THE APCEL GUIDE TO SINGAPORE AND ASEAN ENVIRONMENTAL LAW

WATER

The APCEL Guide to Singapore and ASEAN Environmental Law is a multi-year research project that commenced in late 2017. It aims to publish a series of annotated bibliographies on important areas of environmental law in Singapore and ASEAN over the next five years. Each annotated bibliography represents the latest overview of the secondary and primary literature to date, and will be updated annually. Please cite as Eric Bea, Amshar Addy, and Alvina Logan, APCEL Guide to Singapore and ASEAN Environmental Law: Water (Asia-Pacific Centre for Environmental Law, Singapore, 2020).

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ANNOTATED BIBLIOGRAPHY:
WATER LAWS AND POLICY OF SINGAPORE AND THE ASEAN REGION

Part 1a: Introduction

This annotated bibliography sets out a list of essential readings on the water laws and policy of Singapore and the ASEAN region. It contains both primary sources and secondary literature.

This bibliography is focused on the law and policy of water management, as it relates to human uses. This refers to the supply and use of water as a resource, as well as the protection of water catchment areas. In the context of ASEAN, the focus is on co-operation by riparian states for watercourse management, primarily the Mekong River.

Matters concerning water pollution are covered in the the Annotated Bibliography on Pollution Control in this series.

While the list is not exhaustive, it is hoped that it will be a useful starting point for further research. Each source cited includes the author(s) or editor(s)' names, the title of the source, and publication details. This is followed by a short paragraph that describes and/or evaluates the source.

The bibliography is divided into:
Part 2a: Singapore: Legislation, Government Policies, and Publications
Part 2b: Singapore: Secondary Materials on Singapore's Water Policies
Part 3a: Singapore: Water Agreements
Part 3b: Singapore: Secondary Materials on Singapore's Water Agreements
Part 4a: ASEAN: Official Instruments and Publications (including Mekong River Commission)
Part 4b: ASEAN: Secondary Materials
Part 5: International water conventions and their status in ASEAN.

Secondary materials are listed alphabetically by the first author's surname or the first editor's surname, followed by the year of publication.

Part 1b: Commonly Used Acronyms

ASEAN – Association of Southeast Asian Nations

EIA – Environmental Impact Assessments

IWRM - Integrated Water Resources Management

MEWR – Ministry of the Environment and Water Resources, Singapore

MRC – Mekong River Commission

NEA – National Environmental Agency, Singapore

PUB - Public Utilities Board, Singapore

UN – United Nations

UN-ECAFE –United Nations Economic Commission for Asia and the Far East

UN-ESCAP – United Nations Economic and Social Commission for Asia and the Pacific

UNECE – United Nations Economic Commission for Europe

Part 2a: Singapore: Legislation, Government Policies, and Publications (including Singapore-Malaysia water relations)

Environmental Public Health Act (Chapter 95, Revised Edition 2002)
The Environmental Public Health Act is the primary legislation for the management of health and hygiene public spaces such as streets, residences, and businesses. It is also the controlling act for the control of water quality.

Environmental Public Health (Water Suitable for Drinking) (No. 2) Regulations 2019
These regulations stipulate the requirements as quality, purity and general appearance of water suitable for drinking, as well as prescribe the proper procedure for ensuring that these requirements are met. These regulations are enforced by the Singapore Food Agency (see section 57(j) of the Singapore Food Agency Act 2019).

Public Utilities Act
The Public Utilities Act was first enacted in 1963 as the Public Utilities Ordinance. The then-City Council's Gas, Electricity, and Water Departments came under the jurisdiction of the newly created Public Utilities Board (PUB), which was created under the Ordinance (which became this Act). This remained the case until 1995, when the PUB's jurisdictional mandate became focused on water supply, sewerage and drainage, and the management of rivers and reservoirs.

Public Utilities (Reservoirs, Catchment Areas and Waterway) Regulations 2006
As part of the PUB's Active, Beautiful, and Clean Waters Programme, water bodies (rivers and reservoirs) in urban areas have been progressively opened up to community and recreational activities. With the introduction of community and recreational activities on these water bodies, new regulations in the form of the Public Utilities (Reservoirs, Catchment Areas and Waterway) Regulations 2006 were enacted to regulate these activities on waterbodies to ensure that they do not pollute the water bodies.

Public Utilities (Tariffs for Water) Regulations
Section 20 of the Public Utilities Act? allows for the PUB to set water tariffs, which is done through these regulations. It also stipulates three classes of tariffs (domestic, non-domestic, and shipping), as well as the rates applicable to different types of premises.

Public Utilities (Water Supply) Regulations
These regulations set out the requirements for water fittings and water service installations, water metering and other conservation measures, as well as water efficiency requirements and management practices.

Public Utilities (Waterborne Tax) Order 2013
This Order stipulates the collection of waterborne tax for sewerage/sanitation services, as well as the amount of waterborne tax to be collected by the PUB.

Sewerage and Drainage Act
This Act governs the construction and maintenance of the sewerage system and storm water drainage systems. This Act also governs the discharge of trade effluent into public sewerage systems.

Sewerage and Drainage (Protection of Public Sewerage System) Regulations 2017
These regulations govern the requirements for earth works done in a public sewer corridor. The regulations require that activity plans and an impact assessment on the public sewerage system must be submitted to the PUB prior to the commencement of work.

Sewerage and Drainage (Sanitary Works and Sewerage Works) Regulations
These regulations govern the separation of rainwater drainage from greywater/blackwater drainage, amongst other things. The former is to drain into the storm water drainage system, and the latter into the sewerage system. This Regulation makes reference to the **Code of Practice on Sewerage and Sanitary Works** as well.

Sewerage and Drainage (Surface Water Drainage) Regulations
These regulations govern the maximum allowable amount of total suspended solids in surface water drained into the storm water drainage system. This Regulation makes reference to the **Code of Practice on Surface Water Drainage** as well.

Sewerage and Drainage (Trade Effluent) Regulations
These regulations govern the discharge of trade effluent into the sewerage system, including the prohibition of certain substances, and maximum allowable concentrations of certain other substances.

CODES OF PRACTICE

Singapore Standard 636: Code of Practice for Water Services
This Code provides the guidelines for the supply of potable water to all residential, commercial and industrial buildings/premises. The scope of the code extends from the Authority's water supply to the point where the water is drawn off for use, including storage, but not water provision for firefighting

Code of Practice on Environmental Health
(https://www.nea.gov.sg/docs/default-source/resource/practices-/copeh---2017-(aug).pdf)
This Code provides the guidelines to address environmental health concerns in the design of buildings. It specifically addresses the design of various requirements in the design of public facilities. Amongst other things, it stipulates the requirements for water supply points (sinks, taps, and hand-basins) and sanitation facilities (water closets, urinals, and showers) for various public facilities.

Code of Practice on Sewerage and Sanitary Works
(https://www.pub.gov.sg/Documents/COPSSW.pdf)
This Code provides guidelines addressing sewerage and sanitary concerns in the design of buildings, including the proper planning and design of the sanitary and sewerage system.

Code of Practice on Surface Water Drainage
(https://www.pub.gov.sg/Documents/COP_Final.pdf)
This Code provides guidelines to address surface water drainage concerns in the design of buildings, including basic planning, design and procedural requirements for surface water drainage. It specifies the minimum engineering requirements for the provision of functional facilities for surface water drainage.

