



THE APCEL GUIDE TO SINGAPORE AND ASEAN ENVIRONMENTAL LAW

CLIMATE CHANGE

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 Mandy Meng FANG, APCEL Guide to Singapore and ASEAN Environmental Law: Climate Change (APCEL, Singapore, 2019).

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Date of Publication: 30/07/2019

ANNOTATED BIBLIOGRAPHY:

CLIMATE CHANGE LAWS AND POLICY OF SINGAPORE AND THE ASEAN REGION

i. Introduction

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

ii. COMMONLY USED ACRONYMS

AFOLU Agriculture, Forestry, and other Land Use
APCEL Asia Pacific Centre for Environmental Law
ASCC ASEAN Socio-Cultural Community
BAU Business-as-usual
CBI City Biodiversity Index
COP23 23rd Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change
ECA Energy Conservation Act
GDP Gross Domestic Product
IMCSD Inter-Ministerial Committee on Sustainable Development
INDCs Intended Nationally Determined Contributions
NCCS National Climate Change Secretariat
NDCs Nationally Determined Contributions
NWA National Water Agency
SCCB Socio-Cultural Community Blueprint
UNSDGs United Nations Sustainable Development Goals
SSB Sustainable Singapore Blueprint
UN United Nations
UNFCCC United Nations Framework Convention on Climate Change

iii. SINGAPORE: GOVERNMENT POLICIES AND PUBLICATIONS

Ministry of the Environment and Water Resources, *Singapore's National Climate Change Strategy* (Singapore: Ministry of the Environment and Water Resources, 2008), online: https://www.elaw.org/system/files/Singapore_Full_Version.pdf.

The National Climate Change Strategy (NCCS) represents Singapore's comprehensive response to climate change. It sets out how Singapore will address the various aspects of climate change, by better understanding our vulnerabilities to climate change, identifying and assessing adaptation measures required for climate change, and mitigating greenhouse

gas emissions. It also identifies improving energy efficiency as Singapore's key strategy for mitigating greenhouse gas emissions. Energy efficiency will not only reduce greenhouse gas emissions, but also reduce the cost of living and doing business as well as enhance energy security. The government will therefore actively support energy users in the industry, buildings, households and transport sectors to be more energy efficient, through regulations to provide consumer information and deploy appropriate technologies, and incentives to encourage take-up among individuals and businesses. The NCCS will be periodically reviewed, to be in line with advances in technology, further evidence on climate change science and international commitment to climate change.

National Climate Change Secretariat, *A Lively and Livable Singapore: Strategies for Sustainable Growth* (Singapore: Ministry of the Environment and Water Resources & Ministry of National Development, 2009), online: <https://www.nccs.gov.sg/docs/default-source/publications/a-lively-and-liveable-singapore-strategies-for-sustainable-growth.pdf>.

The Inter-Ministerial Committee on Sustainable Development (IMCSD) was set up by Prime Minister Lee Hsien Loong in January 2008 to develop a national framework and key strategies for Singapore's sustainable development until 2030. The IMCSD launched the Sustainable Singapore Blueprint in April 2009. It sets higher targets than the SGP 2012 (2006 edition). Some of the key recommendations made in Chapter 6 of the SSB 2009, which is entitled "PLAY – A City of Gardens and Water", relate to the nature conservation targets under the SGP 2012 (2006 edition). The SSB 2009 recommends substantially increasing green park space and sky-rise greenery, as well as tripling the lengths of park connectors. In respect of biodiversity conservation, the IMCSD recommended implementing a National Biodiversity Strategy and Action Plan to research, document, and conserve biodiversity in Singapore, in addition to developing a City Biodiversity Index (CBI) with international partners to promote biodiversity conservation efforts among cities worldwide. The SSB also reiterates that Singapore will keep the Nature Areas designated in the Special & Detailed Controls Plans of URA's Master Plan 2008 for as long as possible.

National Climate Change Secretariat, *Climate Change & Singapore: Challenges. Opportunities. Partnerships* (Singapore: National Climate Change Secretariat Prime Minister's Office, 2012).

This document outlines current thinking about climate change and its implications for Singapore. It highlights the initiatives and strategies that should be prepared for the uncertainties and challenges that climate change poses. In addition, this document states that Singapore needs to seize opportunities to transition to a lower emission economy.

National Climate Change Secretariat, *Take Action Today, For A Carbon-Efficient Singapore* (Singapore: National Climate Change Secretariat Prime Minister's Office, 2016).

