NMUN•NY

Economic and Social Commission for Asia and the Pacific
Background Guide 2019

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Dear Delegates,

Welcome to the 2019 National Model United Nations New York Conference (NMUN•NY)! We are pleased to welcome you to the Economic and Social Commission for Asia and the Pacific (ESCAP). This year's staff are: Directors Mihai Gheorghe Cioc (Conference A) and Zachary Parker (Conference B), and Assistant Directors Ian James A. Lee (Conference A) and Ryan Shepard (Conference B). Mihai is currently completing his Bachelor of Laws (LL.B) at the University of Montreal. Zachary holds a bachelor's degree in Supply Chain Management and works as a Supply Chain Planner for a major international machine and equipment distributor. Ian recently completed a BA at Concordia University of Edmonton and is currently working and studying in Suzhou, China. Ryan recently graduated with his BS in Urban and Regional Planning in June 2018 and is working as an environmental planning consultant for local governments in Southern California.

The topics under discussion for the Economic and Social Commission for Asia and the Pacific are:

1. Transitioning to Sustainable Energy: Meeting Growing Energy Demands
2. Information and Communications Technology for Disaster Risk Reduction
3. Promoting Climate Resilience

As one of the five regional development commissions of the Economic and Social Council (ECOSOC), ESCAP is the largest United Nations (UN) serving body in Asia and the Pacific region. ESCAP promotes economic and technical cooperation among developing Member States, highlighting the need for interstate information exchange and concerted action among all Member States of the region. The Commission acts as an intergovernmental forum that allows Members States to discuss and debate pressing issues at the national, regional, and international level, to share knowledge and best-practices, and to maximize opportunities through regional integration and cooperation.

This Background Guide serves as an introduction to the topics for this committee. However, it is not intended to replace individual research. We encourage you to explore your Member State's policies in depth and use the Annotated Bibliography and Bibliography to further your knowledge on these topics. In preparation for the Conference, each delegation will submit a Position Paper by 11:59 p.m. (Eastern) on 1 March 2019 in accordance with the guidelines in the NMUN Position Paper Guide.

Two resources, available to download from the NMUN website, that serve as essential instruments in preparing for the Conference and as a reference during committee sessions are the:
1. NMUN Delegate Preparation Guide - explains each step in the delegate process, from pre-Conference research to the committee debate and resolution drafting processes. Please take note of the information on plagiarism, and the prohibition on pre-written working papers and resolutions. Delegates should not start discussion on the topics with other members of their committee until the first committee session.
2. NMUN Rules of Procedure - include the long and short form of the rules, as well as an explanatory narrative and example script of the flow of procedure.

In addition, please review the mandatory NMUN Conduct Expectations on the NMUN website. They include the Conference dress code and other expectations of all attendees. We want to emphasize that any instances of sexual harassment or discrimination based on race, gender, sexual orientation, national origin, religion, age, or disability will not be tolerated. If you have any questions concerning your preparation for the committee or the Conference itself, please contact the Under-Secretaries-General for the Economic and Social Council Department, Estefani Morales (Conference A) and Stéphanie Toschi (Conference B), at usg.ecosoc@nmun.org.

We wish you all the best in your preparations and look forward to seeing you at the Conference!

Conference A

Mihai Gheorghe Cioc, Director
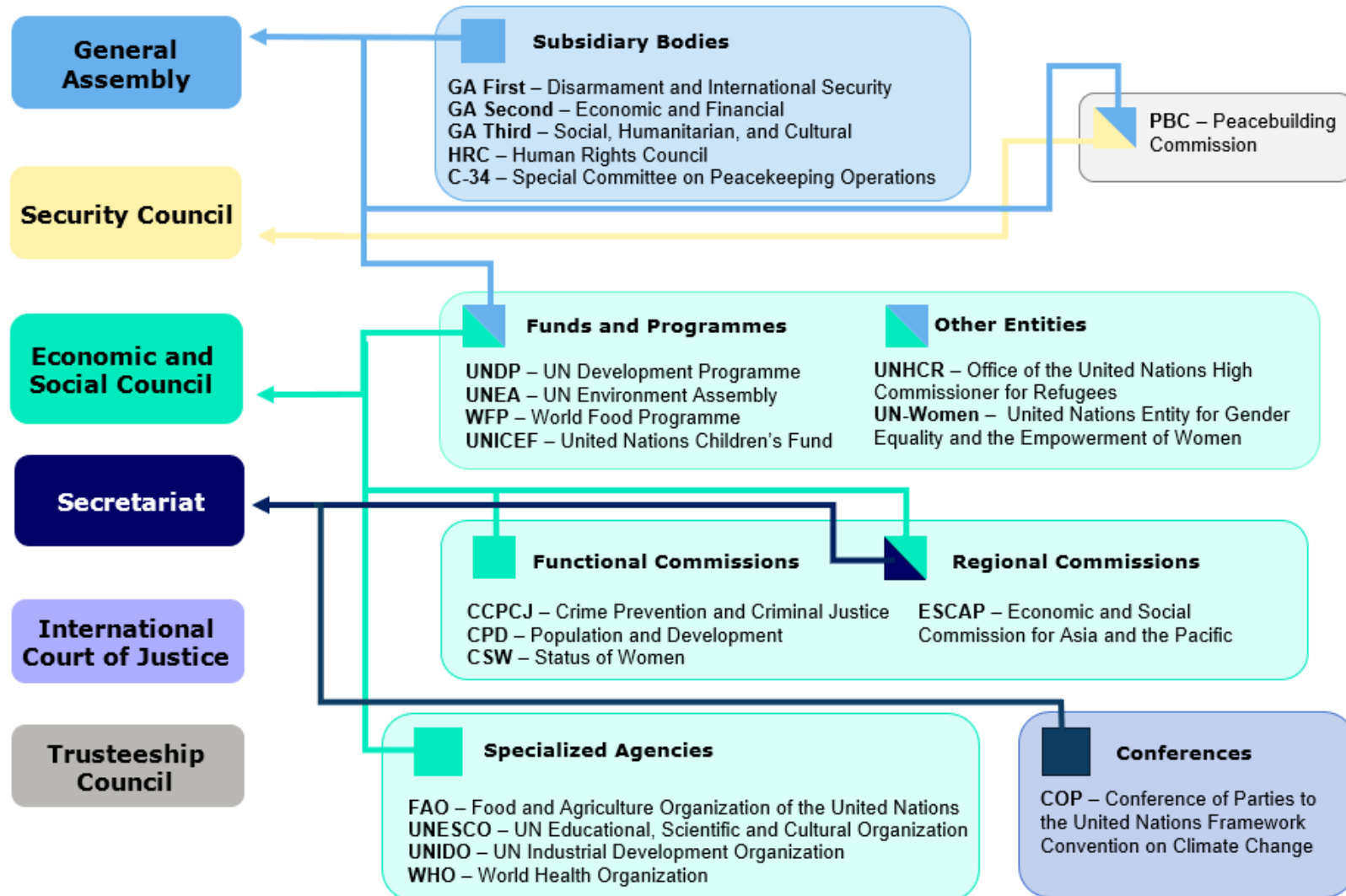Ian James A. Lee, Assistant Director

