Foucault's power/knowledge theory allowed me to be clear that there was no one universally true discourse, and that both perspectives from UOP and the state were important, preventing findings or recommendations from potentially including what may have been regarded as inflammatory or defamatory. Therefore, context-based quality was accounted for by addressing the existing needs of the UOP and choosing to focus on heritage and nature conservation in the planning of the island, while also taking into account the strict censorship laws of the country.

The pluralistic principle 'explicitly recognises the multiple ways of knowing and doing'. There is a need to ensure diversity in co-production by engaging with multiple stakeholders to glean multiple ways of understanding the issue at hand. This was addressed by obtaining different opinions on Pulau Ubin and the planning of the island by people ranging from the UOP, including different genders and age groups, to governmental spokespersons. As the scope of this thesis focused on only two stakeholders—the UOP and the government, there was not much diversity in terms of interest groups. However, diversity in terms of age, gender, and life experience among the UOP were taken into account, for instance, there was an even balance of men and women who were interviewed. There were also older UOP who had lived on the island before, and younger descendants who had only grown up on the mainland. Keeping the pluralistic principle in mind, interviews also were held in a semi-structured way, particularly to encourage the UOP

to voice any perspectives and knowledge that I did not previously know. Pre-interview briefings emphasised that I was not looking for any technical knowledge in particular, and that any opinions or knowledge they had would be valuable to the project. I was conscious not to contradict this by correcting anyone during interviews or talking about the planning of Pulau Ubin from a traditional theory-based perspective, as it would have been easy to fall into since I had, until then, only been exposed to this theory in formal education.

Next, knowledge co-production must be goal-oriented. Goals are important to build a common understanding of the issue and its solution, so that all involved stakeholders are aware of and can work towards the same indicators of success. In this thesis, both the internal and external research objective was clearly communicated to interviewees. The internal research objective was to identify the different discourses of planning of the island, and the external objective was to help to encourage the participation of the UOP in planning. I had also made sure to ask if these goals were representative of the goals of the UOP so that they could be revised if possible. Norström et al indicates that while direct impacts and thus goal attainment may be difficult, it is also possible to focus on other results like the increased ability to address challenges and the increased awareness of 'non-academic actors' (p. 188). The interviews allowed members of the UOP to talk freely about their perspectives on the planning of Ubin, and since my contact was present at all interviews as a translator, it also allowed the UOP to build on each other's perspectives and recognise that all of them wanted change in the planning of Ubin. My contact who was actively involved in advocating for their involvement was also able to ask his own questions and clarify some interview responses, and the garnering of more perspectives had a direct impact on his advocacy work as these clarifications were recorded on his social media and blog. The consolidation of perspectives thus proved helpful in contributing towards collective planning goals among the UOP, mobilising them to work together towards increased recognition and involvement.

Lastly, an interactive co-production process emphasises frequent meetings with participants to align the research agenda, actual research, and research output together. Repeated interactions also build trust and can increase the legitimacy of research findings, making it more likely to be used. In this thesis,

the interactive principle was accounted for firstly by forming a relationship with my contact, a descendant of the UOP. I built trust by establishing that my work was to help him in his cause of advocating for the UOP, and by meeting regularly and even over meals. Establishing a relationship with my contact was important, as he then helped by reaching out to other UOP and being present during interviews as a translator. Because contact with other UOP was firstly initiated through him, it helped to establish a level of trust as a known member of the community was seen as supporting my work. Without first forming a relationship with my contact, further interviews with other members of the UOP would not have been possible. Interviews with the UOP were also held in informal settings, for example, in relaxed community spaces. Some interviews were even held in homes and over meals, which allowed the respondents to be comfortable in a familiar setting, helping them to share their perspectives more openly. Norström et al writes about assessing the interactive principle through measuring if progress has been made towards a collective understanding of the issue. Though there were no interactions between the UOP and the state in this process, there was progress towards a collective understanding among the UOP that was recorded on social media and on my contact's blog, demonstrating that interactive engagement culminated in helping them to advocate for themselves.

A case study of indigenous involvement in planning

Case study research was selected because of its ability to produce detailed accounts and explanations over a shorter period of time (Hays, 2003). It was also deemed to be suitable because of the need to take into account the broader social and political context of a country that affects the research topic, which in this case was the topic of Indigenous advocacy in planning (Hartley, 2004, p.323). Thus, considering the time limit for a master's thesis and the importance of context to ensure applicability of findings, this thesis employed the use of a case study.

The case study chosen is that of Pulau Ubin, in Singapore, and its Indigenous Peoples, the Ubin Orang Pulau. Singapore as a city-state is an interesting setting in which to examine participatory planning, because land use planning is state-led—while public participation exists in the form of focus groups and

surveys, the final decision is always left to the Ministry of National Development (MND) and the Urban Redevelopment Authority (URA), Singapore's urban planning government agencies (Ministry of National Development, 2024; Urban Redevelopment Authority, 2024). The theory of equity planning was hence determined to be applicable to Singapore as advocacy planning requires 'civil society or activist planning', which is unlikely to happen in Singapore in the near future (Sager, 2022). Instead, to plan for the needs of marginalised groups, planners need to understand and advocate for them from within official institutions.

Secondly, indigeneity is mentioned once in the Constitution, recognising Malays as the Indigenous people of Singapore, promising to 'protect, safeguard, support, foster and promote their political, educational, religious, economic, social and cultural interests and the Malay language' (1965). However, official planning processes do not reflect this, with no mention of this in any official documents.

Indigenous People of Singapore

The Orang Laut (Malay for Sea People) were the original inhabitants of Singapore, living near the coast and rivers on boats (Low, 2022). Over time, some of them chose to settle on some of the 64 islands that make up Singapore, earning the name Orang Pulau (Malay for Island People) (Orang Laut SG, 2022). As Singapore urbanised, all of these settlements and kampungs (Malay for villages) were cleared, and all of the Orang Laut and Orang Pulau currently reside on mainland Singapore where they are largely considered to be under the ethnic group of Malays (Soh, 2021). Examples of islands that once housed these people but have now been reclaimed by the state include Pulau Bukom, currently an oil and chemicals refinery operated by Shell, and Pulau Semakau, Singapore's only landfill (SG Climate Rally, 2022).

In recent years, there has been increasing discourse on the Indigenous people of Singapore, with campaigns led by descendants of the Orang Laut and Orang Pulau gaining traction in local news (Abdul Rahman, 2024; Lee, 2020; Lok, 2024). Of these, Orang Laut SG (@oranglautsg) has been one of the most noticeable, having garnered 11600 followers on Instagram and hosting meetings with the Minister for

National Development (Orang Laut SG, 2024). Orang Laut SG is headed by a descendant of the Orang Laut and focuses on sharing their cultural heritage and traditions through public engagement and sharing their cuisine with Singaporeans (Orang Laut SG, 2024). The advent of social media has allowed for descendants of Indigenous people to share about their culture, and also about the challenges they face in advocating for the recognition and protection of their heritage. The Singaporean government has definitely recognised that this is an issue that more and more Singaporeans are aware about, to the extent of keeping in contact with these descendants about possible collaboration efforts (UOP 1, personal communication, November 2024). However, in an official context, the government still has not done much to recognise the existence of Indigeneity and 'promote their... interests', as outlined in the Constitution (Article 152). There have been limited, if any, official planning initiatives that have incorporated elements of Indigenous knowledge or history. In a country where planning is state-led and heavy emphasis is placed on meritocracy, there appears to be an overarching belief that no one should be entitled to special treatment because of their race or religion (Cheang & Choy, 2023).

This thesis mentions earlier that Singapore, like many other Asian countries, does not engage with Indigenous planning, linking it to a lack of a common definition of 'Indigenous Peoples' and a lack of recognition of the rights associated with Indigeneity. Here it seems appropriate to also provide further context about the government's approach of erasing pre-colonial history as a strategy to avoid race-based tensions by preventing the Malay minority from advocating for their Indigenous rights to their land (Barr, 2021). The absence of history that inevitably situates the Orang Laut and other tribes as central to pre-colonial heritage and development appear to be one of the key factors that explain the exclusion of Indigenous participation in official processes, not just planning ones. Barr (2021) adds that this erasure was coupled with an aggressive ethno-nationalistic campaign that favoured the majority Chinese population, culminating in an environment where then Prime Minister Lee Kuan Yew was comfortable enough to publicly laud Chinese culture as beneficial to other races. As a result, history textbooks in 1984 reinforced racial stereotypes where 'Malays were presented as ignorant people who did not appreciate the value of education, and Chinese as energetic and civicminded people who valued education'. (Barr &

Skrbiš, 2008, Chapter 5; Kwek, 2018, 164–165; as cited in Barr, 2021, p. 357). These textbooks adopted the stance that every Singaporean child was a descendant of migrants and no one was indigenous to Singapore (Blackburn & Wu, 2019). Hence, according to this article, not only were Malays in Singapore stripped from their Indigenous rights to the land, they were also relegated to a portrayal of a people who were inferior to the majority Chinese. Here I bring in Alatas' (1997) introduction of the myth of the 'lazy native' which he argues was an ideology perpetuated by colonialists to justify oppressive practices and 'European conquest' (p.2). The refusal of Malay natives to work in 'colonial capitalist estates and plantations' were judged as lazy, as compared to Chinese and Indian labourers who, owing to their immigrant status, had no choice (p.74). These colonial stereotypes have left ramifications till this day where Malays in Singapore may still be perceived to be 'lagging behind' (Suratman, 2004).

Pulau Ubin

Pulau Ubin is an island separated from mainland Singapore that is 1020 hectares large (NParks, 2021e). Touted as a tourist site boasting 'one of Singapore's last villages or kampongs (Malay word for village)', visitors can enjoy activities like nature walks, camping, cycling, fishing, and visiting places of heritage (NParks, 2021e). As of 2023, official census data puts the population at 39 villagers (SG 101, 2023). After the British colonisation of Singapore in 1824, the island saw large population growth due to the mining of quarries for granite extraction (SG101, 2023). The population was at an all-time high with nearly 4000 inhabitants in the 1970s but has now fallen to 38 villagers (SG101, 2023). This sharp population decline can be attributed to economic opportunities on the mainland, but also to forced displacement by the government due to plans to develop Pulau Ubin for tourism, recreation, and conservation (Abdul Majid, 2020). For example, in the 1980s, over 100 residents in Kampung Surau were evicted due to plans to build a water park; yet to this day, no such amusement park has been constructed (Abdul Majid, 2020). Another instance of top-down implementation of an attraction is that in 2022, NParks announced plans to introduce the OCBC Mangrove Park, to be built on Sungei Durian on Pulau Ubin (NParks, 2022). This is an area of high significance to the Orang Pulau community, as it borders two

Malay kampungs and was previously an area for foraging and fishing (Abdul Majid, 2024). Despite this, development plans have not involved the UOP at all.

The UOP are a group of people descended from the Orang Laut and Malays, and who came to Pulau Ubin in the 16th century (Majid, 2020). Continued development has led to a perceived erosion of land and heritage, through displacement and redesignation of fishing and foraging grounds as tourism sites. The majority of Orang Pulau currently reside on the Singapore mainland, with limited and dwindling access to their ancestral land. Currently, there is a lack of involvement of the UOP community in the official planning of Pulau Ubin.

In the context of the case study, all official planning in Singapore is handled by the government. While participatory processes do exist in the form of panel discussions and surveys, final decisions still lie solely with the government (Urban Redevelopment Authority, 2024).

Pulau Ubin and NParks

The Ubin Project was initiated in 2014 to 'preserve the island's rustic charm, natural environment, biodiversity and heritage' (Ministry of National Development [MND], 2018). The five pillars of the Project include Biodiversity Conservation, Education & Research, Community, Heritage & History, Nature-based Recreation, and Sustainable Design & Practices. The Friends of Ubin Network (FUN) was formed the same year and consists of nature advocates, academics, Pulau Ubin residents, architects, and more (MND, 2018).

Previously, Pulau Ubin was under the management of 12 government agencies (NParks, 2016). In 2016, the Friends of Ubin Network (FUN) proposed a central management agency for the island in hopes of achieving a more holistic overview and to avoid confusion from the public on which agency to approach for issues that had overlap. The press release was published in June 2016 and stated that the handover to NParks, an agency under the Ministry of National Development, would take place in parts, to be completed by the middle of 2017.

NParks currently manages everything related to Pulau Ubin, ranging from biodiversity conservation, to issues raised by tourists and people living on the island as well. The official website of

Pulau Ubin is managed by NParks, with lists of places of interest and heritage sites that tourists can visit. NParks also conducts monthly tours of the island by volunteers from the mainland who bring visitors around to show them active biodiversity sites and heritage sites (NParks, 2021b).

Methods of data collection

In line with this paper's definition of discourse, data analysis incorporated multiple forms of analyses, including spoken interviews, document analysis, and genealogical analysis. An iterative approach, where content or methodology is adapted over the time period of research, was used in this thesis, specifically for data collection. This was due to the fact that in generating Indigenous knowledge, it is vital to emphasise a collaborative process that can result in actionable steps for Indigenous Peoples (Malmer et al., 2020).

Interviews

In deciding on a list of interviewees, maximum variation sampling was firstly used, followed by snowball sampling. Maximum variation sampling involves choosing cases that vary from each other significantly, and can produce both detailed descriptions and unveil significant commonalities (Patton, 2002, p. 235). In the context of the case study, I chose to interview both state-led, official planners, as well as the UOP on the mainland. This sampling method also aligns with discourse analysis as they both can be used to examine and compare different forms of knowledge. Snowball sampling was then used to obtain more potential interviewees as recommended by previous rounds of interviewees, aligning with the context-based principle of knowledge co-production (Patton, 2002, p. 237). Previous research that involves interviewing Indigenous Peoples have also recommended building on the nominations of previous interviewees to arrive at more (Pyett et al; 2008).

Detailed transcriptions were imperative to avoid missing important features of speech, and to capture minute details such as overlapping speech and tone (Gill, 2000). Transcription also occurred as soon as possible after the interview concluded, especially since videoing participants was not deemed to

be appropriate. This was in the case of older participants in particular, some of whom expressed hesitation as they felt that they did not have planning expertise or sufficient technological knowledge. I did not want to put them on the spot by asking to video record the interviews, some of which were held in their own homes. Transcription was carried out using TurboScribe.

Table 1Transcription process for all members of the UOP

Interviewee	Transcription process
UOP 1	Interview held in English, transcribed with TurboScribe.
UOP 2	Interview held in English, transcribed with TurboScribe. Some phrases were mentioned in Bahasa Melayu but translated on the spot.
UOP 3	Interview held entirely in Bahasa Melayu. I attempted to put it through TurboScribe but found that the translation was not accurate. My contact translated relevant sections.
UOP 4	Group interview with UOP 3.
UOP 5	Group interview with UOP 3.
UOP 6	Interview held in English, transcribed with TurboScribe.
UOP 7	Interview held in a mix of Bahasa Melayu and English, transcribed with TurboScribe. Some sentences were translated on the spot.

In initial planning of the thesis, semi-structured interviews were to be used for both interviews with the UOP and government interviewees. I firstly interviewed a point of contact who is a descendant of the UOP and has experience representing his community on a grassroots level, as well as communicating with planners/officials. This point of contact was important as he then reached out to others for me to interview, and also acted as a translator with elders of the community. Though I reached out to the respective ministry and to governmental planners for a face-to-face interview, I was told they would

rather correspond via email. MND, in charge of overall land use planning in Singapore, redirected me to NParks. When I was not able to obtain the desired responses from them, I contacted MND again, and was then told that planners from the ministry would 'prefer to focus on facts rather than sharing their personal reflections'. Thus, most of the interviews were from the UOP. Interviews started out by asking about their personal experiences with Pulau Ubin to break the ice, before asking them about the themes of nature and heritage conservation, and finally ending with their personal planning goals for the island.

The number of interviews was not predetermined as I drew on previous research on comparing discourses, that involve interviews, between Indigenous Peoples and non-Indigenous people (Brooks-Cleator & Giles, 2020; Darroch & Giles, 2015; Nursery-Bray, 2009). In existing research, the exact number of pieces of analytic evidence or interviews was not indicated beforehand as a goal to achieve. Researchers relied on data saturation, where no new discoveries are made at a certain point (Glaser & Strauss, 1967). Accordingly, I stopped conducting interviews when no new information was being presented. At the same time, my contact also told me he felt that no new information would be obtained from further interviews.

Documents

Document analysis was also used in this thesis. Since inductive analysis produced themes of nature and heritage conservation early on, documents where the state made mention of these themes were then chosen for analysis. A majority of these documents came from websites dedicated to these specific themes, run by the government. Though one can argue that these sources have been edited by communication professionals for external communication, I posit that even though the 'how' it is being said may have been through a filter, the 'what' is still as relevant. This was also applicable for the Pulau Ubin website—the themes of nature and heritage were portrayed as important points of conservation on the island, and the selection of places of interest on the website also offered a deeper layer of analysis in the seeming prioritisation of one theme over another. Though the discourse on this website was curated by communication professionals, it remains the main source of information for everyday citizens who wish

to find out more about Ubin. Hence, the website was important in analysing how and what the government wanted to communicate about Ubin, about planning goals, needs, and priorities. Next, media was taken as an extension of state discourse due to extremely limited press freedom in Singapore where the Protection from Online Falsehoods and Manipulation Act (POFMA) enables the prevention of communication that could cause 'a diminution of public confidence... by the Government' (Protection from Online Falsehoods and Manipulation Act, 2019). The only two major media groups are state owned and are funded directly by the government (Reporters Without Borders, 2024). Other than news media, other documents that were analysed include official policies and press statements. Though there were few Indigenous documents on planning recorded for public access, I also looked at blogs written by descendants of the UOP or similar activist sites. The full list of documents is located in Annex A.