GOVERNMENT PLANS AND POLICY DOCUMENTS

- **Singapore Green Plan (SGP) (1992 edn)**
- **Singapore Green Plan 2012 (2002 edn)**
- **Singapore Green Plan 2012 (2006 edn)**
- **Sustainable Singapore Blueprint (SSB) (2009 edn)**
- **Sustainable Singapore Blueprint 2015 (2015 edn)**
- **Sustainable Singapore Blueprint 2015 (2016 edn)**

These plans and policy documents are discussed in the Biodiversity Annotated Bibliography of this Series. The Government's policies on water management have become more multi-faceted over the years. In the 1992 SGP, the focus was solely on wastewater management. In the SGP 2012, however, the regulatory focus widened to include water reclamation and self-sufficiency, as well as water conservation. Water catchment areas were set to increase from one-half of Singapore' land area to two-thirds by 2012. A target of reducing domestic water consumption to 155 litres per day by 2012 was also set.

The SSB 2015 sought to improve on the SGP 2012 target by aiming for a further reduction of domestic water consumption to 140 litres per day by 2030. It also set a new target of opening up

80 hectares of waterbodies and an additional 7 kilometres of waterways to recreational activity under the ABC Waters Scheme by 2030.

- **Water Master Plan 1972**
- **Water Conservation Plan 1981**
- **Our Water, Our Future 2016**

Singapore has had three water "masterplans", each of which demonstrate a gradual progression in the development of Singapore's water governance. The first Water Master Plan, drawn up in 1972, was the genesis of Singapore "four national taps" supply-side strategy. The four "taps" refer to water from local catchment areas, imported water, NEWater, and desalinated water. It proposed that Singapore should not rely on imported water for more than 25% of its needs. The other 75% would be met through expansion of water catchments in Singapore, and the future adoption of water reclamation and desalination when the technology was economically efficient.

The Water Conservation Plan 1981 focused on demand-side policies. It set out three key water conservation policies - water pricing, mandatory water conservation requirements for users and appliances, and public education.

As water reclamation and desalination came onboard, PUB launched Our Water, Our Future. On the supply side, a new target of 85% was set for Singapore's water self-sufficiency by 2060 (when the Johor River Water Agreement expires). On the demand side, the document reaffirmed the SSB 2015 goal of reducing domestic water consumption to 140 litres by 2030. PUB also aims to increase the number of Active, Beautiful, Clean (ABC) Waters from 36 in 2016 to 100 in 2030.

Part 2b: Singapore: Secondary Materials on Singapore's Water Policies

Bhullar Lovleen, 'Climate Change Adaptation And Water Policy: Lessons From Singapore' (2013) 21 Sustainable Development 152

This article addresses the impacts of climate change on Singapore's water management policy – including coastal erosion, land loss, and flooding - and evaluates the adaptation measures planned in response to the identified challenges.

Brears Robert C., 'Chapter 13: Singapore transitioning towards urban water security' in Robert C. Brears, *Urban Water Security* (John Wiley and Sons 2016)

The first half of the chapter provides details on Singapore's efforts in ensuring a water supply such as the four national taps, as well as factors driving the need for water security such as climate change, rising energy costs, and a rising population. The second half of the chapter looks at demand management tools such as pricing mechanisms and a smart meter system. The chapter then covers efforts to develop alternative sources of water, and efforts to encourage a reduction in water consumption, such as through school programmes and water efficiency awards for non-domestic sources.

Chen Deh Chien, Maksimovic Cedo and Voulvoulis Nikolaos, 'Institutional Capacity And Policy Options For Integrated Urban Water Management: A Singapore Case Study' (2011) 13 Water Policy 53

Part 1 and 2 of the article explores the evolution of Singapore's water supply over the course of 200 years. Part 3 sets out the different policy approaches Singapore has taken, such as reconstituting PUB as the single water authority in Singapore, the implementation of the Integrated Reservoir Scheme, and the setting of water tariffs.

Foo Kim Boon, 'Control of Pollution in Singapore' (1993) 5 Singapore Academy of Law Journal 81

Part D of this article provides details on the laws in 1993 that regulated pollution in inland waters with a specific focus on discharge of waste and pollutants, under the Water Pollution Control and Drainage Act and the Environmental Public Health Act.

Goh Kim Chuan, 'Water Supply in Singapore: Challenges and Choices', (2003) 42 Greener Management International 77

This article focuses on the sources of Singapore's water supply. It describes the search for water from external sources such as Malaysia and Indonesia, the development and enhancement of domestic water sources such as reservoirs, harnessing stormwater run-off, water recycling, seawater desalination, and methods of reduction of water loss in the system. The article then describes methods of managing water demand and the challenges faced by Singapore in continuing to ensure water supply.

Irvine Kim Neil, Chua Lloyd and Eikass Hans S., 'The Four National Taps Of Singapore: A Holistic Approach To Water Resources Management From Drainage To Drinking Water' (2014) Journal of Water Management Modeling (https://www.chijournal.org/Journals/PDF/C375)

This article gives an overview of the four national taps (water from local catchment areas, imported water, NEWater, desalinated water). The article mainly focuses on the approaches in capturing runoff from local catchments through policies such as rain gardens, stormwater planters, pervious pavements, wetlands, green roofs and rooftop gardens and park construction projects. The article then evaluates the results of these pilot projects along with other factors that may have influenced Singapore's water management system.

Lee Hannah and Tan Thai Pin, 'Singapore's Experience With Reclaimed Water: Newater' (2016) 32 International Journal of Water Resources Development 611

This paper focuses on the implementation of NEWater in Singapore, evaluating the factors that led to successful implementation of the policy, and the technological approaches and scientific requirements necessary in maintaining the quality of NEWater. The paper then concludes by examining possible future challenges to the production of NEWater.

Lye Lin Heng, 'A Fine City in a Garden—Environmental Law and Governance in Singapore' (2008) 1 Singapore Journal of Legal Studies 68

This article provides an overview of environmental law and policy in Singapore. Section IV of the article talks about water management in Singapore, covering issues such as the role of the PUB, NEWater, and water conservation methods in Singapore.

Lye Lin Heng, 'Singapore's New Environmental Law - The Environmental Pollution Control Act, 1999' (2000) Singapore Journal of Legal Studies 1

This article provides details on the Environmental Pollution Control Act as it was passed in the year 1999. Part B of the article talks about water pollution control, with regard to how the changes in the law affect the discharge of substances into Singapore's waters and the remedial and precautionary methods necessary in dealing with contaminating substances.

Ong Bee Luan Ivy, 'Singapore Water Management Policies And Practices' (2010) 26 International Journal of Water Resources Development 65

This article provides details on Singapore's approach to water policy using the following frameworks; political, institutional and technical. The political framework describes the political will for water independence in Singapore and water agreements with Johor. The institutional framework describes inter-agency coordination in water management, and legislation available relating to water law. The technical framework then describes the roles of public education, and research and development efforts in water demand management.