Conference B

Zachary Parker, Director
Ryan Shepard, Assistant Director

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United Nations System at NMUN•NY

This diagram illustrates the UN system simulated at NMUN•NY and demonstrates the reportage and relationships between entities. Examine the diagram alongside the Committee Overview to gain a clear picture of the committee's position, purpose, and powers within the UN system.

General Assembly

Security Council

Economic and Social Council

Secretariat

International Court of Justice

Trusteeship Council

Subsidiary Bodies

GA First – Disarmament and International Security
GA Second – Economic and Financial
GA Third – Social, Humanitarian, and Cultural
HRC – Human Rights Council
C-34 – Special Committee on Peacekeeping Operations

PBC – Peacebuilding Commission

Funds and Programmes

UNDP – UN Development Programme
UNEA – UN Environment Assembly
WFP – World Food Programme
UNICEF – United Nations Children's Fund

Other Entities

UNHCR – Office of the United Nations High Commissioner for Refugees
UN-Women – United Nations Entity for Gender Equality and the Empowerment of Women

Functional Commissions

CCPCJ – Crime Prevention and Criminal Justice
CPD – Population and Development
CSW – Status of Women

Regional Commissions

ESCAP – Economic and Social Commission for Asia and the Pacific

Specialized Agencies

FAO – Food and Agriculture Organization of the United Nations
UNESCO – UN Educational, Scientific and Cultural Organization
UNIDO – UN Industrial Development Organization
WHO – World Health Organization

Conferences

COP – Conference of Parties to the United Nations Framework Convention on Climate Change

Committee Overview

Introduction

Under Article 68 of the *Charter of the United Nations* (1945), the United Nations (UN) Economic and Social Council (ECOSOC) established the Economic and Social Commission for Asia and the Pacific (ESCAP) during its fourth session of 28 March 1947 to provide effective aid to states affected by war.[1] It first served as the Economic Commission for Asia and the Far-East (ECAFE), and was provisionally established in Shanghai, China, until January 1949.[2] In 1949, as ECAFE's size, activities, and geographical reach expanded, the Commission moved its headquarters to Bangkok, Thailand.[3] In 1974, the Commission was renamed ESCAP to reflect the social and economic development aspects of its mandate.[4] In 1977, the General Assembly empowered ESCAP to promote economic and technical cooperation among developing Member States, highlighting the need for interstate information exchange and concerted action among all Member States of the region.[5]

The Asia-Pacific region extends itself from northern Russia to southern New Zealand and from western Turkey to eastern Kiribati.[6] It is home to 70% of the world's population and to seven of the world's 10 fastest growing economies, representing 38% of global exports and 35% of global imports.[7] Asia and the Pacific also experiences 45% of world's natural disasters with 35% of the world's population affected by those disasters, and to the top-six greenhouse gas emitters in the world.[8] As a moderating actor between Member States of the region, ESCAP plays a key role in mediating the regions' economic and social challenges.[9]

Governance, Structure, and Membership

ESCAP is composed of 53 Member States and nine associate Member States.[10] ESCAP is administrated by its Secretariat, which comprises the Executive Secretary, head of the Secretariat, two Deputy-Executive Secretaries assisting the Executive Secretary, and 14 Directors who supervise the divisions' work, managerial, and functional matters.[11] On 13 September 2018, United Nations Secretary-General António Guterres appointed Armida Salsiah Alisjahbana as the new Executive Secretary of ESCAP.[12]

ESCAP's main legislative organ is its Commission.[13] The Commission acts as an intergovernmental forum that allows Members States to discuss and debate pressing issues at national, regional, and international levels, to share knowledge and best practices, and to maximize opportunities through

[1] *Charter of the United Nations*, 1945, Ch. X; UN ECOSOC, *Economic Commission for Asia and the Far East (ECOSOC/RES/37/1947)*, 1947, p. 13.

[2] UN ECOSOC, *Economic Commission for Asia and the Far East* (ECOSOC/RES/37/1947), 1947, p. 13.

[3] UN ESCAP, *Asia and the Pacific: A Story of Transformation and Resurgence*, 2014, p. 2.

[4] UN ECOSOC, *Change of name from 'Economic Commission for Asia and the Far East' to 'Economic and Social Commission for Asia and the Pacific (E/RES/1895(LVII))*, 1974.

[5] UN ESCAP, *Economic and Social Commission for Asia and the Pacific Annual Report (E/ESCAP/58)*, 1977, p. 33, 43.

[6] UN ESCAP, *About UN ESCAP*, 2018.