The Climate Action Plan is explained in two documents. The first document entitled "Take Action Today: For A Carbon-efficient Singapore" details ways in which Singapore will reduce its greenhouse gas emissions while developing initiatives to tackle the effects of climate change. The Climate Action Plan sets out four strategies to achieve the goal of building a carbon-efficient Singapore and meet the 2030 climate pledge as follows: (i) improving energy efficiency; (ii) reducing carbon emissions from power generation; (iii) developing and demonstrating cutting-edge low-carbon technologies; and (iv) taking collective action from government agencies, individuals, businesses, and the community. Improving energy efficiency will continue to be Singapore's key strategy to reduce greenhouse gas emissions, and plans have been made to expand the scope of current initiatives across all sectors, namely the power generation, industry, buildings, transport, household, waste and water sectors. Carbon mitigation efforts, together with steps taken to adapt to climate change will ensure that Singapore remains a sustainable, vibrant and livable city for current and future generations.

National Climate Change Secretariat, *Singapore's National Climate Change Strategy* (National Climate Change Secretariat Prime Minister's Office, 2012).

The National Climate Change Strategy 2012, which was produced by the National Climate Change Secretariat, replaces a previous version published in 2008. It provides a comprehensive overview of Singapore's response to climate change. It reiterates the country's pledge, first made in 2009, to reduce emissions by 16% below 2020 business-as-usual levels if there is a legally-binding global agreement in which all countries implement their commitments in good faith. It also reiterates the country's commitment to a multilateral approach to dealing with climate change, and argues that a global approach will be more conducive towards Singapore's long-term growth and development. It highlights Singapore's position on a global climate agreement as one that supports the United Nations (UN) model of common but differentiated responsibilities and respective capabilities. The strategy outlines three key principles that guide Singapore's response to climate change: (1) long-term and integrated planning; (2) pragmatically and economically sound measures; and (3) developing innovative solutions for Singapore and global markets. It also identifies four main approaches that Singapore will follow in addressing climate change: (1) Reducing carbon emissions in all sectors; (2) Being ready to adapt to the effects of climate change; (3) Harnessing green growth opportunities; (4) Forging partnerships with international and regional bodies.

National Climate Change Secretariat, *A Climate-Resilient Singapore: For A Sustainable Future* (Singapore: Ministry of the Environment and Water Resources & Ministry of National Development, 2016).

As one of the two publications on Singapore's mitigation and adaptation plans, this report explains how Singapore may be affected by climate change and what strategy Singapore should take to prepare for it. It analyzes climate change-related risks from different perspectives, namely, coastal protection, water resources and drainage, biodiversity and greenery, public health and food security and network infrastructure, which need to be protected via the implementation of adaptation measures. It includes a wide range of recommendations to the entire community, including individuals, businesses.

Secretary of the Ministry of Trade and Industry, *National Energy Policy Report – Energy for Growth* (Singapore: Ministry of Trade and Industry, 2007), online: <https://www.mti.gov.sg/ResearchRoom/Documents/app.mti.gov.sg/data/pages/885/doc/NEPR%202007.pdf>.

This report lays out a national energy policy framework which strives to maintain a balance between the policy objectives of economic competitiveness, energy security and environmental sustainability. The focus is on six key strategies: (1) promote competitive market; (2) diversify energy supplies; (3) improve energy efficiency; (4) build energy industry and invest in energy R&D; (5) step up international cooperation and (6) develop whole-of-government approach. It highlights the need to improve energy efficiency and the development of clean energy technologies and solutions, which can contribute to overcoming the challenge of climate change.

National Climate Change Secretariat, *Our Home Our Environment Our Future: Sustainable Singapore Blueprint 2015* (Singapore: Ministry of the Environment and Water Resources & Ministry of National Development, 2014), available at: <https://www.nccs.gov.sg/docs/default-source/publications/sustainable-singapore-blueprint-2015.pdf>.

The Sustainable Singapore Blueprint (SSB) 2015 was drafted in response to current global challenges, namely, climate change, globalization, and the increasing pressures on resources which are being exerted by global population and economic growth. It outlines Singapore's national vision and plans for A Livable and Endearing Home; A Vibrant and Sustainable City; An Active and Gracious Community. Chapter 3, which is entitled A Livable and Endearing Home, discusses the efforts by Parks and PUB, Singapore's National Water Agency (NAW) to bring more green and blue spaces to households through various initiatives, such as creating new parks (see box story on the new Jurong Lake Gardens), the ABC Waters Programme, and the Nature Ways programme. Chapter

5, which is entitled An Active and Gracious Community, highlights volunteerism in relation to Pulau Ubin and the Nature Areas.