Tan Yong Soon, Lee Tung Jean and Tan Karen, *Clean, Green and Blue, Singapore's Journey Towards Environmental and Water Sustainability* (Institute of Southeast Asian Studies 2008)
The first chapter gives an overview of Singapore's environmental journey, starting from Singapore's independence. Some chapters focus on other environmental aspects like land and air pollution, but Chapter 5 onwards focuses on water. Chapter 5 traces the development of Singapore's sources of water, from importation to NEWater. Chapter 6 reviews Singapore's water management policy, with emphasis on efforts to manage water demand. Chapter 7 shows Singapore's approach to water sanitation over the years, and Chapter 8 looks at strategies to prevent flooding.

Teo Joel, 'Singapore Legal History of Water: The Municipal and the Singapore Story Past, Present and Future' (2004) 24 Singapore Law Review 22
This article provides details on the development of water supply in Singapore from 1819 onwards, tracing the sources of water from municipal agreements to agreements with Johor. Some agreements mentioned include the 1927 Water Agreement Between Johore & Singapore, the 1961 and 1962 water agreements and the 1990 Agreement between PUB and the Johor Government.

Timm Stephanie and Deal Brian, 'Understanding The Behavioral Influences Behind Singapore's Water Management Strategies' (2017) 61 Journal of Environmental Planning and Management 1654
This paper looks at Singapore's policies of NEWater and water conservation, with a focus on Singaporeans' acceptance of NEWater, the adoption of water conservation efforts by Singaporeans, and behavioural factors that influenced these strategies. The first part of the paper provides details on behavioural factors such as possible emotional responses to reclaimed water, pricing and rationing factors, and education and technological factors. The second part of the paper focuses on the results of a survey carried out to determine the impact of these factors on NEWater and water conservation, and concludes by evaluating the likely variables influencing these strategies.

Tortajada Cecilia and Joshi Yugal Kishore, 'Water Demand Management In Singapore: Involving The Public' (2013) 27 Water Resources Management 2729
This paper focuses on water demand management strategies that have been developed in Singapore, emphasizing on the role of public engagement, education efforts and the results of these actions in water conservation. The first part of the paper provides details on the role of politicians, and political mechanisms that incorporate the public and civic society participation in water demand management. The second part of the paper looks at the history of water conservation efforts and campaigns to encourage water conservation, and examines the use of pricing and non-pricing strategies in water demand management. Finally, the paper evaluates the effectiveness of these strategies in Singapore and offer suggestions for improvement.

Tortajada Cecilia and Joshi Yugal Kishore, 'Water Quality Management In Singapore: The Role Of Institutions, Laws And Regulations' (2014) 59 Hydrological Sciences Journal 1763

This article, published in 2014, provides details on Singapore's methods in water quality management. Section 2 is on pollution control, introducing the system of water pollution control in sewers, watercourses and reservoirs in Singapore, through the use of regulation, legislation and sewerage management. Section 3 covers Singapore's development from 1975 to 1992, with a focus on the Water Pollution Control and Drainage Act of 1975. Section 4 focuses on the changes that have occurred since, tracking changes such as the formation of the NEA, MEWR and legislation such as the Environmental Pollution Control Act 1999, the Environmental Public Health Act and The Sewerage and Drainage Act.

Tortajada Cecilia, 'Water Management In Singapore' (2006) 22 International Journal of Water Resources Development 227

This article provides an overview of Singapore's methods of water management from a two-part framework of supply management, and demand management. The section on supply management looks at approaches such as catchment management, desalination and supply of NEWater. The section on demand management then covers approaches such as taxation and tariffs. The article also examines governance of water resources through the PUB, highlighting the lack of corruption, human resources practices and the autonomy of the PUB as crucial for effective water management.

Tortajada Cecilia, Joshi Yugal, and Biswas Asit K, *The Singapore Water Story* (Taylor and Francis 2013)

This book provides an overview of Singapore's efforts in water policy and management. Chapters 1 and 2 provide a historical context to water policy management in Singapore. Chapters 3, 4 and 5 respectively cover policies in terms of managing water pollution, meeting the needs of the local population, and water conservation methods. Chapter 6 then examines the case study of cleaning the Singapore river and lessons learnt from the process, while Chapter 7 looks at water supply arrangements between Singapore and Malaysia. Chapter 8 then considers future challenges and developments necessary for Singapore's water management policies.

Wong Kai Yeng, "Singapore's Experience in Water Resource Management" in Poh Onn Lee (ed), *Water Issues in Southeast Asia: Present Trends and Future Direction* (Institute of Southeast Asian Studies 2012)

This chapter looks at Singapore's efforts in building up a domestic water supply. The chapter provides an overview of Singapore's water management techniques, including efforts such as desalination, NEWater production, the use of new technologies, increasing water catchment areas, the Deep Tunnel Sewerage System and stormwater management. Finally, the chapter examines water demand management techniques and highlights some programmes run by the PUB to encourage water conservation.

Part 3a: Singapore: Water Agreements

1927 Agreement as to Certain Water Rights in Johore

The 1927 Agreement was the first water treaty between Johore and Singapore. Under this agreement, Singapore was allowed to rent 2100 acres of land in Gunong Pulai, at the rate of 30 cents per acre. The purpose of this lease was to allow Singapore to gain the "full and exclusive right and liberty to take, impound, and use all the water...in, upon, or under the said land".

Additionally, Singapore was allowed to lay waterworks to transfer the waters to Singapore. Johore had the right to use up to 800,000 gallons of water daily, paying 25 cents per 1000 gallons to Singapore.

1961 Tebrau and Scudai Rivers Water Agreement

This 1961 agreement superseded the 1927 Agreement. Under the 1961 Agreement, land in Gunong Pulai, Sungei Tebrau and Sungei Scudai was set aside for rental by Singapore under similar arrangements as the 1927 Agreement. The rent, however, was increased to $5 per acre. Singapore was also required to pay 3 cents for every 1000 gallons of raw water drawn from the Tebrau and Scudai rivers. Johor, in turn, paid 50 cents for every 1000 gallons of pure (treated) water provided by Singapore.

The raw and treated water prices were to be "subject to review after the expiry of 25 years from the date of these presents (the date of signing)".

The agreement further provided that the lands leased by Johore to Singapore would not be alienated or otherwise acted upon in a way to prejudice Singapore's interests for 50 years. This treaty expired in 2011.

1962 Johore River Water Agreement

This agreement allowed Singapore to draw up to 250 million gallons of water per day from the Johore river. The prices of raw water sold to Singapore, and treated water sold to Johore were also set at 3 cents per 1000 gallons, and 50 cents per 1000 gallons, respectively. Again, these prices were to be "subject to review after the expiry of 25 years from the date of these presents (the date of signing)".

To facilitate this, Singapore was allowed to rent specific lands in Tebrau Mukim (in the Johor Baru District) and Kota Tinggi Mukim (in the Kota Tinggi District) in Johore for 99 years at "standard rates". This treaty will expire in 2061.

Independence of Singapore Agreement 1965

This agreement set out the arrangements for the separation of Singapore from Malaysia. Notably, clause 14 of Annex B of the Separation Agreement bound the PUB and the Johor state government to abide by the 1961 and 1962 water agreements. Further, it required the Singapore government to guarantee that the PUB "shall on and after Singapore Day (9 August 1965) abide by the terms and conditions of the Water Agreements dated 1st September, 1961, and 29th September, 1962, entered into between the City Council of Singapore and the Government of the State of Johore." Likewise, the Malaysian government was to guarantee that the Johore State government would "also abide by the terms and conditions of the said two Water Agreements."