[7] UN ESCAP, *Celebrating 70 Years of the Economic and Social Commission for Asia and the Pacific (ESCAP)*, 2017; UN ESCAP, *The Role of Asia and the Pacific in Global Governance and Multilateralism*, 2019, pp. 4-5; UN ESCAP, *ESCAP: A stronger Asia-Pacific for a better World*, 2012.

[8] UN ESCAP, *ESCAP: A stronger Asia-Pacific for a better World*, 2012.

[9] UN ECOSOC, *Economic Commission for Asia and the Far East (ECOSOC/RES/37/1947)*, 1947, p. 13; UN JIU, *Cooperation among the United Nations Regional Commissions (JIU/REP/2015/3)*, 2015, pp. 1-4.

[10] UN ESCAP, *ESCAP Member States and Associate Members*, 2018.

[11] UN ESCAP, *Secretariat*, 2018.

[12] UN DPI, *Secretary-General appoints Armida Salsiah Alisjahbana as Executive Secretary, United Nations Economic and Social Commission for Asia and the Pacific (SG/A/1834-BIO/5140-REC/274)*, 2018.

[13] UN ESCAP, *Restructuring the conference structure of the Commission to be fit for the evolving post-2015 development agenda (E/ESCAP/RES/71/1)*, 2015, p. 2.

regional integration and cooperation.[14] The Commission reviews and endorses the program of work and the strategic frameworks created by Member States, decides on the recommendations made by subsidiary organs and by the Executive Secretary, and develops other decisions in accordance with its terms of reference.[15] With the adoption of the *2030 Agenda for Sustainable Development* (2030 Agenda) in 2015, ESCAP instituted operational and structural changes within the Commission to better fit into the global agenda for sustainable development.[16] The Commission now convenes annually under a theme selected by Member States.[17] Meetings begin with the senior officials' segment, followed by a ministerial segment that discusses and debates the topics on the agenda.[18] During Commission sessions, Member States hold intergovernmental meetings and ad hoc ministerial conferences to discuss multidimensional issues.[19] The Commission maintains nine programmatic committees, the Asia-Pacific Forum on Sustainable Development, and the Advisory Committee of Permanent Representatives and Other Representatives Designated by Member States of the Commission.[20]

The Asia-Pacific Forum on Sustainable Development (APFSD) is an intergovernmental forum that meets annually to prepare for the UN High-Level Political Forum on Sustainable Development.[21] It provides peer-learning opportunities about the Sustainable Development Goals (SDGs), supports and encourages the implementation of national reviews, and undertakes periodic reviews and assesses of progress on the implementation of SDGs in the Asia-Pacific region.[22] The Advisory Committee of Permanent Representatives and Other Representatives Designated by Member States of the Commission reports on Member State programs and the work of sub-regional offices to the Commission.[23] It guides the Executive Secretary and Member States on adopting joint initiatives, cooperation programs, and multi-stakeholders arrangements, which strengthens intergovernmental consultation and cooperation with the Secretariat.[24] To guide and advise the Executive Secretary, the Advisory Committee integrates socioeconomic issues within its program of work, and monitors the implementation of ESCAP's strategic framework.[25]

According to ESCAP resolution 64/1 (2008) on "Restructuring of the conference structure of the Economic and Social Commission for Asia and the Pacific," ESCAP's programs are divided among nine mutually supportive and interconnected committees on trade and investments, transport, environment, technology, disaster risk reduction and economic policy.[26] The committees review and consult on regional trends and approaches, identify priorities and emerging issues, promote regional dialogues, and monitor the implementation of resolutions adopted by the Commission.[27] The committees meet biannually and

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[14] UN ESCAP, *ESCAP: A stronger Asia-Pacific for a better World*, 2012.
[15] UN OIOS, *Audit of the Economic and Social Commission for Asian and the Pacific (2013/051)*, 2013, p. 1.
[16] UN ESCAP, *Restructuring the conference structure of the Commission to be fit for the evolving post-2015 development agenda (E/ESCAP/RES/71/1)*, 2015, pp. 2-4.
[17] UN ESCAP, *Our work*, 2018.
[18] Ibid.
[19] UN ESCAP, *Restructuring the conference structure of the Commission to be fit for the evolving post-2015 development agenda (E/ESCAP/RES/71/1)*, 2015, p. 6.
[20] Ibid., pp. 2-6.
[21] UN ESCAP, *A conference structure of the Commission aligned with the 2030 Agenda for Sustainable Development (E/ESCAP/RES/73/1)*, 2017, pp. 2-4; UN ESCAP, *Summary of progress in the implementation of Commission resolutions (ESCAP/RES/72/6)*, 2016, pp. 2-3; UN DPI, *ESCAP: Asia Pacific Forum on Sustainable Development (APFSD)*, 2017.
[22] UN DPI, *ESCAP: Asia Pacific Forum on Sustainable Development (APFSD)*, 2017.
[23] Ibid.
[24] UN ESCAP, *Annual report of the Economic and Social Commission for Asia and the Pacific (E/ESCAP/73/40)*, 2017, p. 37.
[25] Ibid., p. 37.
[26] UN ESCAP, *Final review of the conference structure of the Commission, including its subsidiary structure, pursuant to resolutions 64/1 and 67/15 (ESCAP/RES/69/18)*, pp. 2-10; UN OIOS, *Audit of the Economic and Social Commission for Asian and the Pacific (2013/051)*, 2013, p. 1.
[27] UN OIOS, *Audit of the Economic and Social Commission for Asian and the Pacific (2013/051)*, 2013, p. 1.

advise the Secretariat in reviewing ESCAP's strategic plans.[28] When required, the Commission may also ask committees to address a pressing issue during gap years.[29]