Ministry of the Environment and Water Resources & Ministry of National Development, *Sustainable Singapore Blueprint 2015 (2016 version)* (Singapore: Ministry of Environment and Water Resources & Ministry of National Development, 2016), online: <https://www.mewr.gov.sg/docs/default-source/module/ssb-publications/41f1d882-73f6-4a4a964b-6c67091a0fe2.pdf>. The 2016 version of the SSB 2015 features several case studies in relation to the vision for “A Livable and Endearing Home, A Vibrant and Sustainable City, An Active and Gracious Community”. The section on A Livable and Endearing Home includes case studies of the Jurong Lake Gardens, and the Singapore River and the ABC Waters Programme while the section on An Active and Gracious Community discusses the Ubin Project and the Community in Bloom project. Some of Singapore’s global efforts to respond to complex environmental challenges were also highlighted.

IV. SINGAPORE: SECONDARY MATERIALS ON CLIMATE CHANGE LAW AND POLICY

Hamilton-Hart, Natasha, “Singapore’s Climate Change Policy: The Limits of Learning” (2006) 28 *Contemporary Southeast Asia: A Journal of International and Strategic Affairs* 363, online: <http://muse.jhu.edu.libproxy1.nus.edu.sg/article/211094>.

This article explores Singapore’s changing policy on addressing climate change, both in terms of its position regarding international cooperation and in terms of its domestic energy policy. The reasons behind Singapore’s shift in climate change policy are worth exploring because they shed light on the prospects for broadening and strengthening the global climate change regime. The article argues that Singapore’s accession to the Kyoto Protocol has been facilitated by a reassessment of economic costs and benefits rather than deep socialization or normative change in Singapore’s climate change policy. Singapore has gradually learnt the language associated with global environmental responsibility, which has served to obscure the basic policy conflicts involved.

Putra, Nur Azha, “Singapore’s Policy Responses to Climate Change: Towards A Sustainable Future” in Putra, Nur Azha and Eulalia Han, eds, *Governments’ Responses to Climate Change: Selected Examples from Asia Pacific* (Singapore: Springer, 2014).

This chapter examines the sustainability of Singapore’s climate change policies. Singapore’s climate change strategy is largely premised on economics and market-based solutions, and it appears to be comprehensive because it is fully supported by a ‘whole-

of-government' approach. It questions whether the state's holistic approach would be sustainable if the same rigor and political will are not demonstrated at the grassroots level. It argues that while the state has demonstrated its political will to reduce its carbon footprint, adapt to the effects of climate change and mitigate the country's long-term vulnerabilities, the nation as a whole needs to build upon this work towards a more profound solution by nurturing a sustainable Singaporean society. To achieve such a society, the paper recommends the institutionalization of climate change in public schools through the national curriculum, involvement of members of the public in the nation's environmental decision-making process, empowering CSOs and NGOs as government watchdogs and whistleblowers in case the public and private sectors do not adopt ecofriendly practices and, finally, provision of a legal framework for the prosecution of private sector organizations that violate environmental laws within and outside Singapore.

Bhullar, Lovleen, "Climate Change Adaptation and Water Policy: Lessons from Singapore" (2013) 21 Sustainable Development 152, online: <https://onlinelibrary-wiley-com.easyaccess1.lib.cuhk.edu.hk/doi/full/10.1002/sd.1546>.

This article evaluates the contribution of Singapore's water policies and practices to climate change adaptation, and examines whether they can support the development of adaptation strategies in the water sector for other similarly situated cities in vulnerable countries. It argues for deploying pre-existing water technologies and operational measures and committing to the development of further adaptation measures, as the need arises.

Low, Mellissa, "2018 As Singapore's Year of Climate Action" (2019) Energy Studies Institute Policy Brief (Singapore: Energy Studies Institute), online: <http://esi.nus.edu.sg/docs/default-source/esi-policy-briefs/2018-as-singapore's-year-of-climate-action.pdf?sfvrsn=2>.

This policy brief provides an analysis of recent policies changes and what 2018 as the Year of Climate Action will mean for Singapore. Much of the responsibility in 2018 will be on local companies to step up and adhere to the enhanced regulations under Singapore's newly adopted policies under Energy Conservation Act (ECA) and Carbon Pricing Bill. It provides a good opportunity for Singapore to participate in external carbon markets in future. In addition, this brief argues that Singapore also needs to look to deepen ASEAN cooperation to foster a resilient and sustainable energy community among member states and with Dialogue Partners.