1990 Linggiu Dam Agreement

This agreement allowed PUB to purchase water exceeding the 250 million gallons daily limit as set out in the 1962 Johore River Water Agreement. In exchange, PUB would build the Linggiu Dam over the Johore River and a 21,600 hectare reservoir.

Pursuant to this agreement, Singapore would build and operate the Linggiu Dam, and pay for its construction and operational costs. In addition, it paid compensation for the land used for the Linggiu Reservoir project, the potential loss of revenue from logging activities, and as one-time payment for the lease of that land for the remaining tenure of the 1962 Water Agreement. However, Johor would own the Linggiu Dam.

This agreement supplements the 1962 agreement, and will expire together with that agreement in 2061.

Part 3b: Singapore: Secondary Materials on Singapore's Water Agreements with Malaysia and Indonesia

MALAYSIA

Chakraborti Tridib and Chakraborty Mohor, 'Water-Sharing Saga Between Singapore And Malaysia: A Historical Discord Revisited' (2018) 10 Asian Politics & Policy 36

This article examines water treaty disputes between Singapore and Malaysia. The first part of the article gives a background to the dispute, and outlines factors driving the dispute, such as Malaysia's unhappiness over the pricing of water supplies, and Singapore's arguments over the legality of revising the agreements. The second part of the article considers the role of ASEAN and argues that due to the organization's policy of non-interference, ASEAN failed to play a role in resolving this dispute. Finally, the article examines Singapore's efforts to reduce dependency on water from Malaysia through the four national taps policy.

Chang Li Lin, 'Singapore's Troubled Relations With Malaysia: A Singapore Perspective' (2003) Southeast Asian Affairs 259

The first part of this article traces the key events and dates in the negotiations over the water agreements between Singapore and Malaysia up until the year 2003. The article then considers further developments such as the possibility of Malaysia renegotiating the price of water, and Singapore's efforts to reduce water dependency on Malaysia through developing alternative sources such as NEWater.

Ewing J. Jackson and Hangzo Pau Khan Khup, 'Development in Johor and Singapore's Water Access: Challenges and Opportunities' in Francis E Hutchinson and Terence Chong (eds), ***The SIJORI Cross-Border Region: Transnational Politics, Economics, and Culture*** **(ISEAS–Yusof Ishak Institute 2016)**

This chapter begins by examining the relationship between Singapore and Malaysia and their water arrangements. It then highlights certain factors such as Johor's rising population and rising demand for water, industrialization in Johor, rising domestic usage of water and the politicization of water as possible issues in the relationship. The chapter then considers the future of the Singapore-Malaysia water arrangements, envisioning an increase in the price of water from Johor, and considers Singapore's shift to domestic water sources, noting that existing domestic sources tend to be heavily energy dependent.

Ganesan N., 'Malaysia-Singapore Relations: Some Recent Developments' (1998) 25 Asian Affairs: An American Review 21

This article, written in 1998, considers the agreements between Singapore and Malaysia as the most important tie between the two nations. It outlines developments in the 1990s that demonstrate Singapore's efforts to ensure a constant water supply, such as Singapore's lodging of the

Separation Act with the UN, the signing of a water agreement with Indonesia in 1991, and water tariffs and taxation plans.

Lee Poh Onn, 'The Water Issue between Singapore and Malaysia: No Solution in Sight?' (2003), ISEAS Working Papers. Economics and Finance Jan 2003

The article first provides a review of the water agreements signed in 1961 and 1962 between Singapore and Malaysia. It then goes into an in-depth discussion of the political disputes that arose between the two countries in 2001, during negotiations over the terms of the water agreements. It also briefly discusses the prospect of supply of water from Indonesia (through the 1991 Water Agreement). Finally, the article discusses the water demand and supply situation in Singapore, and expounds on the policy implications of the water agreements between Singapore and Malaysia.

Long Joey, 'Desecuritizing The Water Issue In Singapore-Malaysia Relations' (2001) 23 Contemporary Southeast Asia 504

This article examines the water agreements between Singapore and Malaysia as a possible factor in causing bilateral armed conflict between the two countries, arguing that such a scenario is unlikely to occur. First, the article considers various arguments that have been made, such as Singapore's reliance on Malaysia on water, the constant threats from Malaysian politicians to cut the water supply, and the possibility of military reprisal from Singapore should the water supply be cut. The article then considers Singapore's existing water supplies, and strategies in the event of a crisis. Finally, the article considers various scenarios and options for Singapore in the event where Malaysia decides to raise the price of water, and in the event where other changes are made to the existing water agreements.

Nathan K. S., 'Malaysia–Singapore Relations: Retrospect And Prospect' (2002) 24 Contemporary Southeast Asia 385

This article considers the issue of water as a factor affecting Singapore-Malaysia bilateral ties. The section on water first outlines Singapore's reliance on Malaysia on water, and outlines Minister Lee Kuan Yew's efforts in the year 2000 and 2001 in brokering a deal between the two states. The article then describes the differences in perspectives towards the water agreements between the states, with Singapore wanting any changes to only apply to future agreements, while Malaysia would want the changes to apply retrospectively to the 1961 and 1962 agreements. Finally, the article mentions Singapore's efforts to achieve water self-sufficiency arguing that such a scenario would ultimately be beneficial to both states.

Tortajada Cecilia and Pobre Kimberly, 'The Singapore–Malaysia Water Relationship: An Analysis Of The Media Perspectives' (2011) 56 Hydrological Sciences Journal 597

This article analyses the media's coverage of the water relations between Singapore and Malaysia, with Part 3 of the article first describing the various water-related negotiations between Singapore and Malaysia between the years 1998 and 2003. The article then compares the depictions of the negotiations in the media of both countries, arguing that the role of the media has evolved from a

reporter of the news, to a role as a medium of communication between stakeholders on both sides, as well as a role as an unofficial medium of communication between the two governments as well. Parts 4 and 5 focus on the media and its impact on bilateral relations in general, and note the governments' shift towards the discussion of these affairs in private, without media involvement.

INDONESIA

Grundy-Warr Carl, Peachey Karen and Perry Martin, 'Fragmented Integration In The Singapore-Indonesian Border Zone: Southeast Asia's 'Growth Triangle' Against The Global Economy' (1999) 23 International Journal of Urban and Regional Research 304

This article mentions the 1991 agreement to develop water resources in Riau, Indonesia with the aims of both producing water for Singapore's domestic consumption and developing the province of Riau. According to the article, five water catchment areas were identified and two Singapore-Indonesian joint venture companies were established in pursuit of the project. However, the article then mentions that no progress was made. According to the article, among the factors hindering progress of development was the presence of a large number of Indonesian squatters invading the planned development land in the hopes of securing compensation from Singapore.

Ooi Giok-Ling, 'The Indonesia-Malaysia-Singapore Growth Triangle: Sub-Regional Economic Cooperation And Integration' (1995) 36 GeoJournal 337

This article briefly mentions Singapore's 1962 and 1990 water agreement with Johor and the agreement between Singapore and Bintan for supply of water as an example of relationship ties between the states in the growth triangle.