Through its program on sub-regional activities for development, the Commission sustains in-depth technical assistance and capacity-building across its four sub-regional offices.[30] To support the substantive work of ESCAP, the Commission maintains six regional institutions with expertise in technology transfers, information and communications technology (ICTs) for development, agricultural advancements, disasters management, and statistical measurements.[31] ESCAP's activities are funded through the UN system and bilateral donations from its Member States and Member States beyond the region.[32] For the 2013-2014 period, ESCAP accumulated a $14.1 million budget for technical cooperation from the UN system and extrabudgetary contributions.[33] A $5.4 million contribution was received from the Special Technical Cooperation Funds of the United Nations for the same period.[34] However, ESCAP does not provide any funding to Member States, nor to any programs or initiatives.[35]

Partnerships are central to ESCAP's structure.[36] The Commission is empowered to consult with UN Member States, specialized agencies, and intergovernmental organizations on specific themes and topics of intervention.[37] The Commission maintains a close liaison relationship with other organs of the UN and specialized agencies, especially other regional development commissions.[38] ESCAP actively partners with the Asia-Pacific Regional Coordination Mechanism (RCM) to strengthen policy and program coherence across the region, and to develop inclusive, comprehensive, and effective development policies.[39] To attain the *2030 Agenda for Sustainable Development*, ESCAP partners with UN Development Group (UNDG) at the regional level to further provide guidance and technical support to Member States.[40]

Mandate, Functions, and Powers

ESCAP's main work revolves around convening, norm setting, and delivering policy recommendations.[41] The mandate of ESCAP is set out in ECOSOC resolution 37(IV)(1947) on the "Economic and Social Commission for Asia and the Far-East" and is sustained by ESCAP resolution 171(XXXIII)(1977) on "Economic and technical cooperation among developing ESCAP countries."[42] ESCAP moderates the regional dialogue with the objectives of promoting concerted action and cooperation among Member States, and implements and sustains inclusive socioeconomic and development policy dialogues and recommendations to Member States.[43] Another key component of ESCAP's mandate resides in promoting and enhancing regional cooperation and collective action in addressing multilateral,

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[28] UN ESCAP, *Annual report of the Economic and Social Commission for Asia and the Pacific*, 2017, pp. 36-37.
[29] Ibid., p. 37.
[30] UN OIOS, *Audit of the Economic and Social Commission for Asian and the Pacific (2013/051)*, 2013, p. 1.
[31] UN ESCAP, *Transition of Centre for Alleviation of Poverty through Sustainable Agriculture to an intergovernmental organization outside the United Nations system*, 2018, pp. 1-2.
[32] UN ECOSOC, *Economic Commission for Asia and the Far East (ECOSOC/RES/37/1947)*, 1947, p. 13.
[33] The Innerview, *The Innerview Episode 201: Shamshad Akhtar, the Executive Secretary of UN ESCAP*, 2016.
[34] Ibid.
[35] UN ECOSOC, *Economic Commission for Asia and the Far East (ECOSOC/RES/37/1947)*, 1947, p. 13.
[36] UN JIU, *Cooperation among the United Nations Regional Commissions (JIU/REP/2015/3)*, 2015, pp. 1-4.
[37] UN ECOSOC, *Third Year: Sixth Session Supplement No. 8*, *Report of the Economic Commission for Asia and the Far East on its first and second session*, 1948, pp. 27-28.
[38] Ibid., p. 27.
[39] UN Asia-Pacific RCM, *About RCM*, 2018.
[40] UNDG, *About UNDG Asia-Pacific*, 2018.
[41] UN ESCAP, *About UN ESCAP*, 2018.
[42] UN ECOSOC, *Economic Commission for Asia and the Far East (ECOSOC/RES/37/1947)*, 1947, p. 13; UN ECOSOC, *Third Year: Sixth Session Supplement No. 8, Report of the Economic Commission for Asia and the Far East on its first and second session*, 1948, pp. 27-28.
[43] The Innerview, *The Innerview Episode 201: Shamshad Akhtar, the Executive Secretary of UN ESCAP*, 2016.

transboundary, or emerging issues between Member States, and facilitating peer-learning opportunities among Member States.[44]

ESCAP helps Member States implement policy and capacity-building recommendations by providing operational project oversight and technical assistance.[45] It provides substantive secretariat services and documentation by pursuing regional studies and measurements.[46] Additionally, ESCAP utilizes technical assistance to further implement and execute programs of technical cooperation within and between Member States.[47] ESCAP coordinates its activities with the UN system, civil society, and intergovernmental organizations in the region and formulates recommendations to Member States, associate Member States, consulting Member States, and pertinent specialized agencies on any matters within its competency.[48] If any of its proposals might have significant effects on the world's economy, the Commission must submit its recommendations to ECOSOC prior to consideration by the body.[49]

Recent Sessions and Priorities

In its *Proposed programme of work for the biennium 2018-2018,* ESCAP articulated its Member States' priorities and the Secretariat's vision for the 2018-2019 period.[50] For the ongoing biennium, ESCAP aims to sustain and maximize implementation of the SDGs by its Member States and to further address economic cooperation and integration in Asia and the Pacific.[51] ESCAP held its 74th session from 11 to 16 May 2018 at the United Nations Conference Centre in Bangkok under the theme of inequality in the era of the *2030 Agenda for Sustainable Development*.[52] Senior UN officials and ministerial delegations addressed new opportunities to tackle inequality of income, inequality of opportunity, and inequality of impact under the *2030 Agenda for Sustainable Development*.[53] Although Asia and the Pacific experienced unprecedented economic growth and social transformation in recent decades, progress has been uneven within and among ESCAP Member States.[54] In the last 20 years, the Gini coefficient, which measures inequality of income distribution among households, increased by over 5% in the region, generating multiple development challenges relating to education, clean water and energy, healthcare services, environmental degradation, and exposure to natural disasters.[55]