Data analysis

Post-structural data analysis (PDA)

PDA posits that individuals are not inherently powerful or powerless but these change in relation to each other and social context (Baxter, 2002). Thus, it is useful in this paper in order to explore in which areas/contexts that this change happens, as discursive struggle for power is often manifested in changing practice and rhetoric (Sharp & Richardson, 2001). PDA examines both macro and micro-level interactions, and can cover conversations, body language, institutional/structural change, policies, and text (Hajer, 1995). PDA can uncover what is considered as knowledge, the effects of social institutions on discourse and how these institutions are viewed in discourse, underlying ideologies beneath institutions, and the relations of power (Nursey-Bray, 2009). It is also equally as important to note silences—what is not being said, and who is not saying it, and what is the silence in response to. PDA was used for spoken interviews, documents, and genealogical analysis.

In examining conversations, it is useful to note that dominant articulations of elements give rise to a hegemonic discourse (Glynos et al., 2009). Thus, firstly breaking down the discourses into elements

allowed for examining how the discourses differ. In doing so, it was possible to arrive at terms of significance. Terms of significance as introduced by Jager denotes words or phrases that have significant relevance within a specific context, and shapes discourse by affecting how ideas are communicated and perceived (2001). These terms pointed to mutually important themes that can help to bridge the gap between both the UOP and the state. For example, the theme of nature conservation often came up in both discourses. Next, examining elements can also reveal different understandings of what was previously assumed to be a mutually understood concept. Otherwise known as a floating signifier, these terms do not have a fixed or specific meaning but offer different understandings in different concepts (Lévi-Strauss, 1950). For example, the word 'heritage' as a floating signifier—the official website encourages visitors to visit small exhibitions on the island on how people used to live on the island, but the term appeared to mean something different to the UOP, of involving them in tours around the island to generate revenue, form connections to the mainland, and be able to tell their own stories. With this logic, PDA also revealed common elements in the different discourses, that could act as grounds to involve the UOP in planning.

Lastly, the approach of tracing rhetoric in practices and institutional change supports Foucault's concept of genealogical analysis through examining policy changes, institutional change, and practices that have changed with time. To chart how policies, institutions, and practices changed over time, and to examine the contexts under which they changed, this thesis used secondary research, as well as site visits for field observations of the island. Site visits to the island were useful for data collection and analysis. In terms of the state discourse, signs around the island that pointed out places of interest, or prohibited certain activities, showed the perspectives of the planning of the island. Visiting the island with my contact also allowed him to point out culturally significant sites to the UOP and inform me of the history of these sites. I was able to make observations about overall planning of the island as well.

To address an often-cited critique of PDA, this thesis clearly describes the criteria that it used to select and analyse pieces of information for discursive analysis (Jacobs, 2006). A definition of each code was written in order to ensure the consistency of each piece of information under it.

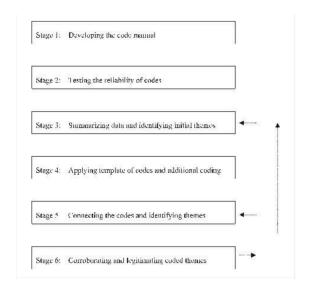
Figure 2List of Codes and Their Definitions

1	Code	Comment
2	Important	Notable quotes that I may add into the thesis
3	Power relations	Power relations between NParks and the UOP as demonstrated through participatory processes, rules and regulations, and either party's opinions about these relations.
4	State	
5	State: Goals	Planning goals of the state
6	State: Heritage	State views on heritage (conservation), examples
7	State: Kampungs	State views on kampungs, conservation efforts
8	State: Nature	State views on nature (conservation), examples
9	UOP	
10	UOP: Goals	Planning goals of the UOP
11	UOP: Heritage	UOP views on heritage (conservation), examples
12	UOP: Kampungs	UOP views on kampungs, conservation efforts
13	UOP: Nature	UOP views on nature (conservation), examples

Thematic analysis

Thematic analysis is often used in qualitative data analysis, and can be understood as a way to recognise patterns and categorise data according to themes (Fereday & Muir-Cochrane, 2006). Thematic analysis can be deductive, where themes are first recorded and then tested against data, or inductive, where the researcher starts with engaging with the data in order to arrive at themes (Babbie, 2010). Fereday & Muir-Cochrane introduces a hybrid method that incorporates both approaches, culminating in a 6-step framework.

Figure 3
Stages of Data Coding



Note. From Boyatizis, 1998; Crabtree & Miller, 1999; as cited in Fereday & Muir-Cochrane, 2006.

This hybrid method of inductive/deductive analysis is based on the inductive approach outlined by Boyatzis (1998) and the deductive approach outlined by Crabtree and Miller (1999). Fereday and Muir-Cochrane argue that this approach combines the benefits of both approaches by ensuring that theory is represented in deductively arriving at themes, while also allowing themes to develop from directly engaging with the data. The nature of thematic analysis as an iterative process is also strongly emphasised, where data collection and analysis happens simultaneously, and the researcher checks previous codes and themes to ensure they align with new insights.

Drawing on the above approach, this thesis also adopted both deductive and inductive approaches of thematic analysis. Firstly, inductive analysis was used when analysing interviews, so as to allow codes and themes to emerge from them and represent the discourses that each party expresses. Deductive analysis was used to analyse documents, where I applied codes that emerged from the interviews of the UOP. The first round of data from documents was then analysed again to assess if the codes were relevant

and were able to be categorised into this round of themes. This process was an iterative one, where all data underwent multiple rounds of coding according to new information and themes that developed throughout the data collection and analysis phase of this thesis.

Ethics

One way to confirm the validity of the discursive analyses is to check them with people who are involved in the specific context (Jacobs, 2006). Accordingly, the final discourses and themes were firstly checked with the point of contact from the UOP, to be revised if he had not agreed that they were representative of the overall values of the UOP, however, he approved of my findings. I also gave all UOP interviewees the option to review their transcriptions and recordings and was explicit that they could revise their words if they so wanted. In my research proposal, I had planned for focus groups to discuss these findings as well. However, due to time constraints, I did not manage to carry this out.

Data from the interviews included consent forms, audio files of the interviews, as well as transcriptions. I recorded audio files on my phone and deleted them after uploading them on Google Drive. Transcriptions were also deleted from TurboScribe. All files were stored on Google Drive where only I had access to it.

All interview data was anonymised and participants signed a consent form after I briefed them about the objectives of the interview and how their responses would be used. I was explicit that responses would be used solely for this thesis and raw files would not be shared with anyone outside of my supervisor who only needed access to upload them later on. The consent form gave permission to record.

The point of contact was reimbursed 100SGD (\sim 70 Euros) for his time. This sum was agreed upon before starting the interviews.

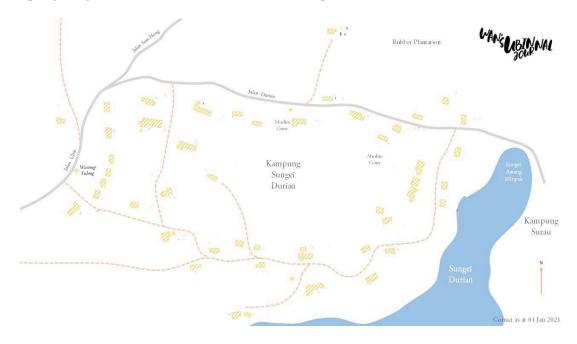
Results

What is the discourse of the planning of Pulau Ubin from the perspective of the Ubin Orang Pulau living on the Singapore mainland?

Living in the kampung was an important part of their existence on Pulau Ubin. The kampungs provided many opportunities for social interaction, and residents think of their time spent there as a time where they could easily see friends and family.

Figure 4

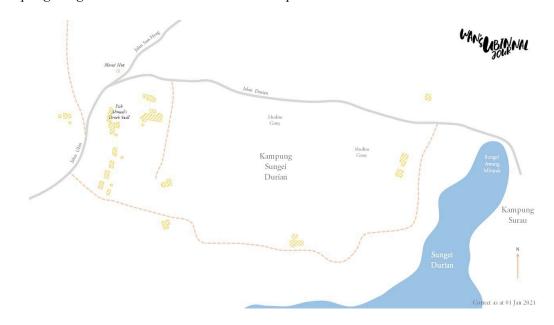
Map of Kampung Sungei Durian in the 1970s. Yellow boxes represent inhabited houses.



Note. By Nor Syazwan Bin Abdul Majid, sent via personal correspondence.

Figure 5

Map of Kampung Sungei Durian in 2021. Yellow boxes represent inhabited houses.



Note. By Nor Syazwan Bin Abdul Majid, sent via personal correspondence.

The strength of the social bonds in the kampung was apparent through the spirit of gotong royong, where people living in the village helped each other with a sense of camaraderie and community, a term shared by the UOP during interviews. UOP 2 shared about how everyone in the village would head down to a particular house to catch a movie as that house was the only house in the kampung that had a television. The amount of time spent with each other is also shown through UOP 7 who talked about how they used to be able to 'sit in the kampung, we (they) could see the neighbour's house, we (they) could wave and talk', compared to living in public flats where the children 'don't have a chance to play together' despite having apartments right next to each other. Proximity to each other then does not appear to be a key factor that determines their opportunities for social interaction, and living in the kampung most likely heightened the strength of their social relationships. This could be explained by the possibility that they spent more time together interacting with nature. A typical day as told by UOP 7 included going to school which ended at noon, then playing with friends outdoors, and looking for all sorts of animals

ranging from frogs to beetles. Thus, another perceived benefit of living in the kampung was that it allowed them to be close to nature, something that all of them miss after having moved to the Singapore mainland.

The relevance of nature to their daily lives seems to explain their support for nature conservation in the planning of Ubin. UOP 1 stated '... because even from the Orang Pulau community there is a lot of interaction with these mangrove forests. So when you are able to conserve these forests, also goes to show that you are conserving a space where the Orang Pulau are also dependent on'. Living in kampungs was vital to their close relationship with nature, with UOP 2 saying that if 'we want to catch fish, whatever we want to eat, everything is possible in the kampung. In one house, we can (could) plant all kinds of fruits, vegetables, all for free'. All interviewees who used to live in the kampung on Pulau Ubin talked about obtaining food through fishing, foraging, and small-scale agriculture. Their relationship with nature is thus also seen as a part of their heritage as they depended on it for sustenance and shelter. Traditions and local practices often centred around interactions with nature. For instance, UOP 2 shared an anecdote about her family's durian plantation in the kampung that was owned by her grandfather and his siblings. They would take turns to stay overnight in a small hut in the middle of the plantation during the fruiting season so that they would be able to collect any durians that fell overnight before any animals got to them. Because of their close ties to nature and their reliance on it, the UOP believe that nature conservation plays an important role in the planning of Pulau Ubin, as it is directly linked to the conservation of their heritage. While discussing their planning goals for Pulau Ubin, all UOP interviewed mentioned the importance of nature-human interaction, completely unprompted. Strategies included the construction of chalets or homestays to allow visitors to experience life on the island overnight while also having access to running water and electricity, and the construction of a nature school for future generations to learn about local flora and fauna.

Despite the importance of nature conservation in the planning of Pulau Ubin to the UOP, their interactions with nature have dwindled over the years, resulting in a perceived loss in heritage by the UOP. Firstly, the displacement of the UOP from the island has greatly lessened their interactions with

nature. Though there was no explicit eviction of the kampungs, the closure of the granite quarries, which was a main source of income for many, followed by the closure of amenities and facilities like schools and clinics, caused most of the UOP to move to the mainland. Additionally, the strict rules and regulations on foraging and fishing imposed by NParks have worsened this disconnect with nature. The Parks and Trees Act of 2005 also bans a person from cutting, collecting, or displacing any part of a tree or plant. The regulations combined with the fact that most of the UOP now live on the mainland where it is highly urbanised has resulted in difficulties in carrying out many traditional practices which revolve around nature. For example, UOP 1 gave an account of another UOP who was caught by NParks officers in the act of plucking leaves from a tree to make traditional cakes, who was then told to stop, even though this was a practice she had been doing since she was a child, as her parents and grandparents did before her. Younger generations of the UOP do not have the same close relationship with nature as their elders, which is also a loss in heritage as much of their Indigenous knowledge centres around nature. In the same example of the durian plantation above, UOP 2 added that it was a fun experience her children would never experience, and that they did not even know where the plantation was. UOP 3 said that she felt sad and pitied her grandchildren because they did not get to experience the kampung or feel the joy their grandparents had from activities like diving in the sea. Lastly, UOP 4 gave an account of how she felt sad that her grandchildren could not experience kampung life anymore and that they were scared of various animals like lizards and cockroaches, resulting in a disconnect between generations. There is a direct impact on Indigenous knowledge and this disconnect between generations is also part of a global trend where there has been a loss in both Indigenous knowledge and traditions (Pearson et al., 2021). Thus, the lessened interactions with the natural environment on Pulau Ubin may have caused a loss of Indigenous knowledge and a lack of something in common that once tied the UOP together, in turn resulting in a perceived loss of heritage.

In terms of the management of the island, the UOP seem to feel that even though NParks has done well in some aspects, for instance, by improving tourism and the safety of tourists, there are some improvements that could be made. Firstly, in terms of the natural aspect, all of the interviewees except

UOP 2 indicated that NParks' approach of letting nature remain untouched has caused overgrowth and is one of the major factors of a surge in animal attacks. From my visits to the island, other than the jetty area which has numerous shops and restaurants, and the demarcated places of interest, the rest of the island appears to be left in its natural state, with the occasional paved road. Even then, most of the roads are dirt roads.

Figure 6

Example of dirt road surrounded by nature



This is in line with NPark's approach of leaving the island with 'untouched nature' and in its 'rustic state'. Though the UOP acknowledge that this is the approach that NParks has chosen to take, the overgrowth has caused wildlife to become increasingly aggressive. UOP 7 said that 'The monkeys are very scary. Wild boars. I'm also scared. In the past, we were not scared. In the past, we were brave. The monkeys did not dare to enter our house. They walked on the trees, just climbed the trees, near the rivers, the seas, right? But now, the monkeys enter your house. They can open your food. Then, the wild boars,

they can bite people, the kids, everything... How do you live?' She attributed this spate of attacks to the fact that most of the island is now forested, when previously there was more open land, to the extent where they could see each other's houses easily. UOP 5 also said that the part of Ubin that she disliked was that 'it looks unmaintained. It looks like such a pity to see it in such a state'. The overgrowth, in their opinion, may have been one of the lead causes of more animals being able to populate the island. Coupled with a sharp decrease in the human population, this may have caused the animals to become more aggressive especially in their search for food. From this example, it may be inferred that though there were animals present on the island in the past, they did not bother the residents, who lived in harmony with the wildlife. In the past, as the UOP had their own small farms and the granite quarries were still open, land use was more equally divided between residential purposes, agricultural purposes, and undeveloped land. Currently, most of the land is undeveloped, and the Parks and Trees Act prohibits any interference. Hence, the residents are not able to clear plots of land to discourage overgrowth and animal attacks, even if they wished to.

The second aspect of planning of the island that requires improvement is that of heritage conservation. The UOP feel that currently, heritage conservation does not include them. Though FUN does consist of residents, the UOP feel that their interests are not yet being represented when it comes to the planning of Ubin. Not only would they like to be involved in this process, but the younger generation feels that heritage conservation should prioritise allowing the UOP to return back to live on Pulau Ubin by expediting their requests to reclaim their homes on the island. UOP 6 shared about his family's lengthy process to reclaim a kampung house that was previously owned by his great-grandfather. Though the house legally belonged to his family since he could prove the family lineage from his death certificate, NParks deterred the family from undergoing an official name transfer in the title deed, claiming that such a process needed to be accompanied by a demolition and rebuilding of the house since the current house was unsafe to live in. All construction costs would have to be borne by the family, and that amount came up to 500 000 Singapore Dollars, which was an exorbitant amount of money to the family. Two weeks later, in an email sent across to UOP 6, the number had dropped to 250 000 Singapore Dollars. When the

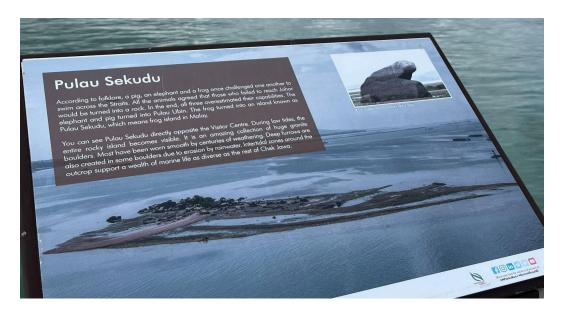
family asked for a cost breakdown, the emails stopped coming. The house in question is currently covered and cordoned off by NParks, and the family 'can't even look at it'. This family was deterred by the high cost of construction in order to regain access to a house that they felt was rightfully already theirs, and also deterred by what seemed like arbitrary amounts of money that NParks did not elaborate on. As put by UOP 6 when asked if he would be interested in conserving their heritage on Pulau Ubin:

It would be nice for them (NParks) to attend to the actual descendants, their problems. And if you want to continue the heritage, I feel you should engage the ones who are there. So instead of like, making, oh okay, a museum, when actually we are here, we are not like historical.