Smith Shannon L.D., 'The Indonesia-Malaysia-Singapore growth triangle: A political and economic equation', (1997) Australian Journal of International Affairs 369

This article examines the political and economic considerations in the formation of the growth triangle. Water is highlighted as one of the key motivations for Singapore as Singapore would want to ensure a secure water supply which it lacked. For Indonesia, the article argues that ties with Singapore would ensure that it has a market for its natural resources while simultaneously boosting interdependency between the two states.

Wee Vivienne, 'The Significance of Riau in SIJORI' in Francis E Hutchinson and Terence Chong (eds), *The SIJORI Cross-Border Region: Transnational Politics, Economics, and Culture* (ISEAS–Yusof Ishak Institute 2016)

This chapter focuses on the Riau Islands in the growth triangle and analyzes the problems in the materialization of the growth triangle. In relation to the water agreement between Singapore and Bintan, this chapter points to the unrest in 1997 after the fall of Soeharto as a possible reason that impeded progress in this area. According to the article, the Salim Group that was under Soeharto's

political protection also failed to adequately compensate people who were resettled for the building of freshwater reservoirs on the island of Bintan and the compensation offered was not commensurate with that offered by Singaporean investors, leading to discontent.

Part 4a: ASEAN: Official Instruments and Publications (including Mekong River Commission)

MEKONG AGREEMENT AND RELATED DOCUMENTS

Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin 1995 (Mekong Agreement 1995)

This Agreement relates to the sustainable use of the lower half of Mekong River (the section flowing through, Laos, Thailand, Cambodia, and Vietnam). As such, the contracting states are limited to these four ASEAN nations. The Mekong Agreement forms the framework for co-operation between the States parties for issues relating to the Mekong River, including the use of the water for navigation, irrigation/consumption, and hydropower. It also provides a platform for co-operation with China and Myanmar, where the upper half of the river is situated. The Agreement included the establishment of the Mekong River Commission (MRC). The MRC is a technical body which advises the State parties on the sustainable use and development of the river.

From there, the States parties further adopted "procedures" (ie procedural rules) to facilitate co-operation and monitor the health of the river:

- **Procedures for Data and Information Exchange and Sharing (PDIES) (2003)**
  The PDIES defines the scope of regional data management, and sets out the roles and responsibilities of the MRC and its member countries, and the modalities of data acquisition, storage and dissemination. These rules are designed to strengthen the management of reliable information across borders.

  MRC countries are required to collect and share various information such as hydrology, meteorology, topography, irrigation, navigation, flood management, hydropower, environment, socio-economy and tourism, among others. Those data are shared with the MRC Secretariat for consolidation, analysis and public dissemination.

- **Procedures for Water Use Monitoring (PWUM) (2003)**
  The PWUM define the scope of work, the role and responsibility of the MRC bodies and its member countries, and the modality of water use monitoring. The MRC Secretariat is tasked to consolidate data, prepare reports and make recommendations for better usage.

MRC countries are to first establish a baseline of current water usage within the existing schemes, and to define a set of indicators to monitor intra-basin water use, including rainfall data, water quality parameters and the type of water use; and another set of indicators for water diversion monitoring such as location of diversion, design specifications and diverted water volume. The guidelines also require a comprehensive water use monitoring system to be set up at the MRC Secretariat for data consolidation and storage.

- **Procedures for Notification, Prior Consultation and Agreement (PNPCA) (2003)**
  The PNPCA specifies three processes for regional cooperation on water development. Any water development project in the region, which may significantly alter the water flow or quality of the Mekong mainstream, should undergo one of the three processes: Notification, Prior Consultation, or Specific Agreement.

  The processes are designed to facilitate cooperation among the four countries to optimise the use of water resources for development while minimising potential adverse transboundary impacts on the environment and livelihoods of riverine communities. However, the processes do not, on their own, result in the approval or rejection of a proposed project.

- **Procedures for the Maintenance of Flows on the Mainstream (PMFM) (2006)**
  The PMFM requires the four member countries collect daily data on water flow such as discharge, level and volume at 12 hydrological stations along the Mekong and Tonle Sap rivers. During the wet season, the data are sent to the MRC Secretariat daily for consolidation and analysis, and published online on the MRC's PMFM website for public view. During the dry season, water flow data are collected daily but sent to the MRC Secretariat weekly.

  If the situations become "unstable" or "severe", the MRC alerts the countries concerned for necessary actions, and provides technical support to mitigate impacts, if required.

- **Procedures for Water Quality (PWQ) (2011)**
  The PWQ defines two types of actions to keep the quality of water acceptable for humans, flora and fauna: (1) water quality monitoring, and (2) emergency response. The PWQ requires the four Mekong countries to regularly monitor the water quality throughout the basin, and prepare response mechanisms for water pollution emergencies, such as oil spills and toxic wastewater discharges, to protect the river and minimise impacts on its ecology and surrounding communities.

ENVIRONMENTAL PLANS AND PROGRAMMES, AND SOCIO-CULTURAL COMMUNITY BLUEPRINTS

ASEAN Sub-Regional Environment Programme (ASEP) Phase I (1978-1982)
ASEP Phase II (1983-1987)
ASEP Phase III (1988-1992)

The history of the ASEAN environmental programmatic framework stretches back to 1978, when the ASEAN Experts Group on the Environment, with the assistance of the United Nations Environment Programme, produced ASEP Phase I. At this time, the main concern of ASEAN in relation to water was ensuring its quality. ASEP Phase I thus included one goal on this issue: "Establishment of adequate urban air and water quality monitoring systems to serve as an indicator of the status of environmental quality".

This continued to be the case in ASEP Phase II, though the revised goal now also included the "control of effluents from small and medium scale industries". ASEP Phase III changed the focus of this goal, dropping the reference to industry and called for the "integration of… experience gained in air and water quality monitoring and management" to serve as a basis for decision making in the urban environment.

Hanoi Plan of Action 1999-2004
Vientiane Action Programme 2004-2010

After a hiatus, water resources returned to ASEAN's environment agenda. This time, water was properly considered as a resource in the Hanoi Plan. ASEAN members agreed to co-operate and exchange information to improve water resources management and supply systems. Another point of agreement was to implement an ASEAN regional water conservation programme by 2001 (This did not materalise until 2005 - see the ASEAN Strategic Plan of Action on Water Resources Management below).

More interestingly, it also called on member states to support the development of a trans-ASEAN pipeline to convey raw water between ASEAN member states.

This was expanded somewhat in the Vientiane Action Programme, which called for the promotion of sustainability of water resources to ensure sufficient quantity and quality of water for the needs of the people of ASEAN. It also noted the "strong linkage between water, health and poverty". This would be done by Halving the proportion of people without sustainable access to safe drinking water by 2010, managing water resources efficiently and effectively, promoting integrated river basin management, and promoting awareness to enhance integrated water resources management (IWRM).

ASEAN Strategic Plan of Action on Water Resources Management 2005

As part of the Hanoi Plan, this Strategic Plan of Action (SPA) was adopted with a view to "the attainment of sustainability of water resources to ensure sufficient water quantity of acceptable quality to meet the needs of the people of Southeast Asia in terms of health, food security, economy, and environment [including the preservation of flow regimes, biodiversity and cultural heritage as well as the mitigation of water-related hazards]".