ESCAP drafted seven agenda priorities during the 74th session with a special highlight on strengthening social protection and prioritizing education.[56] Regional stakeholders pledged to increase the effectiveness of fiscal policies and address the digital divide, ICTs infrastructure, and persistent inequalities in technological capabilities among and within Member States.[57] The Secretariat noted that ESCAP needs to improve its data collection, to take further measures to protect poor and disadvantaged groups and

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[44] Ibid.
[45] Ibid.
[46] UN ESCAP, *ESCAP Guide for new staffers*, 2012, p. 1.
[47] Ibid.
[48] Ibid.
[49] UN ECOSOC, *Third Year: Sixth Session Supplement No. 8, Report of the Economic Commission for Asia and the Far East on its first and second session*, 1948, p. 27.
[50] UN ESCAP, *Proposed programme of work for the biennium 2018-2019 (E/ESCAP/73/33)*, 2017, p. 1.
[51] Ibid., p. 2.
[52] UN ESCAP, *Annual high-level UN Commission session to examine inequality in the era of the 2030 Agenda for Sustainable Development in Asia-Pacific*, 2018.
[53] UN ESCAP, *Annual Report 20 May 2017 – 16 May 2018 (ESCAP/74/43)*, 2017, pp. iii-v; UN ESCAP, *Inequality in Asia and the Pacific in the era of the 2030 Agenda for Sustainable Development*, 2018, pp. 3-21.
[54] UN ESCAP, *Inequality in Asia and the Pacific in the era of the 2030 Agenda for Sustainable Development*, 2018, pp. 3-21.
[55] UN ESCAP, *Inequality in Asia and the Pacific in the era of the 2030 Agenda for Sustainable Development*, 2018, pp. 3-21; UN ESCAP, *Annual Report 20 May 2017 – 16 May 2018 (ESCAP/74/43)*, 2017, pp. iii-v; UN ESCAP, *Inequality in Asia and the Pacific in the era of the 2030 Agenda for Sustainable Development*, 2018, pp. 14- 15.
[56] UN ESCAP, *Inequality in Asia and the Pacific in the era of the 2030 Agenda for Sustainable Development*, 2018, pp. xiii-xvi.
[57] Ibid., pp. xiii-xvi.

communities from the disproportionate impact of environmental hazards, and to further expand regional cooperation.[58] The Secretariat also recognized the need for Member States to increase public funding and to mobilize capital leverage for inclusive and sustained economic growth, particularly among Least Developed Countries (LDCs), landlocked developing countries, and Small Island Developing States (SIDs).[59] The Secretariat highlighted opportunities for South-South cooperation, global development assistance, and external sources of finance.[60]

Conclusion

Since its establishment, ESCAP has served as a catalyst for cooperation within the Asia-Pacific region.[61] It continues to play an important role in ensuring inclusive and sustainable development for the region.[62] ESCAP's key aims in advancing its engagement with the 2030 Agenda include the alleviation of inequality within and between Members States, the transition of LDCs toward sustainable development, and the strengthening of capacity-building mechanisms.[63]

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United Nations, Economic and Social Commission for Asia and the Pacific. (2014). *Asia and the Pacific: A Story of Transformation and Resurgence* [Report]. Retrieved 2 July 2018 from: https://www.unescap.org/publications/asia-and-pacific-story-transformation-and-resurgence
> *This resource offers an analytical narrative about the Asia-Pacific's region transformation from a periphery economic region to a worldwide economic corner stone. It comprehensively explains the role that ESCAP played in fostering sustainable development in the region. It reflects on the committee's funding and core principles as well as on the Secretariat's perspective for the future of development in the region.*

United Nations, Economic and Social Commission for Asia and the Pacific. (2017). *Asia and the Pacific SDG Progress Report 2017.* Retrieved 29 July 2018 from: https://www.unescap.org/publications/asia-and-pacific-sdg-progress-report-2017
> *The* 2030 Agenda for Sustainable Development *is central to ESCAP's mandate and institutes one of the committee's agenda priorities. The report assesses progress in the implementation of the SDGs, the targets in the Asia-Pacific region and the areas were further engagement, acceleration or change of direction is required. Because this report tracks the progress made in the region on the 2030 Agenda, it may be pertinent to understand how ESCAP, within its mandate and its approach, processes and analyses information about the SDGs.*

United Nations, Economic and Social Commission for Asia and the Pacific. (2017). *Annual Report 20 May 2017 – 16 May 2018 (ESCAP/74/43).* Retrieved 28 July 2018 from: https://www.unescap.org/commission/74/document/E74_43E.pdf
> *This resource is ESCAP's annual report to ECOSOC, which covers the period of 20 May 2017 to 16 May 2018. This is a valuable resource for delegates to identify all the work*

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[58] UN ESCAP, *Inequality in Asia and the Pacific in the era of the 2030 Agenda for Sustainable Development*, 2018, pp. xiii-xvi.; UN ESCAP, *Celebrating 70 Years of the Economic and Social Commission for Asia and the Pacific (ESCAP)*, 2017; UN ESCAP, *Pathways to Sustainability: the 2030 Agenda for Sustainable Development in Asia and the Pacific*, 2018, pp. 9-39.
[59] UN ESCAP, *Celebrating 70 Years of the Economic and Social Commission for Asia and the Pacific (ESCAP)*, 2017; UN ESCAP, *Pathways to Sustainability: the 2030 Agenda for Sustainable Development in Asia and the Pacific*, 2018, pp. 9-39.
[60] UN ESCAP, *Inequality in Asia and the Pacific in the era of the 2030 Agenda for Sustainable Development*, 2018, pp. 78-117.
[61] UN ESCAP, *Our work*, 2018.
[62] UN ESCAP, *CS74: Closing Statement*, 2018.
[63] UN ESCAP, *Celebrating 70 Years of the Economic and Social Commission for Asia and the Pacific (ESCAP)*, 2017.

that the Commission has done for that period of time. Delegates may review this resource to better understand the inner workings of the Commission and to identify its current agenda priorities.