From this statement, it can be inferred that the UOP feel that meeting the current needs of Ubin descendants is the most important part of heritage conservation, when it comes to planning. Their understanding of the term 'heritage' seems to be that it is something that is alive and carried on by its people, as seen by UOP 6's juxtaposition of showcasing heritage in a museum in the form of artifacts and memorabilia. If analysed this way, it appears that the UOP see themselves as vessels of heritage, and heritage conservation should therefore directly involve them so that knowledge and ways of knowing can be passed on. The desire to be directly involved in heritage conservation is also demonstrated by their comments that the current approach of the upkeep and refurbishment of a select few houses could be supplemented by strategies that allow the UOP to share their traditions and knowledge with the general public. Additionally, the UOP felt that amenities like electricity and water should be provided so as to increase the quality of life of the people remaining on Pulau Ubin, both incentivising current residents to stay and to attract future generations to live on the island again. For instance, UOP 4, 5, and 6 agreed that in the long run, they would want to ask the government to construct a simple water tank for drinking water purposes. If understood from their perspective that the people are vessels of their heritage, it can be gathered that meeting the planning and living needs of the UOP is also important in conserving their heritage. Lastly, the UOP felt that some names of landmarks on Pulau Ubin should be renamed to accurately reflect what they are called in Malay and by the UOP, to better account for their heritage. One example is, according to UOP 1, the misnaming of Pulau Sekudu, an islet off the east coast of Pulau Ubin. In English, it is translated into Frog Island, after the shape of a large and prominent boulder on the islet. There is no such word as 'sekudu', however, in the Malay language. The Malay word for 'frog' is 'katak', but more interestingly, the Malay word for 'toad' is 'kodok'. 'Sekodok' would therefore mean 'a toad', which sounds similar to 'sekudu', a similarity also pointed out by UOP 1. The legend of Pulau Sekudu and the founding of Pulau Ubin also differs in official narrative and by the UOP. According to UOP 1, the UOP believe that a long time ago, an elephant, a pig, and a toad challenged each other to a race to Pulau Ubin, with the loser being turned to stone. Because all three animals did not make it to shore before noon, all were turned to stone, forming Batu Gajah (Elephant Rock), Batu Babi (Pig Rock), and Batu Kodok (Toad Rock). The legend as published on official signs on Pulau Ubin differs, with the three animals challenging each other to a race to Johor. In that version, all three animals drowned, with the elephant and the pig forming Pulau Ubin.

Figure 7

Legend of Pulau Sekudu according to NParks, on a sign on Pulau Ubin



In addition to the misnamed Pulau Sekudu, other examples include the cemeteries named after Kampung Melayu and Kampung Surau, where signs now read 'Kg Malayu' and 'Kg Sarau' respectively.

This discrepancy was pointed out to me during a visit to the island by UOP 1, who indicated that this was wrong and should be corrected as it is a culturally significant place to the UOP. Thus, the correction of names of culturally significant landmarks, helping the UOP to regain access to their homes, as well as including them in planning processes that enable them to share their knowledge, are all ways that the UOP see as methods to improve heritage conservation on the island.

The third aspect in the planning of Ubin that the UOP think could be improved on, is the disconnect between nature and heritage. From the interviews with UOP who used to live on the island, it seems that where the UOP used to live in kampungs, in harmony with nature in the past, the current state of the island is one where there are frequent animal attacks and residents are unable to forage, fish, or cultivate plants freely. Because living in a kampung necessitated living amongst nature and subsequent frequent interactions with it, many of their practices and ways of life revolved around nature, and thus, the UOP think that nature and heritage should be managed more cohesively. As lifted from a blog post written by UOP 1: 'Our natural and cultural heritage are inseparable; for our culture could not exist without nature, and nature could not flourish without our culture'. The discourse of the UOP seems to be that since NParks took over as central managing agency, the disconnect between nature and heritage has become more apparent, as planning for nature has become more important than planning for heritage.

Ever since NParks came over, that's when you see the Orang Pulau, they're not as free to make do with whatever they want on the land. They cannot anyhow plant new trees, they cannot plant anything, they cannot do anything.

When asked about the key differences in the island before and after NParks took over, UOP 7 said:

Before NParks, it was different. Now there's a lot of laws. That cannot, this cannot, that cannot... then everything is broken... before NParks took care of the island, when we were young, it was the best. We liked to live in the village, not like now. Now, it's like, now, there are a lot of wild boars, a lot of monkeys. Then, people, now, like people come, tourists come a lot.

This disconnect between nature and heritage in the planning of Pulau Ubin may be attributed to the fact that NParks is responsible for taking care of nature spaces in Singapore and as a result, the UOP think that NParks does not have the expertise or obligation to manage other aspects of the planning of a space. UOP 1 shared that he felt that on Pulau Ubin, 'it's quite clear which form of heritage is being championed more. So mainly because of how natural NParks is, how natural Pulau Ubin has turned into, that's why natural heritage is always given priority over cultural heritage'. The sequence of reasoning that firstly, NParks has to do with natural spaces, secondly, Ubin has become a natural space to be managed, and thirdly, as a consequence, natural heritage is prioritised over cultural heritage, seems to underscore the collective opinion that the disconnect between nature and heritage can be traced back to NParks. When asked what his opinion of NParks was, UOP 6 simply said, 'They take care of our parks in Singapore. That's it'. His emphasis that taking care of natural spaces in Singapore was the sole role of NParks shows that the UOP think that NParks has the expertise and responsibility to only take care of natural spaces in Singapore, and since this is their only obligation, they do not have the expertise or responsibility for anything else.

What is the discourse of the planning of Pulau Ubin from the perspective of the state?

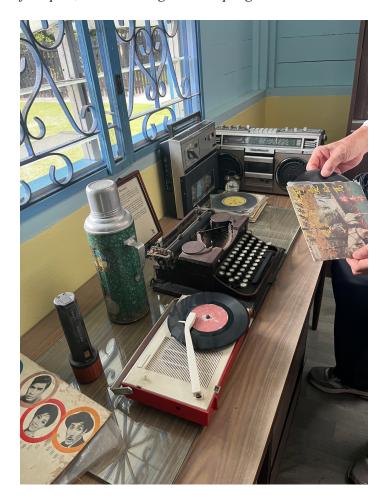
Pulau Ubin is described as 'rustic' and 'idyllic' multiple times, bringing to mind an island that is far from an urban area. This description is consistent in an email interview response from NParks, and in descriptions of the island in press releases and on its official website. The word rustic as described by Cambridge dictionary means simple and often rough in appearance, while the word idyllic means extremely pleasant or peaceful (n.d). When put together in the context of planning, Pulau Ubin gives the impression that it is meant to be kept simple and basic, in terms of facilities and amenities provided, to achieve the touristic appeal of an authentic environment where people used to live. This is supported by the website that states, 'In true kampong-style living, there is no tap water or electricity provided on Pulau Ubin. It is an island where tourists can visit to experience untouched nature and how people used to live in the past. The lack of freely accessible running water and electricity is a part of this experience, to

mirror 'true kampung-style living' (NParks, 2021c). Also, as mentioned in the email response, 'Pulau Ubin is a charming island where visitors can experience the natural beauty, tranquil setting, and rustic kampung life of yesteryear.' It may be that in order to maintain this charm, Pulau Ubin is not planned like the rest of the Singaporean mainland which is highly urbanised. In contrast, the planning goal may be to prevent urbanisation as much as possible on the island so that the physical environment of the past may be preserved. In analysis, this information in itself already presents a challenge for planners who then have to adopt a totally different approach than the one they are used to on the mainland, in the planning of Ubin.

To the state, heritage conservation seems to be an important aspect of the planning of Pulau Ubin because it is an island where tourists can visit to experience how people used to live in the past. The NParks officer interviewed said that part of the planning goal of Ubin is to 'keep its heritage and rustic charm alive for future generations of Singapore'. It seems that NParks aims to conserve heritage by the upkeep and refurbishment of a few kampung houses which are then open to the public as part of heritage tours. NParks carries out two paid tours a month, named the 'Kampong Tour' and 'Rustic Reflections' tour. Both tours include a visit to renovated kampung houses which contain memorabilia of items of the past.

Figure 8

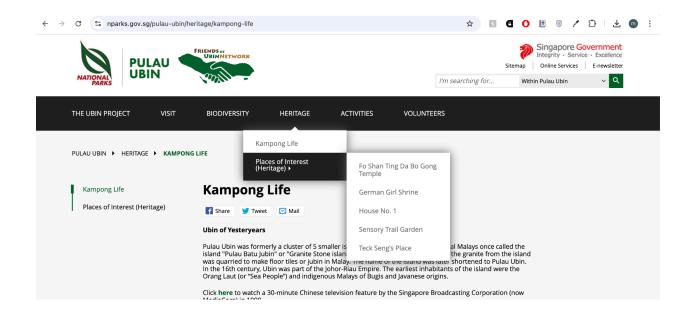
A display of items of the past, viewed during the 'Kampong Tour'.



On the official Pulau Ubin website, which is the governmental website with content published by NParks, tourists may learn about heritage on the island is by clicking on a 'Heritage' header which then leads to a drop-down that includes a section titled 'Kampong Life' and 'Places of Interest'. These places of interest list Chinese houses or those of a colonial heritage, and here it seems important to also note that there is no mention of Malay houses or Malay places of interest.

Figure 9

Lack of Malay places of heritage on official website.



This is despite the fact that the 'Rustic Reflections' tour consists of a visit to Kampung Melayu, which is the name of one of the Malay kampungs and inhabited by the UOP in the past. Even though Malay places of heritage are not listed, the page on 'Kampong Life' still acknowledges that 'The earliest inhabitants of the island were the Orang Laut (or "Sea People") and indigenous Malays of Bugis and Javanese origins' (NParks, 2021c). UOP 1 also mentioned that when he brought up the concern of whether the UOP would still be able to fish and forage after the completion of the OCBC Mangrove Park, NParks officials and project managers told him that they would not be allowed to do so. Instead, the group attempted to compromise by offering to erect a sign to show 'that this is where the Malay kampung was, and this is how they used to engage in this space, this is how they used to forage'. This form of compromise gives the impression that although NParks is willing to acknowledge the UOP, their heritage and ways should remain in the past. Thus, it may be possible that even though the state acknowledges that the UOP were indigenous to Pulau Ubin, their heritage is thought of as belonging to the past, explaining

why there seems to be little to no mention of their places of heritage in official narratives and why planning initiatives may often tend to overlook the UOP.

Nature conservation appears to be an important aspect of the planning of Pulau Ubin, and the main draw is that tourists can visit to see untouched nature. In examining news articles and press releases, the natural environment and biodiversity of Pulau Ubin is often mentioned as a key feature of the island, with the official website stating that 'Pulau Ubin is a hotspot for nature lovers due to its rich wildlife. The NParks estimates that the island has over 786 native plants, 242 birds, 201 butterflies, 89 mammals, reptiles & amphibians. Many of these species are very rare and some are not found on mainland Singapore' (2021a). The emphasis on the numbers, as well as the fact that many of these species are rare and not found on the mainland, underscores the need for nature conservation. In 2024, an endangered Malayan tapir was photographed on Pulau Ubin for the first time, in the midst of researchers collecting data about the distribution and population of greater mousedeer on the island. A local mammal curator attributed the rise in animal sightings to how:

Pulau Ubin's forests, which were formerly cleared for plantations and quarries, have regenerated to a stage where they can support a large mammal like the Malayan tapir. It is also home to nationally threatened native species like the greater mousedeer and straw-headed bulbul. It is yet another good sign that wildlife conservation efforts on the island are bearing fruit. (Ang, 2024)

Another local newspaper reporting about the conservation status about the lesser Asian false vampire bat stated that while 'the bat was previously considered to be critically endangered... Today, it is less at risk of extinction due to conservation efforts by NParks' (Lee, 2024). Attributing the improved conservation statuses of flora and fauna on the island could be a form of self-legitimation by NParks, justifying their work and proving that their work is indeed bearing fruit. The rich biodiversity on the island is indeed a unique point since the Singapore mainland is highly developed and any parks or nature spaces are man made or maintained. Hence, this approach has likely resulted in an overall strategy of minimising human intervention in order to preserve and enhance biodiversity. Both the interview response

and the website also stated that visitors to the island could expect to experience 'untouched nature', showing that minimal human intervention is present in the natural environment.

One reason for the heavy emphasis on managing the natural environment on Pulau Ubin is the international narrative on the adaptation and mitigation of climate change; countries worldwide are trying to tackle this issue and Singapore must also do their part. One example is the case study of the OCBC Mangrove Park which is a joint project by OCBC Bank and NParks that was announced in 2022. According to the NParks press release:

It will be Singapore's first large-scale project to adopt the Ecological Mangrove Restoration (EMR) method to help enhance the long-term resilience of mangrove habitats and increase Singapore's capacity for carbon storage, which helps to fight climate change by reducing the carbon dioxide in the atmosphere.

The emphasis on mangrove parks as a climate change mitigation solution is also echoed by Mr Desmond Lee, Minister for National Development, in the same press release:

The new OCBC Mangrove Park will help restore and safeguard more of our mangrove patches in Singapore. It complements other nature-based solutions implemented by NParks, such as: a coastal protection and mangrove restoration project at Pulau Tekong; the creation of a coastal belt at Kranji Coastal Nature Park; and ongoing restoration works to the northern coastline of Pulau Ubin to combat coastal erosion. These solutions are important in mitigating climate change and offer additional habitats for our native biodiversity.

Here, not only does he emphasise the purpose of the OCBC Mangrove Park, he also highlights NParks' role in national initiatives to mitigate climate change and protect biodiversity. This may be interpreted as a form of self-legitimation by the state, reaffirming their role and success in achieving the international goal of tackling climate change. Furthermore, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Values Assessment released in 2022 mentions that in the international conservation movement, the benefits and reasons associated with biodiversity conservation have often failed to account for the needs of Indigenous people, instead choosing to take the

side of other stakeholders with their own reasons for biodiversity conservation. The global focus on biodiversity conservation may often overshadow the needs of other groups, that include Indigenous peoples. Hence, since climate change is a prominent issue that countries worldwide are trying to address, it may be that Singapore is following suit by leveraging on the fact that Pulau Ubin is sparsely populated, and is able to undergo reforestation and nature-based solutions that can tackle climate change and improve biodiversity.

Next, NParks' area of expertise may also explain the overall strategy and amount of effort that goes into protecting natural spaces on the island. The mission of NParks is 'To create the best living environment through excellence in nature conservation, greenery and recreation, and veterinary care, in partnership with the community' (2025). Firstly, the mission of NParks clearly outlines that they are focused on nature conservation, nature-based recreation, and animal care. Nowhere is it mentioned that they have a responsibility for meeting the needs of urban dwellers, though the part about being 'in partnership with the community' does indicate some level of accountability to the community, but only in the three focus areas mentioned. In the context of Pulau Ubin, NParks does appear to endorse the role of public participation, stating on the Pulau Ubin website that they work together with the villagers to conserve both natural and cultural heritage. However, when asked about participation in an email interview, NParks affirmed that it is important, but did not share details. Further analysing the discourse of participation by the state in the planning of Ubin, UOP 1 shared:

To the best of my knowledge the residents are not involved in the planning of the space, it's just informed of the planning of the space. So that's why there was once a workgroup for the OCBC Mangrove Park and it constituted members of the team that would be leading the whole project, they also involved members of NParks, but they never engaged the Ubin Orang Pulau whose houses are right across the OCBC Mangrove Park. Er, and then also at the same time, there were plans to erect or construct a taxi stand right next to one of the houses. So for me I was actually curious to see, does the resident know that you're planning to have a taxi stand here? Does he know that there's gonna be a bicycle rental shop here? So it just goes to show again that when

they want to do something on the island, the fact that it is now state land, because of the land acquisition exercises on the island, so therefore everything is state land... it just goes to show that I can do whatever I want with the space...