The SPA identified four areas of focus:

1. Supply, demand and allocation
2. Water quality and sanitation
3. Climate change and extreme events
4. Governance and capacity building

ASEAN Socio-Cultural Community (ASCC) Blueprint 2009-2015
ASEAN Economic Community (AEC) and ASCC Blueprints 2025
ASEAN Strategic Plan on Environment (ASPEN) 2016-2025

The first ASCC Blueprint, introduced as part of a wider restructuring of ASEAN into a "three communities" (Economic, Political-Security, and Socio-Cultural) model, set out the work of the ASCC. Amongst other things, it was tasked with "Promoting the Sustainability of Freshwater Resources". The actionables under this header, reiterate the need to meet the four goals in the Vientiane Action Programme by 2015 - except "halving the proportion of people without sustainable access to safe drinking water" was still to be met by 2010.

In the second ASCC Blueprint, water resources was included in the wider heading of "Conservation and Sustainable Management of Biodiversity and Natural Resources", and ASEAN member states agreed to "enhance policy and capacity development and best practices to conserve, develop and sustainably manage... water resources".
Notably, this was mirrored in the AEC Blueprint 2025, under the rubric of "Sustainable Economic Development". ASEAN members agreed to "promote good agriculture practices to minimise the negative effects on natural resources such as... water".

Water resources management is given more focus in ASPEN. As one of the strategic priorities, ASPEN extended the implementation period of the adoption of IWRM and efficient and effective water resources management goals by another 10 years. It also aims to further "reduce the number of people without sustainable access to safe drinking water and improved sanitation", and also seeks to "reduce risks and impacts of water-related disasters".

STATE OF THE ENVIRONMENT REPORTS

1st ASEAN State of the Environment Report 1997 (SOER1)
2nd ASEAN State of the Environment Report 2000 (SOER2)
3rd ASEAN State of the Environment Report 2006 (SOER3)
4th ASEAN State of the Environment Report 2009 (SOER4)
5th ASEAN State of the Environment Report 2017 (SOER5)

The SOER takes stock of environmental conditions and their impact and interrelationship with other sectoral areas in ASEAN. They also offer an update of the prospects and challenges facing the region and highlight what ASEAN has done to protect the environment and promote sustainable development. The latest SOER5 (2017) includes measures that ASEAN and its individual member states are taking to address the issues of water quality, sanitation, water-related disasters, and water stress / insecurity, exacerbated by climate change.

OTHER DECLARATIONS

Bangkok Declaration on the ASEAN Environment (1984)

This declaration included a call for the then-six ASEAN members (Singapore, Malaysia, Indonesia, Thailand, Philippines, and Brunei) to "increase efforts to provide water-borne sewerage systems with central sewage treatment facilities at least for the major towns".

Basic Framework of ASEAN-Mekong Basic Development Co-operation (1996)

This agreement brought together the-then seven ASEAN members (Singapore, Malaysia, Indonesia, Thailand, Philippines, Brunei, and Vietnam), plus Laos, Myanmar, Cambodia, and China together to foster the sustainable development of the Mekong River basin. This included the "development of infrastructure capacities in… irrigation", and "improved management of natural resources and protection of the environment".

Part 4b: ASEAN: Secondary Materials

Armstrong Scott C., 'Water Is for Fighting: Transnational Legal Disputes in the Mekong River Basin' (2015) 17 Vermont Journal of Environmental Law 1

This article examines the issue of resource management and governance of the Mekong River. Section 1 provides an overview of the Mekong River while Section 2 examines multilateral instruments such as the 1995 Mekong River Agreement, the UN Watercourses Convention and the UNECE Water Convention. Section 3 then examines the application of international customary law to the Mekong River, looking at obligations imposed by international law, such as the obligation to not cause significant transboundary harm. Sections 4 and 5 then address tensions stemming from the use of water, and tensions arising in the two aims of conservation and economic development. Finally, Section 6 offers some possible remedies to the legal framework and governance of the Mekong.

Bearden Bennett L., 'Following The Proper Channels: Tributaries In The Mekong Legal Regime' (2012) 14 Water Policy 991

This article examines the Mekong legal framework and criticizes the legal regime applying to Mekong tributaries under the framework. According to the article, a major failing of the Mekong Agreement is that states are allowed to unilaterally divert and transfer water from tributaries without approval from other basin states. Section 2 of the article provides an overview of tributaries in the Mekong. Section 3 questions the usage of the term basin in the Mekong Agreement and compares it to usage elsewhere in international law. Section 4 then engages in an analysis of the 1995 Mekong Agreement. Finally, Section 5 of the article suggests possible remedies such as the implementation of Joint Development Agreements in the Mekong River Framework.

Bearden Bennett L., 'The Legal Regime Of The Mekong River: A Look Back And Some Proposals For The Way Ahead' (2009) 12 Water Policy 798

This article provides an overview of the legal regime of the Mekong River. Sections 2 and 3 provides an overview of the Mekong River and traces the history of the Mekong legal regime from 1957 to 2009, when the article was written. Section 4 then engages in a comparison between international watercourse law and the Mekong legal framework, highlighting differences in definitions and obligations. Section 5 engages in some criticisms of the Mekong legal framework highlighting its application to tributaries, its requirements for Environmental Impact Assessments, and its lack of public participation mechanisms and dispute resolution mechanisms.

Bearden Bennett, Rieu-Clarke Alistair and Pech Sokhem, 'Mekong Basin', in Flavia Rocha Loures and Alistair Rieu-Clarke (eds), "*The UN Watercourses Convention in Force—Strengthening International Law for Transboundary Water Management*" (Abingdon: Routledge 2013)

Chapter 15 of this book provides an overview of the Mekong River and briefly examines the 1995 Mekong Agreement and the UN Watercourses Convention, highlighting differences in the norms encapsulated in the two agreements, and the different approaches to determining reasonable and equitable utilization and the obligation not to cause significant harm under the two conventions.

Browder Greg and Ortolano Leonard, 'The Evolution of an International Water Resources Management Regime in the Mekong River Basin' (2000) 40 Natural Resources Journal 499
This article provides a historical overview of the governance regime of the Mekong River, evaluating the roles played by the Mekong Committee Era from 1958 to 1975, the Interim Mekong Committee from 1978-1992, and the 1995 Mekong River Commission.

Chenoweth Jonathan, 'International River Basin Management: Data And Information Exchange Under International Law And The Case Of The Mekong River Basin' (2000) 18 Journal of Energy & Natural Resources Law 142
This article examines the requirements for data and information exchange under international law, highlighting their legal basis under the UN Watercourses Convention and the Helsinki Rules of the International Law Association. The article then examines these requirements through the case study of the Mekong, and examines the requirements encapsulated under the Mekong Agreement, comparing it to mechanisms present in the management of other international watercourses.

Dung Huynh Tien, 'Mekong River Basin Regional Legal Framework' in Finlayson C. and others (eds), *The Wetland Book* (Springer, Dordrecht 2018)
This article provides a brief overview of the legal framework in the Mekong River Basin. The article first provides an overview of the Mekong River, the history of transboundary management in the Mekong, and provides an overview of the 1995 Mekong Agreement and the Mekong River Commission. The article then briefly mentions possible future challenges in transboundary management such as the emergence of conflicts between state and non-state actors in the development of the Mekong.