United Nations, Economic and Social Commission for Asia and the Pacific. (2017). *Celebrating 70 Years of the Economic and Social Commission for Asia and the Pacific (ESCAP).* Retrieved 2 August 2018 from: https://www.youtube.com/watch?v=8wz8phYg2E0
> *ESCAP produced a commemorative video for the committee's 70th anniversary. This video highlights some of the Commission's most notable events since its creation and explains the Commission's inner workings. It is a valuable resource for delegates to consider in order to understand how the committee's program of work and its nine committees operate through concrete examples scenarios from past.*

United Nations, Economic and Social Commission for Asia and the Pacific. (2017). *Pathways to Sustainability: the 2030 Agenda for Sustainable Development in the Asia and the Pacific* [Report]. Retrieved 4 August 2018 from: https://www.unescap.org/resources/pathways-sustainability
> *ESCAP assists Members States in implementing the* 2030 Agenda for Sustainable Development *in various ways. This report explains how each subprogram intervenes to support Member States in achieving the SDGs through recommendations, policy dialogues, and peer-learning opportunities. This document highlights areas where further progress is needed to attain the SDGs by 2030.*

United Nations, Economic and Social Commission for Asia and the Pacific, Seventy-fourth session. (2018). *Inequality in Asia and the Pacific in the era of the 2030 Agenda for Sustainable Development* [Report]. Retrieved 5 July 2018 from: https://www.unescap.org/publications/inequality-asia-and-pacific-era-2030-agenda-sustainable-development
> *This report summarizes the 74th session of ESCAP, which evolved around the theme of inequality in the Asia-Pacific region. The report draws a comprehensive explanation of inequality and its multidimensional and multilateral linkages to socioeconomic development within and among Member States. This resource outlines the committee's priorities for the upcoming year.*

United Nations, Office of Internal Oversight Services, Internal Audit Division. (2013*). Audit of the Economic and Social Commission for Asian and the Pacific (2013/051)* [Report]. Retrieved 3 November 2018 from: https://oios.un.org/page/download/id/1
> *The audit report examines the effectiveness of ESCAP's governance and functioning structure. It assesses the Commission's governance mechanisms for the establishment, the management and the monitoring of the program of work, and the employment of resources to the accomplishment of its mandate. Delegates may consider this report to identify the areas of progress suggested by the Office of Internal Oversight Services to improve the practical effectiveness of ESCAP.*

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United Nations, Economic and Social Commission for Asia and the Pacific. (2014, August 7). *2014 Policy Statement by the Executive Secretary.* Retrieved 3 August 2018 from: https://www.unescap.org/speeches/2014-policy-statement-executive-secretary

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I. Transitioning to Sustainable Energy: Meeting Growing Energy Demands

"The 17 Sustainable Development Goals are about eliminating poverty, creating decent jobs, providing quality healthcare and education, protecting the environment and combating climate change. Energy cuts across all of them."[64]

Introduction

In 2012, United Nations (UN) General Assembly adopted resolution 66/288 on "The Future We Want" as the outcome document of the United Nations Conference on Sustainable Development (UNCSD), which recognized energy as critical to meeting the basic human needs of all people and to drive economic growth and development.[65] It is integral to most aspects of life and society, including employment, education, transportation, clean water, and food.[66] Despite this, 14% of the world's population lacks access to electricity and over 40% lack suitable energy for clean cooking.[67] Sustainable energy is an important factor in achieving sustainable development, especially for developing states with increasing energy demand and Small Island Developing States (SIDS), whose remoteness hinders them from easily connecting to global energy markets.[68]

Of the more than 4 billion people who live in the Asia-Pacific region, 400 million people are not connected to electricity and over 2 billion lack access to clean energy for cooking and heating their homes.[69] In rural and isolated areas, many people burn traditional biomass fuels such as wood, charcoal, or dung.[70] Household air pollution from these methods is harmful to human health.[71] The growing energy demands of Asia and the Pacific currently rely on carbon-heavy energy sources such as fossil fuels, with coal still projected to account for 38% of total energy production in 2030.[72] As a result of energy production and consumption, air pollution is already at levels dangerous to human health in many parts of the region, and energy emissions account for 68% of global emissions of greenhouse gases (GHG).[73] Environmental consequences of this pollution include global warming, rising ocean levels, pollution, and acidification of the oceans.[74] Many SIDS in the Asia-Pacific region are significantly affected by these issues.[75]

In the last 20 years, the region has significantly increased its investment in renewable energy such as wind, solar, biomass, or hydropower.[76] Renewable sources of energy generate fewer harmful emissions and can be sustained longer than finite fossil fuels.[77] Member States of the Economic and Social Commission for Asian and the Pacific (ESCAP) have adopted many bilateral agreements to set goals and targets for developing renewable energy technologies.[78] Additionally, multilateral organizations in the region are working to bridge regional gaps for energy access by promoting cooperation and integration of energy policy and development.[79]

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[64] UN DESA, *Speech by Under-Secretary-General for Economic and Social Affairs Liu Zhenmin to open the Global SDG& Conference on 22 February 2018, in Bangkok*, 2018.
[65] UN General Assembly, *The Future We Want (A/RES/66/288)*, 2012.
[66] UN DPI, *Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all*, 2018.
[67] UN DPI, *Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all*, 2018.
[68] UN ESCAP, *Developing renewable energy in Pacific small island developing States*, 2016, p. 1.
[69] UN ESCAP, *Enhancing Regional Economic Cooperation and Integration in Asia and the Pacific*, 2017, p. 27.
[70] UN ESCAP, *Energy scene and trends in Asia and the Pacific*, 2016, p. 1.
[71] WHO, *Ambient Air Pollution: A Global Assessment and the Burden of Disease,* p. 11.
[72] Asian Development Bank, *Energy Outlook for Asia and the Pacific*. 2009 p. 9.
[73] UN ESCAP, *Energy scene and trends in Asia and the Pacific*, 2016, p. 5.
[74] UNFCCC, *Climate Change: Small Island Developing States*, 2005, p. 2.
[75] Ibid., p. 2.
[76] UN ESCAP, *Energy scene and trends in Asia and the Pacific*, 2016 p. 13.
[77] UNDP, *UNDP Support to the Implementation of Sustainable Development Goal 7*, p. 5.
[78] UN ESCAP, *Report of the Committee on Energy on its first session*, 2017, p. 7.
[79] Ibid., p. 7.