Though participation does appear to be carried out, it is on a rudimentary level, and it does not seem that residents are able to make decisions about the planning of spaces even when these spaces are right in front of their houses. According to Arnstein's ladder of participation, informing citizens falls under the category of tokenism, which does not guarantee actual change as information is mostly transmitted one-way (Arnstein, 1969). The inability of NParks to carry out a higher level of participation may be because of the organisation's responsibility and expertise solely in official nature conservation, nature-based recreation, and animal care, as very clearly noted in all their media and in the interview by an NParks official, which could mean that they do not have planning expertise. Additionally, the vision of 'our City in Nature' by NParks is outlined by five key strategies: by growing nature parks networks, naturalising gardens and parks, restoring nature into urban areas, connecting green spaces, and enhancing vet care and animal management (2025). Again, it is evident that the scope of the organisation is limited to nature management. This also seems to exclude heritage conservation, which in Singapore seems to mostly be done through the conservation of built heritage, carried out through the Heritage Impact Assessment (Urban Redevelopment Authority, 2025), and the conservation of intangible heritage, carried out by the National Heritage Board (NHB) (2024). Examining both the Heritage Impact Assessment website and the Singapore Heritage Plan revealed no mention of nature, nor the role of nature conservation (NHB, 2024). Likewise, the NParks website gave no indication of heritage conservation as well. When asked about land use planning or participatory processes, the NParks official who was interviewed elected to skip interview questions that asked about such topics, stating that it was not relevant to her work. This presents as an interesting piece of information for analysis as NParks is the central managing agency of the island, and by that association responsible or at least in the know about overall planning of the island. I first directed my interview questions to MND, which oversees national land use planning in Singapore (2018). They redirected me to NParks who then provided an interview

response via email. Given that the ministry in charge of land use planning was the one who redirected me to NParks, it seems to reinforce the earlier notion mentioned that Ubin is thought of as separate from the mainland, and that it has different planning needs and processes. Since both ministries did not appear able or willing to answer questions about planning, it seems that there is a disconnect between land use planning and the management of Pulau Ubin—Pulau Ubin may be viewed as a park in official state discourse. This would explain why a ministry that historically only has experience in nature management has taken over managing the entire island, and why the management of the island by NParks has seemed to mostly prioritise nature conservation.

As a whole, the discourse of heritage and nature conservation on the island may have been projected on Pulau Ubin as a form of urbanisation by the state, in order to meet their needs. Connolly and Muzaini discuss the role of Singapore's offshore islands to 'service the nation-state and in response to the changing needs of the urban core' (2022). Charting the history of these islands, they demonstrate how Indigenous tribes were evicted to support Singapore's industry and leisure purposes. In the context of Chek Jawa Wetlands on Pulau Ubin, the government had initially drawn up plans to reclaim the area for housing, with plans to connect the area to the mainland via a Mass Rapid Transit (MRT) link (Friess, 2022). Though roots gov.sg, ran by the National Heritage Board, states this on its website, it is interesting to note that the National Library Board attributed the reclamation plans to a military training zone (Prasad, 2014). However, both sources agree that these plans were finalised in the masterplan of the Urban Redevelopment Authority in 2001, but shelved by the end of the year due to increased media attention and citizen interest. Throngs of people from the mainland visited Chek Jawa Wetlands to enjoy its biodiversity while it lasted, and wrote letters to relevant ministries and the media advocating for its preservation. This example supports Connoly and Muzaini's theory by demonstrating how the planning of Ubin shifted according to the needs and interests of the mainland, firstly from housing or military purposes, then to nature and biodiversity conservation—not due to the inherent value of Ubin's natural ecosystems, but rather its instrumental value to mainlanders as a recreational site. As Singapore's economy has grown and the country has developed, its needs have changed accordingly. Though the

country has always planned for more housing due to its relatively small size, the increasing wealth of its citizens has caused demand for recreation to increase. The imposition of rurality can also be viewed as a way to meet the need for human-nature interaction on the mainland. In a news article about monkey sightings on the mainland, it was pointed out that with the introduction of many natural spaces, running into wildlife is unavoidable, especially since the state plans to have all residents living within 10 minutes away from a park by 2030 (Koh, 2024). It may be that although the state wishes for residents to live surrounded by greenery, people from the mainland do not enjoy what they perceive as undesirable or accidental interactions with wildlife. Hence the minimal human intervention on Ubin in hopes of encouraging wildlife there to flourish is also an act of ruralisation by the state as Ubin is deemed a 'rural' area where wildlife can roam free. And as the mainland has undergone urbanisation, there has been a demand for 'ruralisation' because one cannot exist without the other—both function to meet the demands of urban regions (Jacobs, 2012). The demand for both nostalgia and nature in the face of rapid urbanisation is hence met in the planning of the ruralisation of Pulau Ubin through the emphasis on heritage and nature conservation.

What are the similarities between the two discourses?

Comparing both discourses, it can be inferred that both heritage and nature conservation are important in the planning of Pulau Ubin. NParks mentions that the goal of planning for Ubin is to 'sensitively enhance the natural environment of Ubin and keep its heritage and rustic charm alive for future generations of Singaporeans' (2021d). Official tours and labelled places of interest on the island are also categorised into heritage or nature conservation. In interviews, when asked if heritage or nature conservation was more important in the planning of NParks, UOP 7 said that 'both have to be conserved'. Both NParks and the UOP also give a similar reason for conserving these aspects, which is for the education and enjoyment of the younger generation. State strategies include the Ubin Living Lab, which is 'an outdoor learning classroom where activities are held to encourage visitors to learn about the biodiversity, heritage, and culture of Pulau Ubin' (NParks, 2022). The facility includes laboratories,

dormitories, and meeting rooms, and will also serve as a testbed site for 'technologies in sustainable design and practices in waste management, electrical power supply, and green buildings'. The Outward Bound School, a learning institute for outdoor education that is part of the National Youth Council (NYC) in Singapore, also has a nine-hectare campus on Pulau Ubin, signifying the state's placed importance on Pulau Ubin as a site for younger generations to learn about nature (Outward Bound School, 2021). Likewise, when asked about planning goals for the island, all UOP interviewed mentioned the importance of conserving nature for future generations. Strategies included the construction of chalets or homestays to allow visitors to experience life on the island overnight while also having access to running water and electricity, and the construction of a nature school for future generations to learn about local flora and fauna.

Another similarity between both discourses may be that NParks has, until taking over Ubin, had the sole responsibility of, and expertise on, managing natural spaces in Singapore. The UOP seem to feel that this may be one of the reasons that is causing the perceived disconnect between nature and heritage, as NParks does not have prior experience with planning or with heritage conservation. Even so, the UOP approve of certain nature-based recreation related works, such as the introduction of Chek Jawa Wetlands, which UOP 2 attributed to the good work of NParks. UOP 4 also shared that while she feels that restricting access to nature spaces does affect foraging and fishing, she understands that it is for the safety of the tourists, as 'the Government... only wants to take care of them'. Thus, the UOP does acknowledge that NParks has some level of expertise on improving nature-based recreation for tourists. Since NParks does manage all parks, nature spaces, and nature reserves on the mainland as is explicit in their mission and vision, it would make sense that the state discourse agrees with the discourse of the UOP about the primary responsibility of NParks. Further analysing this point, this impression of NParks as 'managing nature' seems to fall mostly into nature-based recreation. Since the UOP feel that NParks should reduce the overgrowth on the island, but support the introduction of nature-based places of interest and their upkeep, it seems that the UOP may feel that NParks does well in terms of nature-based recreation on Pulau Ubin. Given the context of how NParks operates on the Singapore mainland, it would appear that

NParks would agree with this as nature spaces on the mainland are solely for recreation purposes. The Singapore mainland is highly urbanised, and there are no occupants on nature reserves or parks. Hence, it would make sense that the state discourse of NParks is also as an organisation that is responsible for managing nature, for the sake of nature-based recreation on the mainland. Both discourses may then consider NParks to have the expertise in managing nature-based recreation both on the mainland and on Pulau Ubin.

Lastly, kampungs feature heavily as a key aspect of heritage conservation in both discourses. The physical aspect of kampungs, or the kampung houses, are agreed to be a focal point of heritage conservation, with plans for their restoration also outlined in both discourses. Similarly, both discourses view the social aspects of kampungs to be important in planning. For example, one UOP mentioned that if it were possible, she would have wanted to stay in the kampung because 'it's very lively, with many people, and it's harmonious. We can help each other. If someone passed away or someone got married, we all were involved equally'. Someone else also talked about how 'there used to be many people in the village... so we know many people, so we have many friends'. The social aspect of living in a kampung is evident as a big draw to the UOP. The National Heritage Board (2016) describes Pulau Ubin 'as a kampung-centred social network, founded on kinship, neighborly relations and/or friendship'. The kampung spirit is often mentioned, referring to a sense of 'community and solidarity... where it was not uncommon for people to readily offer their neighbours food, help, and support' (National Archives of Singapore, n.d). The kampung spirit is a common term in Singapore, with the National Archives labelling it 'an important part of Singapore's treasured heritage'. There even exists a government-endorsed crowdfunding platform for those in need, aptly named Kampung Spirit (Kampung Spirit, 2024). Of noted importance is the fact that there are only two remaining kampungs in Singapore, one of which is located on mainland Singapore, Kampung Lorong Buangkok. The other kampung is the one on Pulau Ubin. The national focus on conserving kampungs is thus not surprising as even though state planners advocate for the preservation of the kampung spirit so as to foster a sense of togetherness and community, the actual physical kampungs themselves are few and far between.

What are the differences between the two discourses?

A difference seems to be that heritage and nature are viewed as inseparable by the UOP, while the state views it as separate concepts. To the UOP, heritage means their traditions, knowledge, and values, which are still alive to this day and should be passed down from one generation to the next. One such example is fishing and foraging, which UOP 6 said that he learnt from his father, who in turn learnt it from his father. Their view of nature also seems to be full acceptance of its intrinsic value—while they depended on it for sustenance and shelter, they did so in accordance with its limits. This view appears to correspond with the 'living with nature' mode under the IPBES values assessment typology (2022, p. 18), where people feel a responsibility for the environment and act as stewards as they 'value its life-supporting processes in connection with other-than-humans'. UOP 1 wrote in a blog dedicated to sharing about the UOP that 'When the tide was high, the community would cast their rods and nets... and when the tide was low, they would forage for intertidal creatures..', demonstrating that the UOP adapted to the natural systems around them in their ways of life and did not attempt to intervene in these systems, out of respect for its ability to support life outside of themselves. The fact that the UOP had lived on Pulau Ubin for generations also points to their ability to live in balance with nature. It may be that heritage and nature are inseparable because much of the heritage of the UOP involves interactions with nature, which can be explained by them living in kampungs where they need to interact with nature on a daily basis. This was the case especially in the past, where the availability of goods and services was lower and people living in kampungs could rely on agriculture and their surroundings for food and other purposes.

To the state, heritage seems to mean traditions, knowledge and values which may or may not be still alive or relevant to this day. Heritage also includes the built environment, specifically buildings from the past that have some sort of cultural significance. The Preservation of Monuments Act (2009) allows for the identification and preservation of national monuments, but there seems to be no such act for intangible heritage. Though intangible heritage has been preserved, such as hawker culture being

inscribed as Singapore's first element on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity in 2020, the lack of an Act on its preservation seems to point toward intangible heritage being under less protection than tangible heritage (NHB, 2020). This already presents a difference in both discourses as both tangible and intangible heritage, such as practices like fishing and foraging, are viewed as equally important to the UOP. To the state, nature seems to be viewed with extrinsic values. Though the state seems to prioritise nature conservation on the island, it appears that this strategy has mainly been to serve the needs of the state through fulfilling the global imperative of climate change mitigation and the demand for nature-based recreation. Hence, the state's relationship with nature appears to align with the 'living-in-nature' typology where nature is viewed as important because it contributes to people's lives and habits through its setting. According to IPBES, some value indicators are the 'willingness to pay for recreation' and the 'ratings of special places' (2022, p. 19). The former value can be seen in tourists from the mainland visiting the island and the latter value in the promotion of certain places as places of heritage. With this interpretation, it may be that there is a disconnect between heritage and nature with regards to the planning of Pulau Ubin because planners are used to planning for the mainland where Singaporeans no longer need to have such daily interactions with nature. On the mainland, Singaporeans can choose whether or not to interact with nature, and it is no longer a part of their heritage (SG101, 2025). Interactions with nature are usually on a recreational basis. The perceived extrinsic value of nature has also allowed the state to choose which of its aspects to include in planning, and this presentation of only certain aspects in ruralisation processes has not allowed for the organic cultivation and spread of nature-based heritage as compared to the UOP.

Another key difference is in the discourse of the kampungs. While the UOP talk about kampungs as somewhere they used to live in and an environment that they want to continue living in, it seems that NParks think of kampungs as belonging to the past. This matches the official national narrative that kampungs are a thing of the past; there are no mentions of any strategies that are encouraging the construction of kampung houses again or strategies that can encourage the younger generation to repopulate kampungs. For example, although kampungs feature as an important point of heritage, state

discourse on the Ministry for National Development website also says that 'Living conditions were deplorable, and building structures were unsafe', and that public housing was introduced as a way to move people out of the kampungs (2019). This is a stark contrast to the discourse of the UOP, who mention wanting to move back to the kampungs. UOP 3 said that 'if possible, I want to rebuild my house by the sea'. UOP 1 said that 'I want to see kampungs coming back again. I want to see old kampung houses being restored, and the families of those houses to come back and have the right to stay again'. The state discourse of kampungs as something that belongs to the past could be a reason that explains why heritage conservation that revolves around kampungs does not currently include the UOP or the ways that they used to live or currently live. Because kampungs are thought of as something from the past, the state could feel that there is no need to involve the people who used to live in them in planning processes. Though the official tours do discuss past ways of life and show items from that time such as fishing nets and traditional cooking utensils, bringing in current UOP would not form a coherent narrative because there would be a direct clash between kampungs that belong in the past, and people from the kampungs who are still living according to these traditional ways of life. As UOP 6 put it, 'We are not gone. We are not gone yet', demonstrating that the UOP still think of themselves and their heritage as something very much alive and relevant to this day. This difference in discourse could also be linked to the earlier point of the different definitions of heritage by the state and the UOP—the UOP seem to think of heritage as something that is still relevant and should be passed down through generations while the state thinks of heritage as something that may or may not still be relevant. In the case of physical kampungs, it appears to be the latter. Although it is true that there are only two remaining physical kampungs in Singapore, the social aspect of the kampungs where residents enjoyed strong relationships with each other, as well as the human-nature interaction in the kampungs, are still intangible aspects of the kampung that are relevant to the UOP today. While the state does laud the notion of kampung spirit where residents often helped each other, it seems to take an approach of encouraging this behaviour in a modern urbanised setting, and does not link this to actual physical kampungs.

How can governmental planners advocate for the Ubin Orang Pulau, in the planning of Pulau Ubin?

This thesis has made multiple mentions of the need for governmental planners to recognise Indigenous knowledge systems and perspectives as valid, as this is a crucial first step before they can include these perspectives in planning processes. For planners to believe in the importance of involving Indigenous knowledge in planning, it needs to ideally start with official planning education in schools. The curriculum for the Bachelor of Arts in Architecture programme at the National University of Singapore (2024) does not make any mention of Indigenous knowledge or Indigenous planning, and neither does the curriculum for the Bachelor of Science (Architecture and Sustainable Design) degree at the Singapore University of Technology and Design (2025), however, both programmes include modules on sustainable architectural practices such as materials and urban design and planning. These are the only programmes recognised by the Board of Architects in Singapore (2024), and it is hence probable that local architects do not learn much about other knowledge systems that can be accounted for in planning or architectural practices. In evaluating how best to introduce pluriversality and Indigenous knowledge into planning curriculum, it seems best to leverage on the knowledge that Indigenous peoples themselves already prioritise, and to then position them as experts in this field. It is well documented that human-nature interaction is at the core of Indigenous knowledge systems (IPBES, 2019). The IPBES Values Assessment (2022) highlighted that in order to reverse the global biodiversity decline, diverse sets of values and knowledge systems must be respected and upheld so as to achieve sustainable interactions with nature. Along this vein, since the global narrative on sustainability continues to gain traction and schools already include sustainable planning practices as part of their curriculum, it seems feasible to introduce Indigenous history and knowledge, positioning them as experts in fields like sustainable resource use and climate-efficient buildings. Research on Indigenous practices that can inform sustainable architectural and planning practices already exist, for instance, Ullah et al. (2024) conducted research on how the use of locally procured stone and traditional construction techniques could help to reduce carbon

emissions and serve as a framework for passive cooling and heating systems. Akinkuolie et al. (2024) found that Indigenous climate change mitigation strategies could range from agroforestry to waste management and had significant impacts on reducing carbon emissions as well. Students could start by engaging with Indigenous sources and interviewing Indigenous members of the community for academic projects. This could start the process of building deep relationships with Indigenous Peoples as students progress to planners, demonstrating that they account for the needs and wants of different communities throughout their career, also helping to build trust between the two. As Jackson (2018) wrote, building trust necessitates planners to take the time to understand and abide by Indigenous systems, ensure that communication goes both ways, and that there is a foundation of mutual respect. Thus, the relevance of Indigenous knowledge and practices in an academic planning setting is highly relevant, and can act as an important first step for potential planners to recognise that the inclusion of different values and knowledge systems is vital to plan for a sustainable and just future.