VI. ASEAN: OFFICIAL INSTRUMENTS AND PUBLICATIONS

ASEAN Secretariat, *ASEAN Socio-Cultural Community Blueprint* (Jakarta: ASEAN Secretariat, 2009), online: <http://www.asean.org/wp-content/uploads/images/archive/5187-19.pdf>.

In 2009, the Heads of State or Government of ASEAN Member States pledged to achieve the ASEAN Community by 2015. In this connection, they agreed that the ASEAN Political-Security Community Blueprint, the ASEAN Economic Community Blueprint, the ASEAN Socio-Cultural Community Blueprint (ASCC Blueprint) and the Initiative for ASEAN Integration Work Plan constituted the Roadmap for an ASEAN Community (2009–2015). Environmental issues feature most prominently in the ASCC Blueprint. The fourth of seven ideal Characteristics covered in the ASCC Blueprint is entitled “Ensuring Environmental Sustainability”. It lists ten strategic objectives, of which the following are related to biodiversity and nature conservation: “Promoting the Sustainable Use of Coastal and Marine Environment”, “Promoting Sustainable Management of Natural Resources and Biodiversity”, “Responding to Climate Change and Addressing Its Impacts”, and “Promoting Sustainable Forest Management”.

ASEAN Secretariat, *2015 ASEAN Socio-Cultural Community (ASCC) Scorecard* (Jakarta: ASEAN Secretariat, 2016), online: <http://www.asean.org/storage/2016/04/9.-March-2016-2015-ASCCScorecard-1.pdf>.

The ASCC Scorecard Report was developed by the ASEAN Secretariat and the S. Rajaratnam School of International Studies. (The background to this report can be traced to a pledge made by the Heads of State or Government of ASEAN Member States in 2009 to achieve the ASEAN Community by 2015. See ASEAN Secretariat, “ASEAN Socio-Cultural Community Blueprint”, cited above.) It is a scorecard on how far the goals, strategic objectives and targets in respect of socio-cultural pillar of the ASEAN Community have been achieved. Although it is a self-assessment tool, it is rooted in quantitative and qualitative indicators, data, and information. It generally corresponds to the Characteristics covered in the ASCC Blueprint. Under the fourth Characteristic entitled “Ensuring Environmental Sustainability”, there are updates under two strategic objectives that are relevant to biodiversity and nature conservation, namely, “Promoting the Sustainable Use of Coastal and Marine Environment” and “Promoting Sustainable Management of Natural Resources and Biodiversity”.

ASEAN Secretariat, *ASEAN Socio-Cultural Community Blueprint 2025* (Jakarta: ASEAN Secretariat, 2016), online: <http://www.asean.org/wp-content/uploads/2012/05/8.-March-2016-ASCCBlueprint-2025.pdf>.

This is the next edition of the ASCC Blueprint. It builds on the earlier ASCC Blueprint to create an ASEAN Community that engages and benefit the people, and is Inclusive, Sustainable, Resilient, and Dynamic. Conservation and sustainable management of

biodiversity and natural resources is listed as one of the key result areas under the “Sustainable” Characteristic. The corresponding strategic measures include strengthening regional cooperation to halt biodiversity loss and to promote sustainable management of terrestrial ecosystems, as well as supporting the full implementation of the Strategic Plan for Biodiversity 2011–2020 and its Aichi Biodiversity Targets.

ASEAN Joint Statement on Climate Change to the 23rd Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP23) (The Philippines, 13 November 2017), online: http://environment.asean.org/wp-content/uploads/2017/12/ADOPTION_ASEAN-JSCC-COP23-Adopted-by-31st-Summit.pdf.

The joint statement was issued on the occasion of the 31st ASEAN Summit. It reaffirms the commitment to the UNFCCC principles and provisions, and the 2030 Agenda for Sustainable Development and national development priorities. It underscores the adequate, predictable, transparent and needs-based technology development and transfer, capacity building and financial support in accordance with longstanding commitments by developed country Parties, as enhanced under the Paris Agreement, are needed to further scale up in a balanced manner, adaptation and mitigation efforts, and enhance awareness in the ASEAN region to contribute to global efforts led by developed country Parties to hold the average temperature rise to well below 2 °C and pursue efforts to limit it to 1.5 °C above pre-industrial level by the end of the century;

ASEAN Joint Statement on Climate Change to the 22nd Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP22) (Lao People’s Democratic Republic, 6 September 2016), online: <http://environment.asean.org/wp-content/uploads/2016/10/ASEAN-Joint-Statement-on-Climate-Change-28th-and-29th-AS-Final.pdf>.