International and Regional Framework

The *Universal Declaration of Human Rights* (UDHR) (1948) established the right to an adequate standard of living for all people, including access to food, shelter, education, economic opportunity, and medical care.[80] Access to energy is key to achieving many human rights.[81] The UDHR was further reinforced by the 1986 *Declaration on the Right to Development,* which reiterated that all people have a right to participate and benefit from development.[82] The declaration emphasizes that states have an obligation to create policies that promote development and to cooperate with other states to achieve the same.[83]

In 2015, the General Assembly adopted resolution 70/1, "Transforming Our World: The 2030 Agenda for Sustainable Development," which comprises the 17 Sustainable Development Goals (SDGs).[84] Access to energy is highlighted in SDG 7 on affordable clean energy, which outlines five targets for achieving its energy goals.[85] SDG 7 aims to achieve universal access to modern sustainable energy and promote cooperation toward renewable technology and infrastructure.[86] SDG 7 also calls for significantly increasing the share of renewables in global energy production and doubling the efficient use of energy globally.[87] Targets 4 and 5 address inequality of resource distribution affecting Least Developed Countries (LDCs) and other geographic barriers such the remoteness of SIDS and rural areas that must rely heavily on imported energy.[88] As a core driver of development, SDG 7 overlaps SDG 8, 9, and 11 for economic growth, infrastructure, and building sustainable cities respectively.[89] SDG 7's target for universal access to modern electricity is essential in achieving SDG 1, 3, and 4, which addresses poverty, health, and education.[90] Access to energy is highlighted in SDG 7 on affordable clean energy, which outlines five targets for achieving its energy goals.[91]

The *Paris Agreement* on climate change, adopted in 2015 at the 21st session of the Conference of Parties to the *United Nations Framework Convention on Climate Change* (1992), is the most recent global agreement on the topic of global response to climate change.[92] The *Paris Agreement* calls for Member States to set emission reduction targets and addresses the need for climate change adaptation and mitigation strategies, which are especially pertinent to ESCAP's coastal Member States and SIDS.[93] The *Paris Agreement* also urges Member States to develop and share technologies that can help mitigate GHG emissions, for which energy production is the single largest global contributor.[94]

In July 2015, the *Addis Ababa Action Agenda* was adopted at the Third International Conference on Financing for Development to support the implementation of the SDGs.[95] Building on the previous frameworks, the Action Agenda introduced a stronger focus on mobilizing domestic resources by enabling Member States to generate their own funds for services and development.[96] ESCAP aids Member States in achieving the objectives of the Action Agenda by facilitating regional consultations, carrying out

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[80] UN General Assembly, *Universal Declaration of Human Rights (A/RES/217 A (III))*, 1948, Art.21-26.
[81] Bradbrook, *Access to Energy in a Human Right Framework*, 2005, p. 12.
[82] UN General Assembly, *Declaration on the Right to Development (A/RES/41/128)*, 1986.
[83] Bradbrook, *Access to Energy in a Human Right Framework*, 2005, p. 12.
[84] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[85] SDG Compass, *SDG 7*, 2015.
[86] Ibid.
[87] Ibid.
[88] UN DESA, 2018, *Review of Partnerships for Small Island Developing States*, p. 7.
[89] UN ESCAP, *Asia and the Pacific SDG Progress Report 2017*, 2018.
[90] Asian Development Bank, *SE4ALL Tracking Progress in Asia and the Pacific*, 2015, p. 1.
[91] SDG Compass, *SDG 7*, 2015.
[92] COP 21, *Paris Agreement*, 2015, Art. 4.
[93] Ibid.
[94] Ibid.
[95] UN General Assembly, *Addis Ababa Action Agenda of the Third International Conference on Financing for Development (Addis Ababa Action Agenda) (A/RES/69/313)*, 2015.
[96] UN ECOSOC, *Implementing the Addis Ababa Action Agenda*, 2016, p. 15.

research, and assisting in capacity-building initiatives through policy training and technical support for public-private partnerships and infrastructure development.[97]

In 2016, ESCAP adopted resolution 72/6 on "Committing to the effective implementation of the 2030 Agenda for Sustainable Development in Asia and the Pacific," which commits to support ESCAP Member States by providing policy recommendations, technical service, capacity-building tools, and guidance in implementing the SDGs.[98] In 2017, ESCAP published *The Regional Road Map for Implementing the 2030 Agenda for Sustainable Development in Asia and the Pacific*.[99] The Regional Roadmap encourages Member States to enhance regional cooperation via increased policy dialogues, especially through the Asia-Pacific Energy Forum (APEF), and to develop regional strategic agreements to meet the SDGs targets.[100] The Regional Roadmap also draws attention to the challenges of implementing SDG 7 among LDCs and SIDS, reiterating strategies for implementation first outlined in the 2014 *SIDS Accelerated Modalities of Action Pathway* (SAMOA Pathway).[101] The SAMOA Pathway supports actions to improve energy efficiency, expand access to financing initiatives for implementing sustainable energy development, and integrate SIDS economies into larger markets.[102]