Next, the framework introduced by Orbach (2019) suggests partnering with Indigenous peoples in life projects, to provide technical support and the capacity needed as they undertake projects that are meant to increase autonomy and self-governance throughout the entirety of their lives. In the undertaking of such projects, it is important that planners do not view it as temporarily entrusting the UOP with the development of the kampungs, but that they perceive themselves as a long-term support network. This is in order to prevent planners feeling like they are still 'in charge' and that they hold the power to stop the involvement of the UOP at any time they deem fit. To achieve this, the experts in these life projects must be the UOP. The key seems to be focusing on the potential benefits that including them in planning can bring, such as an increase in tourism, the improved conservation of intangible heritage, and even alternative ways of interacting with nature. Krumholz mentions that learning how to frame an issue as positive or negative depending on the context is essential to the work of a planner (Krumholz, 2018, p.7). Planners can choose to focus on the positive aspects of including Indigenous knowledge and perspectives. One example of a life project could be by helping the UOP to lead heritage tours around the old Malay kampungs. The UOP would be able to share about their culture and demonstrate its relevance till this day,

thus imparting the importance of protecting their heritage. This life project also goes beyond sharing about their heritage but helps to position them as experts in the kampungs, amplifying their voices and perhaps expediting their reclamation processes to their old houses on the island. Since there are already regular tours happening on the island, NParks would most likely already possess the necessary administrative skills and knowledge on leading tours. NParks could help by leveraging on their existing social media pages and website that most likely experiences higher traffic than non-official websites related to Pulau Ubin, and advertise these heritage tours there to encourage sign-ups. The organisation could also help by compiling sign-ups and providing a clear template for required participant details, as it would allow them to be clearer on what is needed especially when the UOP first start to conduct their tours. NParks could also brief the UOP on potential safety issues and best practices to ensure safety on the tour, as well as basic first-aid training. The advantages, for NParks, of supporting the UOP as they lead heritage conservation initiatives are two-fold: firstly, it draws tourists with the appeal of hearing directly from people who used to live in the kampung. Although tourists currently already visit the island to learn more about its heritage, the only ways to do so are by reading the signs or partaking in guided tours held by NParks volunteers. The role of the Indigenous tour guide is one that has been well-explored in literature (Maslang et al, 2018; Albrecht et al; 2022). Bunten discusses cultural brokerage as a term unique to Indigenous tour guides, as they are able to utilise their 'lived experiences' in both urban areas and as an Indigenous person in order to bridge the gap between (2008). This experience is elevated through the use of storytelling, with the Indigenous guide narrating their personal experiences and relationships with the specific location (de la Barre, 2013). A second advantage of supporting the UOP in this life project is that it frees up additional time and resources for NParks. NParks can also choose to make the most of this opportunity by learning from the UOP. For example, the rebuilding of kampung houses in an authentic and sustainable manner could involve using many materials from nature, much like how the UOP used leaves to patch their roofs, as shared by UOP 2. By adopting such methods from the UOP, not only would it ensure that their heritage remains alive and relevant in official discourse, it would

also align with the principle of 'Sustainable Design' that NParks advocates for in the planning of Pulau Ubin.

Lastly, the repoliticisation of planning is a theme that runs through this thesis, in the argument that the recognition of Indigeneity and its according knowledge, values, and beliefs, is necessary to lay the groundwork before accepting Indigenous knowledge into official planning systems. As Orbach puts it, planners must be actively involved in the political sphere to advocate for self-determination and the autonomy of Indigenous Peoples. Armed with the validation of Indigenous knowledge, the next step is to speak about it in the political arena—a call to action that is seconded by Foucault's research on the Greek concept of parrhesia, a word that means 'to speak freely' and that Grange (2017) argues is necessary for planners in order to safeguard the democracy of the planning arena. Her article sheds light on how planners have increasingly conformed to and prioritised neoliberal planning goals that are aligned to governmental ones. Because of this, she argues that there is already an 'ongoing politicisation of planning', but that which suits the neoliberal agenda, resulting in politicised planning but depoliticised planners who are made out to be neutral actors with no political agenda. As Krumholz writes, 'Too often planners have been content to assume a passive role, never making recommendations unless called upon by more powerful actors'. In order for planners to plan for the public good, they must adopt a self-critical attitude, where introspection can encourage a desire to look beyond top-down instructions to avoid 'submitting to the subjectivities imposed by the current politics' (Grange, 2017). She encourages planners to take on the role of a parrhesiastes, who 'says something which is dangerous to himself and thus involves a risk' (Foucault, 2001), who can advocate for the good of the city (Foucault, 2011). Applying her work to the context of Singapore, it appears to be true that planners mostly work in the public sector and often are positioned as government workers. There have not been any cases of planners who have started a call to action to advocate for a certain cause, and it is here that Singapore may risk a 'reduction into consensus', which Foucault argues is the antithesis of democracy, where 'civil servants... see no other option than to be compliant' (Grange, 2016). To avoid this situation where nothing can improve because nothing is being challenged, I propose that planners must start with recognising that planning is

inherently political. Planning inevitably is a process that allocates resources, that chooses to develop certain areas over others, and that has the ability to benefit some at the expense of others. Recognising that planning is inherently political and planners by extent must be too, can help planners to reflect on their contributions and to question what it means to plan for the public good. Following this, they can start to adopt the attitude of a *parrhesiastes*. Though its definition may sound intimidating, in that it involves risk to oneself by speaking out against the majority, I argue that it is possible even in a Singaporean context where content is subject to censorship by the state. Engaging with the issue of Indigenous rights and knowledge, and how to include these issues into planning, can occur in many places. For instance, building relationships with international planners who have experiences in planning with Indigenous Peoples, such as those in Australia, may help by imparting learned experiences and reaffirming Singaporean planners about the benefits of accounting for these different needs, wants, and values. Planners can engage in healthy debate about how to plan for and with Indigenous Peoples, firstly in informal settings with peers, then in larger settings with political members. Discussing such issues with peers has the added benefit of perceived peer support and engagement, which may help by keeping planners interested in equity topics and avoid burnout or a slow disinterest.

Advocating for Indigenous groups must go beyond planning and hence there is a need for planners to form long-term partnerships with other interest groups that can help with this cause. In the context of this case study, it may be worthwhile to reexamine the role of FUN. Currently, the interest group is divided according to interest, which includes 'nature groups, heritage groups, villagers, academics, and passionate stakeholders', and it is the sole community interest group of Ubin (MND, 2018a). It may be that in introducing Indigenous issues and their desired planning outcomes, it would be beneficial to introduce them according to interest group, for better organisation and to allow the interest groups to work according to area of expertise. For instance, environmental advocates can discuss how to include the UOP in the establishment of the OCBC Mangrove Park. Heritage volunteers can discuss how to involve the UOP in heritage tours, or if there are no volunteers, academics and students can work together to consult other academics in this field. This may be a good start as opposed to introducing the

topic of Indigenous inclusion, especially at the beginning. This idea is from Bates (2018) who used this approach in the Technical Advisory Group that included both community and professional members who were tasked with furthering equity in the Portland Plan of 2009. She outlines three benefits to this approach: firstly, it allowed community representatives to be seen as more than 'giving voice' but to be seen as experts. In the case of Pulau Ubin, the role of community representatives are important as they have existing connections to the wider community on the mainland and are well-positioned to raise awareness on a larger scale. Secondly, this approach encouraged relationship building between planners and the community. Long-term advocacy work requires relationship building on the basis of trust and communication, and this approach allows the two groups to work closely together instead of working with their own peers. Thirdly, this approach pushed community advocates to be doing work outside of just the TAG, spotlighting their equity work. Bates writes that community representatives belonged to large organisations with ongoing campaigns. In this way, advocating for Indigenous inclusion will not start and end with the FUN, as community representatives share learnings and experiences with their own organisation. They may advocate for Indigenous inclusion outside of FUN, raising awareness on the issues that Indigenous Peoples face, which would help to elevate Indigenous recognition beyond the field of planning.

Discussion

What is the discourse of the planning of Pulau Ubin from the perspective of the Ubin Orang Pulau living on the Singapore mainland?

The results of this sub-research question indicate that the discourse of the planning of Pulau Ubin from the perspective of the UOP revolve heavily around themes of nature and heritage. Interviews provided many examples of the UOP growing up in nature, and as a result, many of their traditions also involve human-nature interactions. As a result, the UOP view nature and heritage to be inseparable in the planning of Pulau Ubin. This finding has aligned with the existing literature on Indigenous Peoples and

their worldview. Greenwood and Lindsay (2018) document how Indigenous people, and thus their knowledge, are deeply rooted in their land, allowing them to manage its resources according to natural processes. They conclude that the inextricable connection between Indigenous Peoples and their land means that planning for Indigenous well-being is tied to land use solutions. Likewise, Buenavista et al (2019, p.7) describe Indigenous knowledge as a result of 'direct experience and careful observations' of the natural environment around them. They further delve into examples of Asian Indigenous knowledge, all of which are used in sustainable land use and natural resource management.

The call for increased conservation of Indigenous heritage is not unique to the UOP. Academics who advocate for the rights and recognition of Indigenous Peoples often emphasise that while heritage is a core tenant of their identity, there is a struggle to keep it alive due to the continued defamation of their intangible heritage and the destruction or neglect of their physical heritage (Bernbeck, 2008). However, in line with the importance of context, it is important to note that these papers have been written with mainly Indigenous Peoples from Australia, Canada, and America in mind, where they have faced long histories of genocide and systemic discrimination. An example in Australia is the mass kidnapping of Aboriginal children for 'assimilation' that resulted in the widespread erasure of Indigenous knowledge, labelled as 'cultural genocide' by Krieken (1999). While there has not been, to the best of my knowledge, such violences against the UOP and other Orang Laut tribes in Singapore, the fact remains that there have been no concerted efforts by the government to conserve their heritage. At a maximum, some aspects of their heritage remain as culturally significant in the official narrative through an assimilation into the wider Malay heritage. However, as Nicholas & Smith (2020) argue, the protection of heritage is a human right, and is tied to wider issues of social justice where the concept of Indigeneity is too often not reflected in decision-making institutions. In this vein, though Singapore differs from other post-colonial settler states in that there have been no recorded cases of tangible violences against its Indigenous groups, it shares the same problem that the heritage of these groups remain vulnerable because they have not been formally recognised.

What is the discourse of the planning of Pulau Ubin from the perspective of the state?

Discourse of the planning of Pulau Ubin from the perspective of the state has mainly focused on the 'ruralisation' of the island, through the promotion of nature conservation and a nostalgic approach to its heritage. Nature conservation has appeared to be an important aspect in planning for multiple reasons, such as to meet the global imperative of climate change mitigation and because of the area of expertise of NParks. Heritage conservation, on the other hand, has been promoted to be a way for people to revisit ways of the past. These strategies can be viewed as an extension of the rapid urbanisation taking place on the mainland—the 'ruralisation' of Pulau Ubin may have been to meet the needs of the state, through protecting an untouched natural environment and as a way for people to visit the nostalgic ways of the past.

The focus on the ruralisation of Pulau Ubin, according to Connolly and Muzaini (2022), can be seen as a form of service from the peripheral offshore islands to the core, the Singapore mainland. Their paper charts the transformation of Singapore's Southern and Western islands as they evolve to meet the needs of Singapore's development goals. Other than petroleum and petrochemical industries, tourism, and waste management, Connolly and Muzaini also note that there has been a renewed interest in ruralisation, which can mean processes like farming but also an emphasis on landscapes and ways of life. This ties in to the state discourse on heritage which emphasises visiting the physical kampungs and tours which share about past ways of life there. They argue that this has mostly been to meet the needs of the urban population of nostalgia, nature, or the improvement of mental health. In the authors' depictions of the case study of St John's and Lazarus, two offshore islands, they note the recent attempts to keep the 'rural' aspects as locations for 'rustic' tourism, which is also a phenomenon that can be witnessed on Pulau Ubin. It appears that most of the offshore islands earmarked for leisure and recreation have earned the label of being 'rustic', highlighting the public demand for nostalgia-based tourism and for a natural environment. This paper concludes that while ruralisation may be viewed as a way to mitigate the effects of rapid urbanisation, the creation of a new form of rurality differs greatly from the original form of the island,

resulting in the further marginalisation of Indigenous heritage. Tying back to the theory of power/knowledge that has informed this thesis, I also posit that UOP knowledge on Pulau Ubin was not viewed to be important or desirable until repackaged into knowledge on nature or heritage conservation that could serve the state—in other words, the state has exercised its power in choosing which aspects of Indigenous knowledge to present, and in this case it has been in the form of signs and tours for heritage-based tourism, and preserving biodiversity and ecosystems on the island.

The exclusion of Indigenous perspectives and knowledge can thus be traced back to the broader effects of colonisation. Though this master's thesis is situated within the field of planning, it is important to recognise that the failure of the state to account for Indigenous planning needs is deeply rooted in colonialist tendencies of disregarding native perspectives in favour of its own. At the same time, since Indigenous identity is tied to the land, the disregard of their perspectives and heritage have also resulted in a disregard of their land rights. The ability of the state to choose when to incorporate Indigenous perspectives at its convenience and necessity also reflects the perceived inferior status of the UOPs and the wider Orang Laut community—their knowledge, wants, and needs are only important when viewed as complementary to the planning goals of the state. The context of Singapore's colonial history and its ramifications therefore lend a deeper analysis in examining the state's discourse of the planning of Pulau Ubin.

What are the similarities and differences between the two discourses?

A comparison of the discourses found that both nature and heritage conservation were important to the UOP and the state in the planning of Pulau Ubin. The results also showed that both discourses appeared to predominantly consider the expertise of NParks to be in nature conservation. Lastly, a similarity was that kampungs were a feature of heritage conservation.

A key difference in analysing the differences between both discourses was the different value typologies present in the ways that people relate to nature, as put forth by the IPBES in its assessment report on the diverse values and valuation of nature (2022). This typology organises how people relate to

nature as living from, in, with, or as nature, taking into account their 'worldviews, knowledge systems, broad and specific values' (p. 18). The discourse of the state indicates that they may view themselves as living in nature, where nature is important because of its contributions to human lives and habits through its setting. This can be seen from the promotion of nature-based tourism on Pulau Ubin and nature as a setting for people to relax and escape from the urban setting of mainland Singapore. This differs from the UOP who may view themselves as living with nature, where they assume a responsibility for nature because of its life-sustaining properties for species other than themselves. Because of this underlying value, communities who belong to this typology often exercise a knowledge and respect for natural systems so as not to adversely impact biodiversity and natural cycles. This value can be seen in how the UOP fish and forage according to natural cycles, for example, the tide, and how they have managed to sustain generations through living off the land. It is important to note that, as the IPBES mentions, these categories are not mutually exclusive, and that no one category is superior to the rest. The objective of the values typology is to help policy makers understand worldviews, knowledge systems, and values that may underlie a specific community.

How can governmental planners advocate for the Ubin Orang Pulau, in the planning of Pulau Ubin?

Addressing this research question ties in with the discussion of the previous one, that is, the role of values in better understanding different human-nature interactions. However, it is not enough to simply recognise and categorise these values. Planners need to engage with the issue of power for a greater awareness on why and how certain values are prioritised over others in decision-making processes about human-nature relationships (Arias-Arévalo et al., 2023). As Arias-Arévalo et al (2023) posits, transformative change will require that people who benefit from or support institutions that prioritise unsustainable values such as capitalist accumulation give up some of their power, while people who align with sustainable values such as stewardship of nature are empowered to make decisions. They argue that addressing discursive power, which is the power to frame issues a certain way and hence prioritise certain

values, as well as structural power, which is the power held by sociocultural and political systems, can help to recognise and include different values into decision-making that is related to power.

The power of framing is mentioned in the Results section where I call for planners to take on the role of a *parrhesiastes* by engaging in deeper conversations with international counterparts and local peers. Though the inclusion of Indigenous perspectives may be new to planners in Singapore, the way that they talk about this issue as well as their framing of the UOP and their expertise can go a long way in planting the seeds of change. Indigenous Peoples and the UOP by inclusion, have a wealth of knowledge on how to interact with nature in sustainable ways that can also benefit humans. By leveraging on the topic of global climate change, planners can position the Indigenous Peoples as experts in sustainable human-nature interaction. For instance, they can talk about the Indigenous approach to sustainable resource management. While discussing relevant topics, planners can also discuss the importance of values that align with planning goals and visions. For example, if a goal is for more Singaporeans to commute via active transport along green networks, relevant nature-based values would be an appreciation of natural landscapes, responsibility to reduce emissions, and compassion for biodiversity. Thus, by expanding the discussion to include sustainable values that go beyond economic growth and the need to fulfil a global responsibility for climate change mitigation, planners can introduce new ways of thinking about planning for human-nature interaction, that include the values of the UOP.

The dismantling of structural power involves rule-making power and operational power (Arias-Arévalo et al, 2023). Rule-making power refers to the ability to create rules that can uphold specific interests and values, while operational power refers to who has the ability to 'manage' nature, and which and whose values are represented in this management of nature. Because the transference of rule-making power and operational power cannot occur over a short period of time, inculcating the need to question these existing structures need to occur in an education setting, in official planning curriculum. Values provide an interesting lens through which potential planners can view and start to dismantle power structures, because they are often the underlying reason for many planning decisions. They also provide an easier entry point into grappling with complex power relations because the concept of values is one

that is relatively easy for students with no prior planning theory to grasp—what is important to someone? From there, students can discuss the underlying values that inform rule-making and the 'management' of nature, assess whose interests are being represented by these values, and if these values are sustainable in the long-run.