The joint statement was issued on the occasion of the 28th and 29th ASEAN Summits in Vientiane, Lao PDR. It reaffirms the commitment to the UNFCCC principles and provisions and Sustainable Development Goals (SDGs). It recognizes the importance of enhanced pre-2020 ambition to ramp up mitigation actions and provide means of implementation that will underpin effective implementation of the Paris Agreement and to serve as lessons learnt for achieving Post 2020 actions. It highlights that adequate, predictable, and needs-based technology development and transfer, capacity building and financial support are needed to further scale up adaptation and mitigation efforts, and enhance awareness in the ASEAN region.

ASEAN Joint Statement on Climate Change 2014 (Republic of the Union of Myanmar, 12 November 2014), online: <http://environment.asean.org/wp-content/uploads/2015/06/ASEAN-Joint-Statement-on-Climate-Change-2014.pdf>.

The joint statement was issued on the occasion of the 25th ASEAN Summit. It reiterates the commitment to the UNFCCC principles and provisions. It also reaffirms the UNFCCC's core principle of common but differentiated responsibilities and that developed country Parties should take the lead in combating climate change and the adverse effects thereof in accordance with this principle, while agreeing that renewed efforts by all Parties to the UNFCCC are required to ensure mitigation goals are met.

ASEAN Ministerial Meeting, *ASEAN Action Plan on Joint Response to Climate Change* (2012), online: <http://environment.asean.org/wp-content/uploads/2015/06/ANNEX-8-Lead-Countries-for-ASEAN-Action-Plan-on-Joint-Response-to-Climate-Change-27-March-2013.pdf>.

This plan was adopted by the 12th ASEAN Ministerial Meeting on Environment held on 26 September 2012, to implement the ASEAN Leaders' Statement on Joint Response to Climate Change issued at the 16th ASEAN Summit in 2010. This plan covers climate change adaptation, climate change mitigation, finance and investment, technology transfer, capacity building and regional cooperation. A Partners Consultation Meeting was held on 26 March 2013 in Siem Reap, Cambodia, to explore potential collaboration with dialogue partners and regional/international organizations to implement the Action Plan.

ASEAN Declaration on ASEAN Post-2015 Environmental Sustainability and Climate Change Agenda (Malaysia, 21 November 2015), online: http://www.asean.org/storage/images/2015/November/27th-summit/ASCC_documents/Declaration%20on%20Post%202015%20Environmental%20Sustainability%20and%20Climate%20Change%20AgendaAdopted.pdf.

This declaration was adopted on the occasion of the 27th ASEAN Summit. It recognizes the growing need to address global and transboundary environmental concerns and ASEAN's obligations to its people in ensuring environmental sustainability for our region and to achieve sustainable development. It also affirms the commitment to support global efforts to address climate change at the UNFCCC.

ASEAN Leaders' Statement on Joint Response to Climate Change (Vietnam, 9 April 2010), online: http://asean.org/?static_post=asean-leaders-statement-on-joint-response-to-climate-change.

This statement was adopted on the occasion of the 16th ASEAN Summit by the Heads of State/Government of Brunei Darussalam, the Kingdom of Cambodia, the Republic of

Indonesia, the Lao People's Democratic Republic, Malaysia, the Union of Myanmar, the Republic of the Philippines, the Republic of Singapore, the Kingdom of Thailand and the Socialist Republic of Viet Nam, Member States of ASEAN. It underscores the need to find a global solution to the challenge of climate change at COP 16/CMP 6 and build an ASEAN Community resilient on climate change.

ASEAN Joint Statement on Climate Change to the 15th Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change and the 5th Session of the Conference of Parties serving as the Meeting of Parties to the Kyoto Protocol (Thailand, 24 October 2009), online: http://asean.org/?static_post=asean-joint-statement-on-climate-change-to-the-15th-session-of-the-conference-of-the-parties-to-the-united-nations-framework-convention-on-climate-change-and-the-5th-session-of-the-conference-of-parti.