Fleur Johns, 'On Failing Forward: Neoliberal Legality in the Mekong River Basin' (2015) 48 Cornell International Law Journal 347
This article examines the interaction between neoliberalism and law in the Mekong, highlighting the case studies of the Xayaburi dam and the Nam Theun 2 project. The article highlights issues such as private financing, the role of institutions such as the Asian Development Bank and the role of the state in the development of these projects.

Gao Qi, *A Procedural Framework For Transboundary Water Management In The Mekong River Basin* (Brill Nijhoff 2014)
This book examines the procedural requirements in international watercourse law and management in the context of the Mekong River. Chapter 1 gives an introduction to the Mekong and provides

some reasonings for the focus on procedural requirements in the context of the Mekong. Chapter 2 focuses on development in the Mekong, and the implications of dam building and hydropower development from the different perspectives of the various parties involved. Chapter 3 focuses on the exchange of information and data collection between states while Chapter 4 examines the duty to notify and consult under international law and as applied to the Mekong. Chapter 5 then examines the right to information and public participation in the various Mekong states, while Chapter 6 examines the requirements for Environmental Impact Assessments and Strategic Impact Assessment under international law and under the Mekong Agreement. Finally, the book offers recommendations in these selected areas.

Halbertsma H.G., 'Legal Aspects Of The Mekong River System' (1987) 34 Netherlands International Law Review 25

This article provides an overview of the legal system of the Mekong before the 1995 Mekong Agreement. Section 2 of the article addresses boundary delimitation in the Mekong while Section 3 covers navigation regimes in the Mekong. Section 3 also mentions the various international river committees in the Mekong and provides an overview of these committees. Section 4 then examines the role played by UN-ECAFE (now known as UN-ESCAP) and the Mekong Interim Committee in governing the Mekong.

Ibrahim Imad Antoine, 'Water Governance In The Mekong After The Watercourses Convention 35th Ratification: Multilateral Or Bilateral Approach?' (2019) International Journal of Water Resources Development 200

This article considers different approaches to governance in the Mekong River. The first part of the article gives an overview to the current system of governance in the Mekong and of China's approach to transboundary water governance, arguing that the Chinese approach prioritizes China instead of international water agreements. The article then considers the UN Watercourses Convention in relation to the Mekong Agreement, arguing that ratifying the UN Watercourses Convention could strengthen governance in the Mekong. The article then considers governance through bilateral mechanisms and flexibility based mechanisms arguing that these mechanisms could in practice be a more practical solution in the Mekong over international law, given China's reluctance to sign the UN Watercourses Convention.

Jacobs Jeffrey W., 'The Mekong River Commission: Transboundary Water Resources Planning And Regional Security' (2002) 168 The Geographical Journal 354

This article first examines the 1957 Mekong Committee, tracing its development into the 1978 Interim Mekong Committee and finally the Mekong River Commission. The article then engages in an analysis of all three bodies and offers some reasons for the weakness of the Mekong Committee and the Interim Mekong Committee.

Johns Fleur and others, 'Law and the Mekong River Basin: a socio-legal research agenda on the role of hard and soft law in regulating transboundary water resources.' (2010) 11 Melbourne Journal of International Law 154

This article examines the role of law in the governance of the Mekong and raises the issue of the role of hard law and soft law in this area. Part II of the article raises some issues in the interaction between hard law and soft law in the Mekong, looking at the 1995 Mekong Agreement, the Mekong River Commission and international watercourse law. Part III looks at the existing scholarship on the interaction between soft law and hard law in general and discusses its relevance to international watercourse law and management. Part IV and V then makes the case for research focused on this area of law in the Mekong, and offers possible research methodology by which such research could be carried out.

Ke Jian and Gao Qi, 'Only One Mekong: Developing Transboundary EIA Procedures of Mekong River Basin' (2013) 30 Pace Environmental Law Review

Part II of this article first examines the role of transboundary EIAs in international law and the rationale of its application in the Mekong. Part III engages in a study of the feasibility of carrying out EIAs in the Mekong, mentioning the involvement of organizations such as the Mekong River Commission and ASEAN. Part V then explores how EIA procedures can be developed in the Mekong and elaborates on various stages within the EIA process such as the screening process, scoping, and the notification and consultation process within the EIA.

Kinna Rémy and Rieu-Clarke Alistair, *The Governance Regime of the Mekong River Basin: Can the Global Water Conventions Strengthen the 1995 Mekong Agreement?* (Brill 2017)

This book engages in a comparative exercise between the 1995 Mekong River Agreement, the UN Watercourses Convention and the UNECE Water Convention, arguing that all three instruments are complementary. The first few sections of the book traces the development and history of the three legal instruments, providing an overview of the conventions while highlighting certain provisions within each instrument. Comparisons are then made between the instruments, looking in terms of the geographical scope covered, the legal scope, and the substantive norms encapsulated in the instruments, such as the norms of reasonable and equitable utilization, and the duty to take all appropriate measures to prevent harm. The procedural aspects of the three instruments are then compared, looking at the obligations of notification and consultation. Finally, the book considers the differences in terms of institutional arrangements and dispute settlement mechanisms, and ends by recommending that the Mekong States join the UN Watercourses Convention and the UNECE Water Convention.

Kittikhoun Anoulak and Staubli Denise Michèle, 'Water Diplomacy And Conflict Management In The Mekong: From Rivalries To Cooperation' (2018) 567 Journal of Hydrology 654

This article looks at water diplomacy between the states in the Mekong. The first part of the article provides an overview of rivalries and conflicts in the Mekong region. The second part of the article then discusses managing of tensions through the Mekong River Commission and focuses on specific case studies, such as the Yali Falls dam, the Chinese Manwan dam, the Xayaburi and Don Sahong hydropower projects and the Pak Beng hydropower project and analyzes the role of the Mekong River Commission in each case.

Landberg Sophie, 'Sustainable Development Of Water Resources In The Mekong River Basin: Legal And Policy Implications Of Dams In The Regional Context' (2012) 5 Journal of East Asia and International Law 9

This article addresses the construction of dams in the Mekong River Basin. Part II of the article gives an overview of hydropower development in the Mekong, while Part III examines international watercourse law through the UN Watercourse Convention and the Mekong Agreement, highlighting the concept of sustainable development in international law. Part IV describes the various organizations for cooperation in the Mekong such as the Mekong River Commission, ASEAN and the Greater Mekong Subregion. Part V then examines the sustainability of dams in Mekong and considers the economic, environmental and social effects of dam building. Finally, Part VI offers recommendations to the legal framework of the Mekong, proposing methods such as improving the implementation of EIAs, allowing access to information and increased stakeholder participation in the Mekong.

Lee Ed, 'The Mekong River Basin Agreement' (1996) 1 Asia Pacific Journal of Environmental Law 134

This article provides an overview of the 1995 Mekong Agreement and highlights some shortcomings of the Agreement such as non-participation by China and the ambiguities present in the Agreement.