How can the Ubin Orang Pulau advocate for themselves, in the planning of Pulau Ubin?

Upon further reflection on the role of power in this thesis, and in the context of South-East Asian countries as explored in my case study, I found that official planners still had most of the responsibility to 'give up a seat at the table' (Porter, 2017). The root of 'equity' in equity planning indicates that people have different circumstances and should be allocated a different amount of resources and responsibilities, which differs from 'equality' where everyone is allocated the same amount of resources. It did not feel fair to assign a 'responsibility' to these people who had been displaced from their homes. That being said, there are still ways for the UOP to raise awareness about their cause and to increase their credibility and validity in the planning arena. While I do agree that the UOP have a role to play, I want to be reflexive about my own position as a student in a formal educational institution where knowledge is often the product of privileged and majority groups. The following suggestions are therefore the product of my own reflections, and I hope they can reflect the wishes and abilities of the UOP to some extent.

As a start, the UOP must raise consciousness that they are still here. This is important as the state talks about them as a people of the past, but Singaporeans need to know that they are still here and still practising their traditions. The National Library Board ends its account of the Orang Laut with the information that they have been 'assimilated' into Malay culture and identify as that ethnic group, and that all of them were relocated to public housing flats after the demolition of their settlements (Anuar, 2020). It does not make any mention of how the current UOP live or where they live, giving the impression that the UOP belong in the past and are no longer relevant today. Even though the state has not officially introduced or implemented strategies that are specifically to help its Indigenous People, in recent years, the increasing discourse on Orang Laut and other tribes on social media has allowed for

descendants of Indigenous people to share about their culture, and also about the challenges they face in advocating for the recognition and protection of their heritage. It hence is a powerful tool for the UOP to use in raising awareness on their culture. Wan's Ubin Journal (@wansubinjournal on Instagram) is one such platform, ran by a descendant of the UOP. He also runs a Facebook page and a blog, and has collaborated with local universities and been interviewed by local media about his initiatives. Therefore, the UOP have already recognised the role of social media in advocating for their cause. I suggest that they may build on this in multiple ways. Firstly, more descendants of UOP need to be involved. Though Wan's Ubin Journal is active and growing, I maintain that it needs to be run by a team of UOP descendants that share the same values and mission, as peer support has been scientifically shown to reduce the likelihood of stress and burnout (Peterson et al., 2008; Abrams, 2017). To be able to sustain this advocacy work, more support is needed in order to divide responsibilities and to avoid burnout. Secondly, it would be ideal to form a network of professionals in different fields, such as planners, academics, nature enthusiasts, and heritage enthusiasts, so that the UOP would be able to seek technical advice and build on existing professional networks in different fields. The advantages of doing so are that Indigenous Peoples and the issues they face have increased exposure across different fields, and that it garners support for their cause, creating a louder voice that the state finds more difficult to ignore. Beyond this thesis, I have committed to helping Wan's Ubin Journal with social media content.

Next, the UOP need to position themselves as experts in terms of their knowledge of nature and of kampungs. As put by Zapata and Bates in 2015, they need to speak the 'language of planning' (2015). If Porter calls for planners to give up power by listening to Indigenous accounts of and in planning, planners must feel that Indigenous Peoples have something worth listening to (2017). The Indigenous advocacy group needs to commit to learning about planning together. With the advent of the Internet, learning about the foundations of planning will still be difficult, but not impossible. Through research articles, online courses, and the news, it is possible for the UOP to get a good grasp of the planning issues that face the state, and planning trends that are often incorporated in local planning. The network of experts in different fields as mentioned above will also help the UOP advocacy group to learn about

content and technical skills, such as accurate terminology, and data analysis skills. This is necessary to show that the UOP have thought about how their knowledge can benefit planners, and planning on Pulau Ubin. For instance, since the state appears to emphasise both nature and heritage conservation on Ubin, the UOP can leverage on this using their 'nature as heritage approach'. Using their Indigenous knowledge, they can demonstrate how their traditional practices allow them to rely on nature, showing how they are able to mend roofs using leaves, or make a full meal using only foraged ingredients. Since the state places a strong emphasis on educating the younger generations, the introduction of a nature-based curriculum would allow younger generations to be able to interact with nature up close, and eventually cultivate a closer relationship with nature that is difficult to learn on the mainland. In this example alone, UOP involved would need to learn how to prepare a basic curriculum for different age groups, conduct professional presentations to state planners, and learn how to execute educational programmes, all of which require some level of technical skills. Another benefit of positioning the UOP as human-nature relationship experts is that it addresses the current human-wildlife tensions on the mainland. By sharing about how they existed in harmony with the wildlife on Ubin for decades, the state may also view them as knowledgeable and consult them in this area. Other than helping the state to conserve nature and heritage, an added benefit would be that the active involvement of the UOP ensures that their heritage remains current, demonstrating how it is still relevant today and the importance of preserving it. Learning to speak the language of planning also increases their credibility and makes their voices harder to overlook when they speak in a public setting.

Limitations

The limitations of this methodology of this thesis can be attributed to my heavy reliance on one person to provide contacts, and to act as a translator, interlocutor, and tour guide. While I remain exceedingly grateful for his help, this meant that the progress of my data collection and thus analysis relied solely on one person. If he was unable to commit for some reason, I would not be able to carry out any interviews. Building a relationship with one contact also meant that throughout the progress of

writing this thesis, our relationship became more informal. Because of this I also found it more difficult to draw clearer boundaries about the time and effort I needed from him for this thesis. In my interviews, a limitation that I faced was that I did not brief my contact who acted as an interpreter for the group interview with UOP 3, 4, and 5. Since I had interviewed him before this group interview, I had wrongly assumed that he would remember the type of questions I had asked and the data I needed. I also did not brief him on the structure of the interview. This resulted in an interview where respondents ended up going off tangent quite regularly, and since I did not speak the language fluently, I could not stop them or redirect the conversation. It also seemed rude to stop them halfway to ask the interpreter what they were talking about. This limitation could have been addressed by briefing the interpreter before the interview and telling him that I wanted to know about their opinions towards nature and heritage, and the conservation of both on the island. I could also have briefed him to redirect the conversation if it was veering too far from topics that I had previously decided on.

In the research proposal, I had planned to interview the UOP living on Pulau Ubin, to answer a SRQ on the discourse of the planning of Pulau Ubin from the perspectives of the UOP living on Ubin. However, there were a number of factors that resulted in having to adapt and remove this SRQ. Firstly, it was the monsoon season in Singapore, with multiple monsoon surges (Chow, 2024). Boats were unable to leave the mainland for Pulau Ubin. Given that these boats also did not leave unless they carried the maximum number of passengers the boat allowed, I also did not have the funding to keep trying to buy over the whole boat's worth of passengers on weekdays, as these boats usually were only full on weekends. Next, my contact whom I depended on for translation and who often made the interviewees feel more at ease with me was also increasingly busy with his own work, and felt that no new information could be obtained from interviewing this second group of stakeholders. Since he had already chosen to help me with reaching out to new interviewees and with translation work, I chose not to pursue this matter. This was a limitation that I could have addressed by asking him about his commitments before starting fieldwork. That could have helped me to plan my timeline better and try to pack interviews closer to each other at the start of fieldwork.

Another limitation was that I did not manage to interview state planners, or interview planners in a face-to-face setting. Although I had sent multiple emails, NParks insisted on answering questions via email, and state planners did not agree to an interview at all. I also tried to call but there were no listed phone numbers. Walking into the MND office was not an option because I had heard that there was strict security at the entrance. This limitation, although disappointing, was not entirely unforeseen, and I attempted to compensate for this through document analysis that consisted of websites, press releases and news articles that could act as an extension of state discourse. Planning decisions such as the upkeep of kampung houses also informed my perception of state discourse.

Conclusion

The research objective of this thesis was to identify and compare discourses from the Ubin Orang Pulau and the Singaporean state on the planning of Pulau Ubin, facilitating the transfer of knowledge and thus power in order to advocate for the involvement of the Ubin Orang Pulau in the planning of Pulau Ubin.

The main research question was: How can similarities and differences in discourses be utilised to advocate for the participation of the Ubin Orang Pulau, in the planning of Pulau Ubin?

The biggest similarity is that in both discourses, both heritage and nature conservation are important in the planning of Pulau Ubin. However, while the state appears to view the heritage of the island as something that belongs in the past, the UOP view their heritage as something still alive and relevant. I suggested that the implementation of life projects such as the UOP giving tours around the island could both elevate their status as experts in human-nature interaction, as well as demonstrate the relevance of their heritage to this day. By sharing about the advantages of including Indigenous knowledge and thus validating Indigenous knowledge systems, other planners and the state would be incentivised to include Indigenous perspectives in the planning of the island, especially since much of this knowledge revolves around interactions with nature, which is a key aspect of state-led planning. Heritage

conservation could also be improved by involving the UOP as their heritage is inextricably tied to the land, and is thus highly contextualised to the environment of Pulau Ubin. Including the UOP in tours and allowing them to share about their ways of life could deepen appreciation for traditions and practices that are uniquely connected to Pulau Ubin. By addressing this different perspective of heritage in both discourses, state-led initiatives on heritage conservation could directly involve the UOP who would then be able to show the importance of protecting traditions that are still applicable to them. This approach would also go beyond heritage conservation by giving the UOP the platform to share about aspects of planning important to them, and the collaboration of the state and the UOP on such life projects could also open up possibilities of further collaboration in the future. For example, recognition of Indigenous knowledge and perspectives in this area could help to expedite the UOP's reclamation to their houses on the island.

Another difference in the discourses is the underlying values that determine the approach to human-nature interaction by the state and the UOP. The state appears to 'live in nature', valuing nature for its physical setting and the benefits it could bring to humans, for example, fulfilling the need for nostalgia and for being in a natural environment. This drove processes of ruralistion that imposed a new definition of 'rurality' on Pulau Ubin, one that fit the state and the needs of people on the mainland. The UOP, on the other hand, appear to 'live with nature', explaining their ability to live off the land for generations through a respect for natural systems on the island. As a result, their ways of life are closely tied with nature. Comparing the discourses through values allowed for a closer analysis of the disconnect between heritage and nature present on Pulau Ubin, as perceived by the UOP. Since their values have already caused the interconnection between heritage and nature, the imposition of a new version of 'rurality' has not aligned with this existing relationship. However, the process of identifying underlying values and attempting to change them cannot happen overnight. There needs to be a long-term solution that can inculcate planners with the ability to recognise and plan for different values. To address this, the notion of pluriversality needs to be inculcated into the official planning curriculum, so that planners can learn to

view Indigenous knowledge systems and values as legitimate and important, and plan in ways that respect and take these views into account.

Scientific recommendations

This thesis has attempted to address the uneven power balance in research processes by adopting the four principles of knowledge co-production of being context-based, pluralistic, goal-oriented, and interactive. Together, these four principles have prevented a tokenistic approach to Indigenous participation in planning, by ensuring that these contributions are representative of the UOP and that findings can be used in the current context. Although this thesis mainly carried out interviews and does not constitute knowledge co-production, I have found that the underlying principles nevertheless act as an excellent guide for planners who wish to generate knowledge from systematically marginalised groups. The framework reminds planners of the need for continual respect and validation of different perspectives that they may not have been exposed to in formal education or broader planning processes, and this pluralistic approach is necessary for the implementation of initiatives that target the benefit of more than one group.

This thesis has also endeavoured to ensure that its findings can be useful for planners outside of academia, by engaging with both the concepts of self-determination and participation. It has recommended that while planners campaign both within and outside the planning arena for Indigenous rights, planners should also partner with Indigenous Peoples in life projects that can allow autonomy while providing a platform for relationship-building between the two groups. Future research that tests this framework or aims to further develop it can look at the different factors that may help or hinder processes of self-determination in Indigenous Peoples or planners. Self-determination may mean different things to people of different age groups, genders, socio-economic backgrounds, educational backgrounds, and many other factors, even though all are Indigenous. This may be especially so in countries like Singapore where they have assimilated into a broader ethnocultural group and have been exposed to urban life that has caused different lived experiences and worldviews. As a result, self-determination may mean

different things to different groups and this could be a potential area of focus for future research. There may also be different desired levels of participation for different social groups within the Indigenous community and this could be a topic for further research as well.

Societal recommendations

In the context of this thesis, located in a post-colonial Asian country that is sensitive about race-based privileges or rights, I have found that Orbach's framework has the potential to improve Indigenous planning participation without risking any perceived insurgency of planners. This thesis has added to the small but growing body of research on Asian Indigenous Peoples and what can be done to recognise their rights, and by extension, their right to participate in planning. Through the discovery of alternative discourses, this thesis has acted as a crucial first step in the acknowledgment of Indigenous knowledge that can benefit planning in the long-run, by improving both heritage and nature conservation. Both participation and the fight for self-determination can go hand in hand to aid Indigenous Peoples regain access to their land. A longer-running research project may elect to test these findings out, or, if researchers have access to governmental planners, it would also be useful to find out if planners have any recommendations for this framework.

Lastly, I recommend that future researchers build connections and relationships with grassroot advocacy groups who have experience with event and press organisation. The inextricable relationship between land use rights and Indigeneity means that planners must work with advocacy groups in order to raise awareness on Indigenous rights, and this is something that they cannot do alone.

References

- Abdul Majid, N. S. (2020, January 6). Pulau Ubin's Constant Vulnerability to Redevelopment. *Wan's Ubin Journal*.
 - https://wansubinjournal.blogspot.com/2020/01/pulau-ubins-constant-vulnerability-to.html
- Abdul Majid, N. S. (2024a). Pulau Ubin. Wan's Ubin Journal.
 - https://www.wansubinjournal.com/pulauubin
- Abdul Majid, N. S. (2024b, January 9). There are fewer Ubin Orang Pulau left. *Wan's Ubin Journal*. https://www.wansubinjournal.com/post/there-are-fewer-ubin-orang-pulau-left
- Abdul Rahman, I. H. (2024, February 18). She started a boat tour business with her husband to share her Orang Laut heritage and bring people closer to the sea. CNA Lifestyle.

 https://cnalifestyle.channelnewsasia.com/women/get-hooked-sg-orang-laut-nurhuda-saad-383621
- Abrams, M. P. (2017). Improving Resident Well-Being and Burnout: The Role of Peer Support. *Journal of Graduate Medical Education*, *9*(2), 264–264. https://doi.org/10.4300/jgme-d-16-00805.1
- Akinkuolie, T. A., Ogunbode, T. O., Adekiya, A. O., & Fapohunda, M. T. (2024). Indigenous climate change mitigation strategies in tropical cities a review. *Frontiers in Sustainable Cities*, 6. https://doi.org/10.3389/frsc.2024.1447400
- Alatas, S. H. (1977). The myth of the lazy native: a study of the image of the Malays, Filipinos and Javanese from the 16th to the 20th century and its function in the ideology of colonial capitalism. London: Frank and Cass.
 - https://tengkudhaniiqbal.wordpress.com/wp-content/uploads/2017/12/the-myth-of-the-lazy-native -1997-syed-hussein-alatas.pdf
- Albrecht, J. N., Moscardo, G., & Dwyer, T. (2022). Learning About Learning in Tourism: Indigenous

 Guide Perspectives on Their Personal and Professional Development. *Journal of Hospitality & Tourism Research*, 46(2), 320-343. https://doi.org/10.1177/1096348021997535

- Amnesty International. (2024, September 30). Indigenous peoples rights are human rights. Amnesty International.
 - https://www.amnesty.org/en/what-we-do/indigenous-peoples/#:~:text=Under%20international%2 0law%2C%20states%20cannot,without%20offering%20them%20adequate%20compensation.
- Ang, Q. (2024, December 1). Endangered tapir caught on wildlife camera multiple times on Pulau Ubin, first sightings in 2024. The Straits Times.
 - https://www.straitstimes.com/singapore/environment/endangered-tapir-caught-on-wildlife-camera -multiple-times-on-pulau-ubin-first-sightings-in-2024
- Anuar, M. (2020). Orang Laut. Singapore Infopedia.
 - https://www.nlb.gov.sg/main/article-detail?cmsuuid=e586ffef-6277-4c3d-b463-bd14eefc914f
- Architecture and Sustainable Design. (2025). ASD curriculum Architecture and Sustainable Design (ASD) Undergraduate Curriculum | SUTD Architecture and Sustainable Design. Architecture and Sustainable Design (ASD). https://www.sutd.edu.sg/asd/education/undergraduate/curriculum/
- Arias-Arévalo, P., Lazos-Chavero, E., Ana Sofía Monroy-Sais, Nelson, S., Agnieszka

 Pawłowska-Mainville, Arild Vatn, Cantú-Fernández, M., Murali, R., Muraca, B., & Pascual, U.

 (2023). The role of power in leveraging the diverse values of nature for transformative change.