This statement was adopted on the occasion of the 15th ASEAN Summit. It reaffirms the need to protect the climate system for the benefit of present and future generations of humankind on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. It also covers several points in relation to addressing climate change, including the aim to stabilize atmospheric greenhouse gas concentrations at a level that would prevent dangerous anthropogenic interference with the climate system and within a time-frame sufficient to allow ecosystems to adapt naturally to climate change; work closely to ensure that the agreed outcome of COP15 should incorporate long-term cooperative actions to address climate change in accordance with the principles and provisions of the Convention and the Bali Action Plan; continue actively contributing towards a successful outcome of the 15th session of the Conference of the Parties to the UNFCCC and the 5th session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol.

Singapore Resolution on Environmental Sustainability and Climate Change (Singapore, 29 October 2009), online: <http://environment.asean.org/wp-content/uploads/2015/06/Singapore-AMME-Resolution.pdf>.

This resolution recognizes the need to address ASEAN's environmental issues, in particular environmental sustainability and climate change in order to enhance the environment and prosperity of our people. It highlights the need of cooperation with international partners and the global community in understanding and adapting to the adverse impacts of climate change. It commits to engage constructively in the negotiating process under UNFCCC to ensure an agreed and fair outcome in Copenhagen.

VII. ASEAN: SECONDARY MATERIALS ON CLIMATE CHANGE LAW AND POLICY

Koh, Kheng Lian et al, eds, *Adaptation to Climate Change: ASEAN and Comparative Experiences* (Singapore: World Scientific Publishing Co. Pte. Ltd., 2016).

This book presents a dynamic and comprehensive collection of works from legal scholars around the world that delves into a relatively new frontier on legal aspects of climate change adaptation with focus on the ASEAN region, both at the regional level as well as at the national level in some ASEAN countries — such as Malaysia, Philippines, and Thailand. Other countries not within ASEAN are also represented, such as Bangladesh, People's Republic of China, Sri Lanka, and the Republic of Taiwan. In doing so, it surveys one of the most important issues confronting developing countries today, and the challenges to building resilient societies.

Koh, Kheng Lian, Lin Heng Lye and Jolene Lin, eds, *Crucial Issues in Climate Change and the Kyoto Protocol: Asia and the World* (Singapore: World Scientific Publishing Co. Pte. Ltd., 2009).

This book focuses on responses to climate change in the world's most populous region and provides the most comprehensive insight to the climate change discourse within Asia to date. It draws on the diverse disciplines and experience of legal practitioners, climate change consultants, government officials and academics. Individual chapters address issues such as how the various Asian countries — highly disparate in their cultures, socio-economic conditions and political systems — are responding to climate change, the challenges of mitigating and adapting to climate change, and the effective implementation of the Kyoto Protocol in Asia.

Low, Mellissa and Allan Loi, “Assessment of ASEAN BAU-Emissions Reduction Targets: How Do They Measure Up?” (2014) 61 *Energy Procedia* 488, online: https://ac-els-cdn-com.easyaccess1.lib.cuhk.edu.hk/S1876610214029853/1-s2.0-S1876610214029853-main.pdf?_tid=f8f828c3-42fb-49be-a8a4-964c16b2d56a&acdnat=1535468639_f3de295d1d5d53497d18dde3a290fecd.

This paper analyses the contributions made by ASEAN member States in setting their business-as-usual (BAU) scenarios and emissions intensity reduction targets, identifying the policies, legislations, decisions and assumptions, which underpin them. Policy implications will be identified based on a shared desire to: 1) enhance action plans in specific sectors, 2) prepare appropriate energy efficiency policies, 3) shift from fossil-based energy to non-fossil energy, and 4) rationalize energy pricing mechanisms. The paper also discusses the importance of using accurate energy consumption statistics in determining mitigation targets in ASEAN.

Venuti, Stephanie, “Strengthening Environmental Rights and Protections within Development Law and Policy: A Vehicle for Mainstreaming Climate Action in Southeast Asia” (2015) 18 Asia Pacific Journal of Environmental Law 147, online: <file:///C:/Users/lawfm/Downloads/StephanieVenutiStrengthen.pdf>.

This article examines an environmental rights justification for the reform of development law and policy in mainstreaming positive climate change action. This is based on the argument that development policy and law already imports social and environmental impacts considerations and offers a medium through which such environmental rights protections can be transported. It refers to Myanmar’s draft of environmental impact assessment procedure as an example in this regard. This article builds on the current trends in climate change law-making discourse in Southeast Asia region and argues for the reconstruction of established regulatory frameworks to incorporate a climate change agenda.