Nakayama Mikiyasu, 'Aspects Behind Differences In Two Agreements Adopted By Riparian Countries Of The Lower Mekong River Basin' (1999) 1 Journal of Comparative Policy Analysis: Research and Practice 293

This article compares the differences between the 1975 Joint Declaration of Principles for the Utilization of the Waters of the Mekong Basin and the 1995 Mekong Agreement, highlighting some differences in the rules governing the use of water in the tributaries and in the mainstream of the Mekong.

Nguyen Van Duyen, 'The Inadequacy of Environmental Protection Mechanisms in the Mekong River Basin Agreement' (2001) 6 Asia Pacific Journal of Environmental Law 349
This article highlights issues in the Mekong Agreement and compares it to the UN Watercourses Convention, highlighting issues such as the procedural requirements under the Mekong Agreement, the mechanisms for remedies available and the right to public participation under the Mekong Agreement.

Öjendal Joakim, Hansson Stina and Hellberg Sofie, *Politics And Development In A Transboundary Watershed: The Case of the Lower Mekong Basin* (Springer 2012)
Chapter 1 of this book introduces the concept of Integrated Water Resource Management (IWRM), while Chapter 3 examines the politics and development of the Mekong using the IWRM framework. Chapter 4 then focuses on the trade-offs for the Mekong River Commission in following the IWRM framework and the challenges in implementing the IWRM framework. Chapter 5 examines how domestic water policies affects international water management in the Mekong through a case study of Thailand. Chapter 6 discusses other alternative models of analyzing water management in the Mekong, such as through impact focused models and hydrological models. Chapter 7 uses the framework of environmental flows assessment model within the IWRM model, looking at its use in the various Mekong states. Chapter 8 looks at participation from stakeholders, NGOs and the involvement of various other associations in the governance of the Mekong. Finally, Chapter 10 looks at the nexus between politics and development in the Mekong and the challenges that emerge forthwith.

Rieu-Clarke Alistair and Gooch Geoffrey, 'Governing the Tributaries of the Mekong - The Contribution of International Law and Institutions to Enhancing Equitable Cooperation over the Sesan' (2010) 22 Pacific McGeorge Global Business & Development Law Journal 193
Part V of this article examines the applicability of the 1995 Mekong Agreement to the development of hydropower in the Sesan Tributary, arguing that the Sesan river falls under the scope of the Mekong Agreement. Part VI examines the application of substantive norms of international law such as the right to equitable and reasonable utilization, the obligation to take all appropriate measures to prevent significant harm and the obligation to protect the environment. The article then examines the right to notify and consult, and the obligation to conduct EIAs under international watercourse law and under the Mekong Agreement.

Rieu-Clarke Alistair, 'Notification And Consultation Procedures Under The Mekong Agreement: Insights From The Xayaburi Controversy' (2014) 5 Asian Journal of International Law 14
This article examines the application of the obligation to notify and consult in the case study of the Xayaburi dam. Part I gives an overview of the Mekong Agreement and the obligation to notify and consult encapsulated in the Agreement. Part II and III then highlights the Xayaburi

hydropower project and lessons that can be learnt from that project, highlighting certain issues such as the ambiguities present in international law in the requirement for notification, the collection and exchange of data and information, and the requirements for the amount of time needed for the consultation process.

Rix Adam S., 'The Mekong River Basin: A Resource at the Cross-Roads of Sustainable Development' (2002) 21 Temple Environmental Law & Technology Journal 103
Part IV of this article provides a brief overview of the history of the legal circumstances of the Mekong, from the role played by UN-ECAFE/ESCAP in the 1950s to the formation of the 1995 Mekong Agreement.

Sithirith Mak, Evers Jaap and Gupta Joyeeta, 'Damming The Mekong Tributaries: Water Security And The MRC 1995 Agreement' (2016) 18 Water Policy 1420
This article examines governance in the Mekong through the case study of the 3S Basin (consisting of the rivers Sekong, Sesan and Srepok), examining the human security, environmental security and water security of the surrounding states to the 3S Basin. The article then offers some criticisms of the Mekong River Agreement and its ability to adequately address these issues.

Sneddon Chris and Fox Coleen, 'Rethinking Transboundary Waters: A Critical Hydropolitics Of The Mekong Basin' (2006) 25 Political Geography 181
This article engages in a discussion over the hydropolitics of the Mekong Basin and starts by considering its status as a basin. It first traces the usage of the Mekong from 1957 to 1995 before considering the 1995 Mekong Agreement. The article then discusses the shift as a result of the 1995 Mekong Agreement. Some changes highlighted are the shift in perspective from viewing the Mekong as a basin to a watercourse, and the corresponding imposition of rights and obligations such as the right to equitable utilization due to the Mekong Agreement. The article then examines the case study of the Pak Mun Dam and the application of the Mekong Agreement in that scenario.

Stewart Mart A. and Coclanis Peter A. , *Water and Power: Environmental Governance and Strategies for Sustainability in the Lower Mekong Basin* (Springer International Publishing 2019)
Part III of this book addresses water governance in the Mekong with Chapter 13 first addressing the problems in governance of the Mekong while providing an overview to the Mekong River and the potential issues. Chapter 14 of this book addresses issues in China's involvement in the Lancang-Mekong River and the need to build trust between parties in this area while also suggesting methods to do so.

Suhardiman Diana, Giordano Mark and Molle François, 'Scalar Disconnect: The Logic Of Transboundary Water Governance In The Mekong' (2012) 25 Society & Natural Resources 572

This article looks at the interaction between regional and national decision making processes in governance of the Mekong Basin. The article argues that international donors prioritize regional research programmes over national interests in exercising influence over the activities of the Mekong River Commission. The article then considers domestic coordination and infighting within each state's bureaucracies, and examines the role played by development banks and private companies in the development of the Mekong alongside these other actors.

Part 5: International water conventions and their status in ASEAN

UN Watercourses Convention 1997

The UN Watercourses Convention codifies customary international water law for surface watercourses, and clarifies the content and scope of the customary rules. These rules include:

- Articles 5-6: Equitable and reasonable utilisation of international watercourse
- Article 7: Obligation not to cause significant harm
- Article 8-9, 11-19: Obligation to co-operate, including regular information and data exchange, including information and consultation on planned measures, and possible adverse effects.
- Article 10: Relationship between different kinds of uses of the watercourse. While there is no priority given to any specific use case, "vital human needs" are given "special regard".

The only ASEAN member state which is a party to this Convention is Vietnam, which acceded on 19 May 2014.

UNECE Water Convention 1992

The UNECE Water Convention, unlike the UN Watercourses Convention, covers both surface water and groundwater. When it was first adopted in 1992, it was restricted to countries sharing transboundary waters in the region of the United Nations Economic Commission for Europe. However, in 2016, the Convention was open for signature by all UN member states.

Part I of the convention requires all parties - not just the riparian states to a given watercourse or lake - to prevent, control, and reduce harm to waterbodies.

The Convention also requires EIAs to be carried out as part of riparian state parties' commitment to bilateral and multilateral co-operation.

Developed country parties are also to provide technology transfer and technical assistance to developing countries would need to be sharing a river course or lake with a developed countries to prevent, control, and reduce harms to watercourses and lakes.

No ASEAN member state is party to date.