 Current Opinion in Environmental Sustainability, 64 https://doi.org/10.1016/j.cosust.2023.101352
- Arnstein, S. R. (1969). A Ladder Of Citizen Participation. *Journal of the American Institute of Planners*, 35(4), 216–224. https://doi.org/10.1080/01944366908977225
- Babbie E. (2010). The practice of social research (12th ed.). Wadsworth.
- Baca, D., Cushman, E., & Garcia, R. (2024). Pluriversal Literacies (pp. 4, 22). University of Pittsburgh Press.
- Baffoe, G., & Roy, S. (2022). Colonial legacies and contemporary urban planning practices in Dhaka,

 Bangladesh. *Planning Perspectives*, *38(1)*, 173–196.

 https://doi.org/10.1080/02665433.2022.2041468

- Barr, M. D., & Skrbiš, Z. (2008). Constructing Singapore: Elitism, ethnicity, and the nation-building project. *Nordic Institute of Asian Studies*.
- Barr, M. D. (2021). Singapore Comes to Terms with its Malay Past: The Politics of Crafting a National History. *Asian Studies Review*, *46(2)*, 350–368. https://doi.org/10.1080/10357823.2021.1972934
- Barras, B. (2004). "Life projects: development our way". *In the way of development: indigenous peoples, life projects and globalization*, Edited by: Blaser, M., Feit, H. and McRae, G. 47 51.

 London: Zed Books.
- Bates, L. K. (2018). Growth Without Displacement: A Test for Equity Planning in Portland. In Advancing Equity Planning Now (pp. 21–43). Cornell University Press. http://www.jstor.org/stable/10.7591/j.ctv43vr3d
- Baxter, J. (2002). Competing discourses in the classroom: a Post-structuralist Discourse Analysis of girls' and boys' speech in public contexts. *Discourse & Society*, *13(6)*, 827-842. https://doi.org/10.1177/0957926502013006760
- Bernbeck, R. 2008. 'Structural Violence in Archaeology', Archaeologies 4:3, 390–412.
- Beunen, R., Assche, K., van, & Duineveld, M. (2013). The importance of reflexivity in planning and design education. Wageningen 3IG.
- Blackburn, K., & Wu, Z. L. (2019). Decolonizing the history curriculum in Malaysia and Singapore.

 Routledge.
- Board of Architects Singapore. (2025, February 10). Recognised schools. Boa.gov.sg. https://www.boa.gov.sg/register/recognised-schools/
- Booth, A. L., & Muir, B. R. (2011). Environmental and Land-Use Planning Approaches of Indigenous

 Groups in Canada: An Overview. *Journal of Environmental Policy & Planning*, *13*(4), 421–442.

 https://doi.org/10.1080/1523908x.2011.635881
- Boyatzis R. (1998). Transforming qualitative information: Thematic analysis and code development.

 Thousand Oaks, CA: Sage.

- Brooks-Cleator, L. A., & Giles, A. R. (2020). A Postcolonial Discourse Analysis of Community

 Stakeholders' Perspectives on Supporting Urban Indigenous Older Adults to Age Well in Ottawa,

 Canada. *International Indigenous Policy Journal*, 11(1).

 https://doi.org/10.18584/iipj.2020.11.1.9443
- Buenavista, D. P., Wynne-Jones, S., & McDonald, M. (2019). Asian Indigeneity, Indigenous Knowledge Systems, and Challenges of the 2030 Agenda. *East Asian Community Review*. doi:10.1057/s42215-018-00010-0
- Bunten, A. C. (2008). Sharing culture or selling out? Developing the commodified persona in the heritage industry. *American Ethnologist*, *35*(3), 380–395. https://doi.org/10.1111/j.1548-1425.2008.00041.x
- Cambridge Dictionary. (n.d.-a). idyllic. @CambridgeWords. Retrieved February 16, 2025, from https://dictionary.cambridge.org/dictionary/english/idyllic
- Cambridge Dictionary. (n.d.-b). rustic. @CambridgeWords. Retrieved February 16, 2025, from https://dictionary.cambridge.org/dictionary/english/rustic
- Cheang, B., & Choy, D. (2023). Culture of Meritocracy, Political Hegemony, and Singapore's Development. *International Journal of Politics, Culture, and Society*, *37*(2), 265–290. https://doi.org/10.1007/s10767-023-09458-x
- Chow, E. (2025). Singapore to have more wet days, intense monsoon rains as La Nina set to persist until April. [online] CNA. Available at:

 https://www.channelnewsasia.com/singapore/more-rainy-wet-days-intense-monsoon-la-nina-cond itions-persist-april-4862966.
- Clavel, P., & Giloth, R. (2015). Planning for Manufacturing: Chicago After 1983. *Journal of Planning History*, *14(1)*, 19-37. https://doi.org/10.1177/1538513214541525
- Collins, P. H. (2000). Black Feminist Thought (2nd ed., pp. 227–229). Routledge.
- Collins, P. H., & Bilge, S. (2020). *Intersectionality* (2nd ed.). Polity Press.

 https://books.google.nl/books?hl=en&lr=&id=fyrfDwAAQBAJ&oi=fnd&pg=PT6&dq=intersecti

- onality&ots=ABoDLETEW_&sig=x88t1nH8gt8aktEmMuChmUbILuw&redir_esc=y#v=onepag e&q=intersectionality&f=false
- Connolly, C., & Muzaini, H. (2022). Urbanizing Islands: A Critical History of Singapore's Offshore Islands. *Environment and Planning E: Nature and Space*, *5*(4), 2172-2192. https://doi.org/10.1177/25148486211051082
- Constitution of the Republic of Singapore (2020 Rev Ed), art 13 (152). sso.agc.gov.sg/Act/CONS1963
- Crabtree B., Miller W. (1999). A template approach to text analysis: Developing and using codebooks. In Crabtree B., Miller W. (Eds.), Doing qualitative research (pp. 163–177.) Newbury Park, CA:

 Sage.
- Crenshaw, K. (1989). "Demarginalizing the intersection of race and sex: A black feminist critique of antidiscrimination doctrine, feminist theory, and antiracist politics." *University of Chicago Legal Forum*, 1989(1), 139-167.
- Darroch, F. E., & Giles, A. R. (2015). A postcolonial feminist discourse analysis of urban Aboriginal women's description of pregnancy-related weight gain and physical activity. *Women and Birth*, 29(1), e23–e32. https://doi.org/10.1016/j.wombi.2015.08.003
- Davidoff, P. (2010). Advocacy Planning. In *Encyclopedia of Urban Studies* (pp. 3–6). SAGE Publications, Inc. https://doi.org/10.4135/9781412971973.n2
- Dawson, N., Coolsaet, B., Sterling, E., Loveridge, R., Nicole D, Gross-Camp (2021). The role of Indigenous peoples and local communities in effective and equitable conservation. *Ecology and Society, Resilience Alliance*, 26 (3), ff10.5751/ES-12625-260319ff.
- de la Barre, S. (2012). Wilderness and cultural tour guides, place identity and sustainable tourism in remote areas. *Journal of Sustainable Tourism*, 21(6), 825–844. https://doi.org/10.1080/09669582.2012.737798
- Department of Architecture. (2024). NUS DoA. Nus.edu.sg.

 https://cde.nus.edu.sg/arch/programmes/bachelor-of-arts-in-architecture/curriculum/

- Errico, S. (2017). The Rights of Indigenous Peoples in Asia: Human Rights-based Overview of National Legal and Policy Frameworks Against the Backdrop of Country Strategies for Development and Poverty Reduction (pp. 9–10). *International Labour Organization*. https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@dgreports/@gender/documents/publication/wcms_545487.pdf
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. International Journal of Qualitative Methods, 5(1), 80-92. https://doi.org/10.1177/160940690600500107
- Foucault, M. (1979). Discipline and punish: The birth of the prison. (Trans A. Sheridan). Vintage.
- Foucault M (2001) Fearless Speech. Los Angeles, CA: Semiotext(e).
- Foucault M (2011) The Government of Self and Others. Lectures at the Collège de France 1982–83. New York; Basingstoke: Palgrave Macmillan.
- Friess, D. (2022). Saving Chek Jawa. Roots.gov.sg.

 https://www.roots.gov.sg/stories-landing/stories/Saving-Chek-Jawa/story
- Flyvbjerg, B. (2002). Bringing Power to Planning Research. *Journal of Planning Education and Research*, 21(4), 353–366. https://doi.org/10.1177/0739456x0202100401
- Gentile, V., Jobson, L., Carter, A., & Adams, K. (2022). Much being Written about Us, not much being Written with Us: Examining how alcohol and other drug use by indigenous Australians is portrayed in Australian Government policies and strategies: A discourse analysis. *International Journal of Drug Policy*, 109, 103855–103855. https://doi.org/10.1016/j.drugpo.2022.103855
- Gill, R. (2000). Discourse Analysis. In M. W. Bauer & G. Gaskell (Eds.), *Qualitative Researching with Text, Image and Sound* (pp. 172–189). SAGE Publications, Inc.
- Glynos, Jason and Howarth, David and Norval, Aletta and Speed, Ewen (2009) *Discourse Analysis:* varieties and methods. Discussion Paper. NCRM. (Unpublished)
- Grange, K. (2017). Planners A silenced profession? The politicisation of planning and the need for fearless speech. *Planning Theory*, *16*(3), 275-295. https://doi.org/10.1177/1473095215626465

- Greenwood, M., & Lindsay, N. M. (2019). A commentary on land, health, and Indigenous knowledge(s) Margo Greenwood, Nicole Marie Lindsay, 2019. *Global Health Promotion*, *26*(3). https://journals.sagepub.com/doi/full/10.1177/1757975919831262
- Gunder, M. 2010. Planning as the ideology of (neo-liberal) space. Planning Theory, 9, 298-314
- Hajer, M. A. (1995), The Politics of Environmental Discourse: Ecological Modernization and the Policy Process, Oxford University Press, New York, NY.
- Hancock, A.-M. (2007). Intersectionality as a Normative and Empirical Paradigm. *Politics & Gender*, *3(02)*. doi:10.1017/s1743923x07000062
- Hansen, K. B., Jepsen, K., & Jacquelin, P. L. (Eds.). (2017). The Indigenous World 2017. In *IWGIA* (p. 23). IWGIA.
 https://www.iwgia.org/en/resources/publications/305-books/4506-the-indigenous-world-2017.htm
 - 1
- Hartley, 2004. In Cassell, C., & Symon, G. (2004). Essential guide to qualitative methods in organizational research (pp. 323-333). Sage Publications Ltd.
- Hays, P. A. (2003). Case Study Research. Taylor & Francis, 233–250. https://doi.org/10.4324/9781410609373-17
- Hillier, J. 2002. Shadows of power: an allegory of prudence in land-use planning, New York, Routledge.
- IPBES (2019): Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. S. Díaz, J. Settele, E. S. Brondízio, H. T. Ngo, M. Guèze, J. Agard, A. Arneth, P. Balvanera, K. A. Brauman, S. H. M. Butchart, K. M. A. Chan, L. A. Garibaldi, K. Ichii, J. Liu, S. M. Subramanian, G. F. Midgley, P. Miloslavich, Z. Molnár, D. Obura, A. Pfaff, S. Polasky, A. Purvis, J. Razzaque, B. Reyers, R. Roy Chowdhury, Y. J. Shin, I. J. Visseren-Hamakers, K. J. Willis, and C. N. Zayas (eds.). IPBES secretariat, Bonn, Germany. 56 pages. https://doi.org/10.5281/zenodo.3553579

- IPBES (2022). Summary for Policymakers of the Methodological Assessment Report on the Diverse Values and Valuation of Nature of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Pascual, U., Balvanera, P., Christie, M., Baptiste, B., González-Jiménez, D., Anderson, C. B., Athayde, S., Chaplin-Kramer, R., Jacobs, S., Kelemen, E., Kumar, R., Lazos, E., Martin, A., Mwampamba, T. H., Nakangu, B., O'Farrell, P., Raymond, C. M., Subramanian, S. M., Termansen, M., Van Noordwijk, M., and Vatn, A. (eds.). IPBES secretariat, Bonn, Germany. https://doi.org/10.5281/zenodo.6522392
- Jackson, S. (2018). Building trust and establishing legitimacy across scientific, water management and Indigenous cultures. *Australasian Journal of Water Resources*, 23(1), 14–23. https://doi.org/10.1080/13241583.2018.1505994
- Jacobs, K. (1999). Key Themes and Future Prospects: Conclusion to the Special Issue. *Urban Studies*, *36(1)*, 203–213. doi:10.1080/0042098993826
- Jacobs, K. (2006). Discourse Analysis and its Utility for Urban Policy Research. *Urban Policy and Research*, 24(1), 39–52. https://doi.org/10.1080/08111140600590817
- Jacobs, J. M. (2012). Urban geographies I: Still thinking cities relationally. *Progress in Human Geography*, *36(3)*, 412-422. https://doi.org/10.1177/0309132511421715
- Jäger, S. (2001). Discourse and knowledge: Theoretical and methodological aspects of a critical discourse and dispositive analysis. In Wodak, R. & Meyer, M. (Eds.), *Methods of Critical Discourse Analysis* (pp. 32-62). SAGE.
- Jojola, T. (2008). Indigenous Planning—An Emerging Context. *Canadian Journal of Urban Research*, 17(1), 37–47. http://www.jstor.org/stable/26193203
- Kampung Spirit. (2025). Kampung Spirit | A little kindness goes a long way. Kampung Spirit.gov.sg. https://kampungspirit.gov.sg/
- King, Anthony. Urbanism, Colonialism, and the World-Economy. London: Routledge, 2015
- Koh, S. (2023, August 23). NParks monitoring Jalan Besar "Mission: Impossible" monkeys, herding them to forested areas. The Straits Times.

- $https://www.straitstimes.com/singapore/nparks-monitoring-jalan-besar-mission-impossible-monk \\ eys-herding-them-towards-forested-areas?_gl=1*ahvu0u*_gcl_au*Njc5NTQ1NzkuMTczNjMxO \\ TE3NQ..$
- Koh, W. T. (2024, June 27). 3 women charged with organising procession to Istana in support of Palestinian cause. CNA.
 https://www.channelnewsasia.com/singapore/istana-procession-israel-hamas-war-palestinian-wate
 rmelon-protest-activists-charged-police-4439131
- Krieken, R. V. (1999). The 'Stolen Generations' and Cultural Genocide: The Forced Removal of Australian Indigenous Children from their Families and its Implications for the Sociology of Childhood. *Childhood*, *6*(*3*), 297-311. https://doi.org/10.1177/0907568299006003002
- Krumholz, N. (2007). A Retrospective View of Equity Planning Cleveland 1969–1979. *Journal of the American Planning Association*, 48(2), 163–174. https://doi.org/10.1080//01944368208976535
- Krumholz, N., & Hexter, K. W. (Eds.). (2018). Advancing Equity Planning Now. Cornell University Press. http://www.jstor.org/stable/10.7591/j.ctv43vr3d
- Kwek, T. (2018). Full colour illustrations: Presentations of race in Singapore's history textbooks,1965–2000. In P. M. Jolliffe & T. B. Bruce (Eds.), Southeast Asian education in modern history:Schools, manipulation, and contest. Routledge.
- Lee, L. (2020, September 5). A taste of what life was like on Pulau Semakau captured through photographs and food. Today.

 https://www.todayonline.com/singapore/taste-what-life-was-pulau-semakau-captured-through-photographs-and-food
- Lee, L. Y. (2024, November 21). Over 7,300 species assessed in latest report on conservation status of Singapore's biodiversity. The Straits Times.

 https://www.straitstimes.com/singapore/over-7300-species-assessed-in-latest-report-on-conservation-status-of-singapore-s-biodiversity
- Lévi-Strauss, C. (1950). Introduction to the work of Marcel Mauss. London: Routledge & Kegan Paul.