Sahraie, Mélodie, “The ASEAN Actions on Climate Change: Recognizing or Pro-Actively Addressing the Issue?” (2011) Sustainable Development Law on Climate Change Working Paper Series, online: http://cisdl.org/public/docs/news/5_Melodie_Sahraie_2.pdf.

This paper questions the “ASEAN Way”, which is the “ASEAN Way”, which is characterized by consensus-based decision making, the principle of non-intervention and the sanctity of state sovereignty, either as a systemic drawback or as an original, yet creative mean to trigger regional cooperation. Therefore, ASEAN has to continue to take the lead by making more ambitious commitments to address climate change not constantly based on consensus, but rather based on the emergency of such an immediate issue.

Salamanca, Albert and Nguyen, Ha, Climate Change Adaptation Readiness in the ASEAN Countries (2016) SEI Discussion Brief (Sweden: Stockholm Environment Institute)

This brief proposes the concept of “adaptation readiness” to provide a framework to describe where countries are with regard to formulating and achieving their goals of adapting to the impacts of climate change and implementing key policy priorities. The concept includes political leadership; usable science and data to inform decision-making; institutional structures for adaptation planning, stakeholder involvement and implementation; finance for planning, activities and evaluation, and public support. It shows that readiness results, in a large part, from how governments perceive their country’s vulnerability, and the priority given to responses by different actors. It also emphasizes the need to carefully document what each country is doing, track progress over time, and provide opportunities to evaluate experiences and draw and share lessons.

Koh, Kheng Lian and Lovleen Bhullar, “Governance on Adaptation to Climate Change in the ASEAN Region” (2011) 1 Carbon and Climate Law Review 82, online: <https://search-proquest-com.libproxy1.nus.edu.sg/docview/893749506/fulltextPDF/1E61555F89EA4A52PQ/1?accountid=13876>.

This article examines and analyzes the legal and policy framework governing climate change adaptation in Southeast Asia, particularly at the sub-regional level. Unlike climate change mitigation, critical climate change adaptation decisions tend to emerge and remain more visible at the local level. It is ultimately the national, regional and local governments that initiate appropriate measures and provide the necessary support system. There is no one-size-fits-all adaptation strategy, and approaches should be based on local resources and constraints. Merely developing adaptation policies is not enough, it is therefore important to monitor their implementation. ASEAN’s restructured governance architecture and its newly established working groups hold the promise for a more effective governance framework to meet the challenges.

Koh, Kheng Lian and Lovleen Bhullar, “ASEAN: The Singapore Declaration on Climate Change, Energy and Environment, 2007 and beyond” in Werner Scholtz and Jonathan Verschuuren, eds, *Regional Environmental law: Transregional Comparative Lessons in Pursuit of Sustainable Development* (Cheltenham: Edward Elgar, 2015)

This chapter examines the contribution of ASEAN’s climate change agenda to the promotion of sustainable development in the region with an emphasis on the Singapore Declaration. The chapter also considers the extent to which ASEAN’s climate change agenda has developed since 2007, as well as its future potential. For this purpose, hard law instruments as well as a number of declarations, joint statements and resolutions issued at the annual ASEAN summits, the East Asian Summit and meetings of ASEAN ministers (such as the Environment Ministers and the Energy Ministers etc.), or by senior officials (such as ASEAN Senior Officials on the Environment), expert groups, etc are discussed in this chapter.

Letchumana, Raman, “Climate Change: Is Southeast Asia Up to the Challenge? Is there an ASEAN Policy on Climate Change?” (2010) IDEAS Report-Special Reports (UK: London School of Economics and Political Science), online: <http://eprints.lse.ac.uk/43572/1/Climate%20change%20is%20there%20an%20ASEAN%20policy%28lsero%29.pdf>.

This report states that ASEAN is addressing climate change, not just through a policy on climate change, but through the framework of ASEAN community building, with strategies and actions rooted in the various development and sectoral areas. Responses to climate change should not be viewed in a narrow perspective, but every sector has a

contribution to make to address climate change. ASEAN is committed to pursuing this broad based approach, to play its role in taking voluntary and appropriate mitigation actions, and adaptation measures enabled by technology transfer, provision of concessionary financial assistance, and capacity building to address climate change issues in a proactive and responsible manner.

Fulton, Lew et al., “Climate Change Mitigation Pathways for Southeast Asia: CO2 Emissions Reduction Policies for the Energy and Transport Sectors” (2017) 9 Sustainability 1160, online: <https://search-proquest-com.libproxy1.nus.edu.sg/docview/1944319425?pq-origsite=summon>.