- Lok, C. (2024, September 21). Get a taste of Orang Laut culture at urban farm. The Straits Times. https://www.straitstimes.com/life/get-a-taste-of-orang-laut-culture-at-urban-farm
- Low, K. E. Y. (2022). Sensory and Embodied Narratives of Sea Lives and Displacement: The Orang Laut in Singapore. In R. Siriwardane-de Zoysa, K. E. Y. Low, & N. Abdullah (Eds.), Coastal Urbanites (pp. 27–49). Brill. https://brill.com/display/title/61910?language=en
- Lynch, A. Jasmyn. J. (2017). Respect, reflect, and engage enhancing biophysical research practices with Indigenous people, their land, and culture. *Australasian Journal of Environmental Management*, 24(3), 319–331. https://doi.org/10.1080//14486563.2017.1349694
- Madanipour, A., Hull, A. & Healey, P. (eds.) 2001. The governance of place. Space and planning processes, Aldershot: Ashgate.
- Malmer, P., Masterson, V., Austin, B., & Tengö, M. (2020). Mobilisation of indigenous and local knowledge as a source of useable evidence for conservation partnerships. In W. J. Sutherland, P. N. M. Brotherton, Z. G. Davies, N. Ockendon, N. Pettorelli, & J. A. Vickery (Eds.), *Conversation research, policy and practice* (pp. 82–111). Cambridge University Press. https://books.google.nl/books?hl=en&lr=&id=AX3UDwAAQBAJ&oi=fnd&pg=PA82&dq=malm er+2020&ots=EDTL-tsFQp&sig=0_yiYg4MEBNmXdx7fL2K-A86C0I&redir_esc=y#v=onepage &q=malmer%202020&f=false
- Marsh, N. (2024, October 9). Valencia fans detained in Singapore over football protest. Bbc.com; BBC News. https://www.bbc.com/news/articles/c62m7xrd2z0o
- Maslang, K. L., Dacles, D. D. M., & Rosario, F. Y. G. D. (2018). Following beyond the Trail:

 Motivations and Roles of Indigenous Tour Guides in Local Tourism. *World Journal of Social Sciences and Humanities*, 4(3), 126-145.
- Mashhadi Moghadam, S. N., Rafieian, M., & Fosl, P. S. (2019). If Foucault were an urban planner: An epistemology of power in planning theories. *Cogent Arts & Humanities*, *6*(1). https://doi.org/10.1080/23311983.2019.1592065

- Merino, R. (2018). Re-politicizing participation or reframing environmental governance? Beyond indigenous' prior consultation and citizen participation. *World Development*, *111*, 75–83. https://doi.org/10.1016/j.worlddev.2018.06.025
- Mignolo, W.D. (2018). Foreword. On Pluriversality and Multipolarity. In: B. Reiter, ed., Constructing the Pluriverse: The Geopolitics of Knowledge. [online] Durham: Duke University Press, pp.1–8.

 Available at: https://www.jstor.org/stable/j.ctv11smf4w [Accessed 19 Feb. 2025
- Ministry of National Development. (2018a, February). MND | The Ubin Project. Mnd.gov.sg. https://www.mnd.gov.sg/our-work/engaging-our-communities/the-ubin-project
- Ministry of National Development. (2018b, February 28). MND | Our Vision & Mission. Mnd.gov.sg. https://www.mnd.gov.sg/who-we-are/our-vision-mission
- Ministry of National Development. (2019, June 4). MND | Our Early Struggles. Mnd.gov.sg. https://www.mnd.gov.sg/our-city-our-home/our-early-struggles
- National Archives of Singapore. (n.d.). Blast from the past: Kampung Spirit. National Archives of Singapore. Retrieved February 16, 2025, from https://www.nas.gov.sg/archivesonline/kampungspirit#:~:text=An%20important%20part%20of% 20Singapore%27s,neighbours%20food%2C%20help%20and%20support.
- National Heritage Board. (2016, April 28). Pulau Ubin's Cultural Heritage: An Evolving Kampong

 Community[Press release].

 https://www.nhb.gov.sg/~/media/nhb/files/media/releases/new%20releases/media%20release%20

 pulau%20ubin%20final.pdf
- National Heritage Board. (2018, January 17). Our Work. Nhb.gov.sg; National Heritage Board . https://www.nhb.gov.sg/what-we-do/our-work
- National Heritage Board. (2022, October 3). Hawker Culture in Singapore. Nhb.gov.sg; National Heritage Board.
 - https://www.nhb.gov.sg/what-we-do/our-work/sector-development/unesco/hawker-culture-in-sing apore

- National Heritage Board. (2023, March 19). Our SG Heritage Plan 2.0. Nhb.gov.sg; National Heritage Board . https://www.nhb.gov.sg/heritage-plan/about-our-sg-heritage-plan-2
- National Parks Board. (2016, June 4). NParks to be Central Managing Agency for Pulau Ubin. [Press release]. https://www.nparks.gov.sg/-/media/ubin/newsroom-(yymmdd)/20160604.pdf
- National Parks Board. (2021a). Flora and Fauna of Ubin. Pulau Ubin.
 - https://www.nparks.gov.sg/pulau-ubin/biodiversity/fauna-and-flora-of-ubin
- National Parks Board. (2021b). Kampong Tour. NParks.
 - https://www.nparks.gov.sg/pulau-ubin/activities/nature-walks-and-trails/kampong-tour
- National Parks Board. (2021c, January 26). Kampong Life. Pulau Ubin.
 - https://www.nparks.gov.sg/pulau-ubin/heritage/kampong-life
- National Parks Board. (2021d, February 2). Education and Research. Pulau Ubin. https://www.nparks.gov.sg/pulau-ubin/the-ubin-project/fun/education-and-research
- National Parks Board. (2021e, March 15). *About Pulau Ubin*. Pulau Ubin. https://www.nparks.gov.sg/pulau-ubin/visit/about-pulau-ubin
- National Parks Board. (2022a, March 15). Ubin Living Lab. National Parks Board. https://www.nparks.gov.sg/pulau-ubin/biodiversity/places-of-interest/ubin-living-lab
- National Parks Board. (2022b, November 2). NParks partners OCBC Bank in Singapore's first large-scale Ecological Mangrove Restoration project at Pulau Ubin. NParks.

 https://www.nparks.gov.sg/news/news-detail/nparks-partners-ocbc-bank-in-singapore's-first-large
- National Parks Board. (2025, January 23). Mission and history. National Parks Board. https://www.nparks.gov.sg/who-we-are/mission-history

-scale-ecological-mangrove-restoration-project-at-pulau-ubin

- National Parks Board. (2025b, February 11). City in Nature: key strategies. National Parks Board. https://www.nparks.gov.sg/who-we-are/city-in-nature-key-strategies
- Nicholas, G., & Smith, C. (2020). Considering the denigration and destruction of Indigenous heritage as violence. In V. Apaydin (Ed.), Critical Perspectives on Cultural Memory and Heritage:

- Construction, Transformation and Destruction (pp. 131–154). UCL Press. https://doi.org/10.14324/111.9781787354845
- Norström, A. V., Cvitanovic, C., Löf, M. F., West, S., Wyborn, C., Balvanera, P., Bednarek, A. T.,
 Bennett, E. M., Biggs, R., de Bremond, A., Campbell, B. M., Canadell, J. G., Carpenter, S. R.,
 Folke, C., Fulton, E. A., Gaffney, O., Gelcich, S., Jouffray, J.-B., Leach, M., & Le Tissier, M.
 (2020). Principles for knowledge co-production in sustainability research. *Nature Sustainability*,
 3(3), 182–190. https://doi.org/10.1038/s41893-019-0448-2
- Nursey-Bray, M. (2009). A Guugu Yimmithir Bam Wii: Ngawiya and Girrbithi: Hunting, planning and management along the Great Barrier Reef, Australia. *Geoforum*, 40(3), 442–453. https://doi.org/10.1016/j.geoforum.2009.02.002
- OECD/Lincoln Institute of Land Policy, PKU-Lincoln Institute Center. (2022). "Singapore." In *Global Compendium of Land Value Capture Policies*, (pp. 204–206). OECD Publishing. https://doi.org/10.1787/36813997-en
- Ojong, N. (2020). Indigenous land rights: where are we today and where should the research go in the future? *Settler Colonial Studies*, *10*(2), 193–215. https://doi.org/10.1080//2201473X.2020.1726149
- Orang Laut SG. (2020a, August 16). The Food of Orang Laut. Orang Laut SG. https://oranglaut.sg/our-food/
- Orang Laut SG. (2020, August 16). The Story of Semakau Orang Laut. Orang Laut. https://oranglaut.sg/
- Orang Laut SG. (2024, November 30). A new start and an eternal goodbye. Orang Laut SG; Orang Laut SG. https://oranglautsg.substack.com/p/a-new-start-and-an-eternal-goodbye
- Orbach, A. (2011). Rethinking participation, rethinking power: reflections on local autonomy. *Canadian Journal of Development Studies/Revue Canadienne d'Études Du Développement*, 32(2). https://doi.org/10.1080/02255189.2011.596033
- Outward Bound Singapore. (2021, January 7). Campuses & Facilities. Nyc.gov.sg. https://www.nyc.gov.sg/obs/about-us/campuses-and-facilities

- Patton, M. Q. (2002). *Qualitative Research and Evaluation Methods* (3rd ed., pp. 235, 237). Sage Publications.
- Pearson, J., Jackson, G., & McNamara, K. E. (2021). Climate-driven losses to Indigenous and local knowledge and cultural heritage. *The Anthropocene Review*, *10(2)*, 205301962110054. https://doi.org/10.1177/20530196211005482
- Peterson, U., Bergström, G., Samuelsson, M., Åsberg, M., & Nygren, Å. (2008). Reflecting peer-support groups in the prevention of stress and burnout: randomized controlled trial. *Journal of Advanced Nursing*, *63(5)*, 506–516. https://doi.org/10.1111/j.1365-2648.2008.04743.x
- Porter, L. (2017). Indigenous People and the Miserable Failure of Australian Planning. *Planning Practice* & *Research*, 32(5), 556–570. https://doi.org/10.1080/02697459.2017.1286885
- Porter, L., & Barry, J. (2016). Planning for Coexistence?: Recognizing Indigenous rights through land-use planning in Canada and Australia (1st ed.). Routledge. https://doi.org/10.4324/9781315600727
- Porter, L., Matunga, H., Viswanathan, L., Patrick, L., Walker, R., Sandercock, L., Moraes, D., Frantz, J., Thompson-Fawcett, M., Riddle, C., Jojola, T. (2017). Indigenous Planning: from Principles to Practice/A Revolutionary Pedagogy of/for Indigenous Planning/Settler-Indigenous Relationships as Liminal Spaces in Planning Education and Practice/Indigenist Planning/What is the Work of Non-Indigenous People in the Service of a Decolonizing Agenda?/Supporting Indigenous Planning in the City/Film as a Catalyst for Indigenous Community Development/Being Ourselves and Seeing Ourselves in the City: Enabling the Conceptual Space for Indigenous Urban Planning/Universities Can Empower the Next Generation of Architects, Planners, and Landscape Architects in Indigenous Design and Planning. *Planning Theory & Practice*, 18(4), 639–666. https://doi.org/10.1080/14649357.2017.1380961
- Prasad, V. J. M., & Koh, J. (2014). Chek Jawa. Singapore Infopedia.

 https://www.nlb.gov.sg/main/article-detail?cmsuuid=2a03daf2-006e-4412-957b-c800505dc129

 Preservation of Monuments Act. (2009). Agc.gov.sg.

- https://sso.agc.gov.sg/Act/PMA2009
- Protection from Falsehoods and Online Manipulation Act, 2019. Singapore Statutes Online. https://sso.agc.gov.sg/Act/POFMA2019?ViewType=SI
- Prusak, S. Y., Walker, R., & Innes, R. (2016). Toward Indigenous Planning? First Nation Community

 Planning in Saskatchewan, Canada. *Journal of Planning Education and Research*, *36(4)*,

 440-450. https://doi.org/10.1177/0739456X15621147
- Public Order Act, 2009. Singapore Statutes Online.

 https://sso.agc.gov.sg/act/poa2009?ProvIds=P12-#pr5-
- Pyett, P., Waples-Crowe, P., & Van der Sterren, A. (2008). Challenging our own practices in Indigenous health promotion and research. *Health Promotion Journal of Australia*, *19*, 179–183.
- Rafieian, M. & Jahanzad, N. (2015). Transformation of Thought in Planning Theory. First Edition,

 Tehran: Armanshahr Publications
- Reporters Without Borders. (2024). *Singapore*. Reporters without Borders. https://rsf.org/en/country/singapore
- Roy, S., & Baffoe, G. (2022). Colonial legacies and contemporary urban planning practices in Dhaka,

 Bangladesh. *Planning Perspectives*, *38(1)*, 173–196.

 https://doi.org/10.1080/02665433.2022.2041468
- Sager, T. (2022). Advocacy planning: were expectations fulfilled? *Planning Perspectives*, *37*(6), 1205–1230. https://doi.org/10.1080//02665433.2022.2040189
- SG Climate Rally. (2022, February 16). Firdaus on the Orang Laut. SG Climate Rally. https://www.sgclimaterally.com/post/orang-laut
- SG101. (2023, March 26). *Pulau Ubin*. SG101. https://www.sg101.gov.sg/resources/connexionsg/pulauubin/
- SG101. (2025, February 12). UNESCO Bids and Our Heritage. Sg101.Gov.sg. https://www.sg101.gov.sg/social-national-identity/case-studies/heritage/

- Sharp, L., & Richardson, T. (2001). Reflections on Foucauldian discourse analysis in planning and environmental policy research. *Journal of Environmental Policy & Planning*, *3*(3), 193–209. https://doi.org/10.1002/jepp.88
- Soh, W. L. (2021, August 25). The forgotten first people of Singapore. Bbc.com; BBC. https://www.bbc.com/travel/article/20210824-the-forgotten-first-people-of-singapore
- Stahn C. Reckoning with colonial injustice: International law as culprit and as remedy? *Leiden Journal of International Law*. 2020;33(4):823-835. doi:10.1017/S0922156520000370
- Stocks, A. (2005). Too Much for Too Few: Problems of Indigenous Land Rights in Latin America.

 Annual Review of Anthropology. *Annual Review of Anthropology*, *34*(1), 86.

 https://doi.org/10.1146/annurev.anthro.33.070203.143844
- Suratman, S. (2004, January). "Problematic Singapore Malays" The making of a portrayal. International Symposium on Thinking Malayness organised by Research Institute for Languages and Cultures of Asia and Africa (ILCAA), Tokyo University of Foreign Studies (TUFS). https://fass.nus.edu.sg/mls/wp-content/uploads/sites/13/2023/08/Problematic-Singapore-Malays-Malay-Studies-seminar-papers.pdf
- Tengö, M., Brondizio, E. S., Elmqvist, T., Malmer, P., & Spierenburg, M. (2014). Connecting Diverse Knowledge Systems for Enhanced Ecosystem Governance: The Multiple Evidence Base Approach. *AMBIO*, *43(5)*, 579–591. https://doi.org/10.1007/s13280-014-0501-3
- Tran, M., Kim, D., Salamanca, A., Mandal, S., Wongnithisathaporn, P., & Zenobi, S. (2025). Advancing Indigenous Peoples' rights for inclusive and sustainable environmental governance in ASEAN. In Asia Indigenous Peoples Pact (p. 7). Stockholm Environment Institute. https://doi.org/10.51414/sei2025.009
- Ullah, H., Zhang, H., Ye, H., Ali, I., & Cong, M. (2024). Research on Low-Carbon Design and Energy Efficiency by Harnessing Indigenous Resources through BIM-Ecotect Analysis in Hot Climates. *Sustainability*, 16(14), 6057. https://doi.org/10.3390/su16146057

- United Nations. (2021, October 11). Indigenous People in Urban Areas Face Racism, Poverty, Special Rapporteur Tells Third Committee as Delegates Spotlights Efforts to Bolster Inclusion [Press release]. https://press.un.org/en/2021/gashc4321.doc.htm
- United Nations Environment Programme. (2019, April 3). We're gobbling up the Earth's resources at an unsustainable rate. *UNEP*.
 - https://www.unep.org/news-and-stories/story/were-gobbling-earths-resources-unsustainable-rate
- Urban Redevelopment Authority. (2024). Public Engagement Journey. Urban Redevelopment Authority. https://www.ura.gov.sg/Corporate/Planning/Long-Term-Plan-Review/Public-Engagement-Journey
- Urban Redevelopment Authority. (2025, February 14). Heritage Assessment. Urban Redevelopment

 Authority.

 https://www.ura.gov.sg/Corporate/Planning/Our-Planning-Process/Bringing-plans-to-Reality/Heri
 - tage-Impact-Assessment
- Vincent, S. 2004. "Participation, resistance and problems with the 'local' in Peru: towards a new political contract?". In *Participation: from tyranny to transformation? Exploring new approaches to participation in development*, Edited by: Hickey, S. and Mohan, G. 111 124. London: Zed Books.
- Williams, G. (2004). Evaluating participatory development: tyranny, power, and (re)politicization. *Third World Quarterly*, 25(3), 557-578.
- Zapata, M. A., & Bates, L. K. (2015). Equity Planning Revisited. *Journal of Planning Education and Research*, *35(3)*, 245–248. doi:10.1177/0739456x15589967

Appendix A

List of documents

1	NPARKS PARTNERS OCBC BANK IN SINGAPORE'S FIRST LARGE-SCALE ECOLOGICAL MANGROVE RESTORATION PROJECT AT PULAU UBIN News - National Parks Board (NParks).pdf	PDF	Press releases
2	Mangrove park to be opened in Pulau Ubin in 2026 with around 8,000 trees _ The Straits Times.pdf	PDF	News articles
3	Descendant of Pulau Ubin islanders on a mission to preserve heritage, culture of Muslim community there - TODAY.pdf	PDF	News articles
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6	My thoughts on the OCBC Mangrove Park development at Sungei Durian, Pulau Ubin.pdf	PDF	Blogs
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8	'Never thought of selling'_ Pulau Ubin provision shop owner refuses to give up despite \$6,000 loss last year , Singapore News - AsiaOne.pdf	PDF	News articles
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15	Endangered tapir caught on wildlife camera multiple times on Pulau Ubin, first sightings in 2024 _ The Straits Times.pdf	PDF	News articles
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