This paper reviews the Nationally Determined Contribution (NDCs) plans of six Association of Southeast Asian Nations countries (Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam) and compares their current and projected future CO2 levels across sectors, and their stated targets in the context of their economic and demographic situations. This comparison reveals wide variations in the types of targets, with the “ambition” level changing as the perspective changes from total CO2 to CO2/capita and per unit gross domestic product (GDP). The national plans as stated in NDCs include many types of policies, however, few are quantified and no attempts are made to score individual or groups of policies for their likelihood in achieving stated targets. Therefore, more analysis is needed to better understand the possible impacts of current policies and plans on CO2 emissions, and whether current plans are adequate to hit targets. Considerations on better aligning targets are also provided.

Ardiansyah, Fitriani, “Climate Change and Energy Security Post-Cancun: The Indonesia Perspective” in Putra, Nur Azha and Eulalia Han, eds, *Governments’ Responses to Climate Change: Selected Examples From Asia Pacific* (Singapore: Springer, 2014).

This chapter examines the climate-energy nexus in Indonesia, taking into account the various relevant policies, political contexts and institutions that have influenced the climate change and energy discourses in the country. It critically reviews policy efforts to integrate climate change objectives into energy policy, and discusses policy impediments and implementation gaps that prevent the country from smoothly integrating its climate change and energy security objectives, with the development of geothermal energy in Indonesia taken as a case study.

Fujimori, Shinichiro, “An Assessment of Indonesia’s Intended Nationally Determined Contributions” in Fujimori, Shinichiro, Mikiko Kainuma and Toshihiko Masui, eds, *Post-2020 Climate Action* (Singapore: Springer, 2017).

This chapter provides an overview of Indonesia's current economy, energy sector, land use, and climate policies. It assesses Indonesia's Intended Nationally Determined Contributions (INDC) by using an Asia-Pacific Integrated Model/Computable General Equilibrium model coupled with an agriculture, forestry, and other land use (AFOLU) model. The model shows that the emission reduction target of INDC can be achieved at low economic cost and that the mitigation actions required would not harm economic development. While emissions from land use and land use change are high nowadays, the energy sector is expected to grow rapidly and become more important in the future. Therefore, climate-related policymakers should focus equally on land use and the energy sector in the future.

Overland, Indra, ed, *Impact of Climate Change on ASEAN International Affairs: Risk and Opportunity Multiplier* (2017) Norwegian Institute of International Affairs and Myanmar Institute of International and Strategic Studies, online: https://www.researchgate.net/publication/320622312_Impact_of_Climate_Change_on_ASEAN_International_Affairs_Risk_and_Opportunity_Multiplier.

This study examines the implications of climate change for international affairs in Southeast Asia and for ASEAN as a multilateral organization. Climate change and efforts to mitigate climate change give rise to major risks as well as opportunities in international affairs. The overarching purpose of this study is to support ASEAN and its member states in this area. Climate change may impact on international affairs among the ASEAN countries at several levels. Firstly, changing climatic conditions may affect interstate relations through humanitarian crises, migration, and/or the need for greater imports of vital goods. Secondly, reducing greenhouse gas emissions requires international coordination and cooperation. Thirdly, the global energy transition driven by climate policy may lead to an altered geopolitical situation in the world, including ASEAN. It provides recommendations for ASEAN: (1) follow up the nationally determined contributions; (2) build competence and awareness; (3) promote regional energy integration; (4) promote cooperation on other transboundary climate issues.

Limmechokchai, Bundit, "Asian INDC Assessments: The Case of Thailand" in Fujimori, Shinichiro, Mikiko Kainuma and Toshihiko Masui, eds, *Post-2020 Climate Action* (Singapore: Springer, 2017).

This chapter assesses the impacts of GHG emission reduction targets in Thailand's INDC. Four scenarios are established by the given GHG emission constraints and the renewable power generation targets. Results show that, under the Power Development Plan in 2015, the intended nationally determined contribution (INDC) target is achievable. As a result, macroeconomic loss is low in low reduction target, but it will be high in the high reduction target. In addition, it needs more renewable energy push to realize stringent climate policy. Thus, the availability of land for deploying the renewable energy technologies such as solar, wind, and biomass needs to be evaluated to meet higher GHG emission levels.

Furthermore, the stringent GHG emission levels also induce the reduction of other air pollutants. Finally, the result of this study has been used in the design of roadmap for GHG reduction targets in 2030, and Thailand has more confidence on the achievement of the Paris Agreement.