Role of the International System

ESCAP held the First Asia-Pacific Energy Forum (APEF) in 2013, serving as the first exclusive platform for Ministers from Member States to discuss how to meet SDG 7 as a region.[103] The majority of Member States' regional cooperation takes place under bilateral agreements.[104] In 2015, ESCAP established the Committee on Energy to coordinate initiatives and facilitate the work of regional bodies.[105] ESCAP hosted the Second APEF in 2018, where delegates adopted the *Ministerial Declaration on Regional Cooperation for Energy Transition toward sustainable and Resilient Societies in Asia and the Pacific*, which enhances regional commitments to transition renewable and efficient energy.[106] In the Ministerial Declaration, ESCAP Member States committed to promote cooperation and aid in the development of national strategies for achieving SDG 7.[107]

The General Assembly resolution 67/215 of 20 March 2013 declared 2014 to 2024 the UN Decade of Sustainable Energy for All.[108] In response, Secretary-General Ban Ki-moon created the Sustainable Energy for All (SE4ALL) initiative to aid Member States and stakeholders to promote sustainable energy practices.[109] One significant contribution of SE4ALL is the Global Tracking Framework, which was created in coordination with the World Bank, the Energy Sector Management Assistance Program, and the International Energy Agency as a tool for measuring national, regional, and global progress toward achieving targets related to universal access to sustainable energy.[110] The Asia-Pacific Hub of the SE4ALL (AP-SE4ALL) initiative partners with the Asian Development Bank and the United Nations Development Programme (UNDP) to facilitate the mobilization of finance for energy development and to improve energy efficiency in the region.[111] The SE4ALL partnership provides policy platforms for Member

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[97] UN ESCAP, *Means of Implementation*.
[98] UN ESCAP, *Committing to the effective implementation of the 2030 Agenda for Sustainable Development in Asia and the Pacific (E/ESCAP/RES/72/6)*, 2016, pp. 2-3.
[99] UN ESCAP, *Regional Roadmap for Implementing the 2030 Agenda for Sustainable Development in Asia and the Pacific*, 2017, p. 8.
[100] Ibid., p. 18.
[101] Ibid., p. 8.
[102] UN Conference on Small Island Developing States, *SAMOA Pathway Outcome Document*, 2014.
[103] UN ESCAP, *The Asian and Pacific Energy Forum*, 2013.
[104] UN ESCAP, *Enhancing Regional Economic Cooperation and Integration in Asia and the Pacific*, 2017, p. 4.
[105] UN ESCAP, *Review of the work of the Committee*, 2016, p. 1.
[106] UN ESCAP, *Report of the Second Asian and Pacific Energy Forum*, 2018, p. 3.
[107] Ibid., p. 4.
[108] UN General Assembly, *Promotion of new and renewable sources of energy (A/RES/67/215)*, 2013, p. 1.
[109] Ibid., p. 1.
[110] Sustainable Energy for All, *Global Tracking Framework: Executive Summary*, 2013, pp. 2-3.
[111] Sustainable Energy for All, *Asia Pacific*.

States to implement SDG 7 on a voluntary basis while the Global Tracking Framework tracks the progress and effectiveness of implementation and its effects.[112]

Growing Energy Demand and the Transition to Renewables

The demand for energy in the Asia-Pacific is growing at more than twice the global average, driven by high population growth and rapid urbanization.[113] Energy demand in the Asia-Pacific will eventually exceed the energy capacity of fossil-fuel sources, creating a need for more renewable energy sources to support continued and sustainable development.[114] The region is expected to meet SDG 7 targets on the proportion of the population with access to electricity by 2030, but it has made less progress toward universal access to "sustainable, reliable and modern energy sources."[115] With energy production being a primary contributor to GHG, achieving SDG 7 will involve transition existing energy production to renewable sources and introducing renewable energy infrastructure into areas currently without access to energy.[116] LDCs and parts of nearly every Member State in the region are well-positioned to develop their energy infrastructure around renewable sources, rather than Convention al carbon-heavy sources.[117] Some Member States have even adopted policies to commit that 100% of domestic energy use be provided from renewable sources.[118] However, renewables' share of total energy demand has been decreasing due to the high rate of growth in comparison to the overall energy demand in the region.[119] While total investment in modern renewables has increased substantially, the population in the region has also been increasing.[120] The burning of biomass for cooking and heating currently accounts for a large portion of existing renewable energy use; replacing these sources with more modern methods will require additional investment in renewable sources.[121] Renewable energy technology has been improving quickly, but it is currently too limited to provide a cost-effective alternative to coal and oil.[122] The technology gap requires that renewable investment involve greater focus on research and development of new technology.[123] One mechanism for promoting sustainable development is the issuance of green bonds, in which investors can contribute to the development of environmentally sustainable projects.[124] Member States in the Asia-Pacific region have taken steps to reduce the risk for private investors by providing tax benefits and subsidized investment in renewables.[125]

Regional Cooperation

One aspect of regional cooperation is closely linked to energy connectivity consumption and the form of cross-border energy infrastructure projects that connect areas of high energy production and surplus to areas with limited capacity.[126] Another aspect of regional cooperation is the formation of free-trade agreements between Member States to facilitate cross-border projects.[127] In 2017, the Committee on Energy recognized the progress of multilateral agreements in the region such as the Association of Southeast Asian Nations (ASEAN) Power Grid, the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation, and the Central Asia South Asia Electricity Transmission and Trade Project

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[112] Asian Development Bank, *SE4ALL Tracking Progress in Asia and the Pacific*, 2015, p. xi.
[113] UN ESCAP, *Enhancing Regional Economic Cooperation and Integration in Asia and the Pacific*, 2017, p. 27.
[114] Asian Development Bank, *Pacific Energy Update 2017*, p. 5.
[115] UN ESCAP, *Asia and the Pacific SDG Progress Report*, 2017, p. 6.
[116] UN DESA, 2*018 HLPF Review of SDG implementation: SDG 7- Ensure access to affordable, reliable, sustainable and modern Energy for all*, 2018, p. 5.
[117] UN ESCAP, *Energy Transition Pathways for the 2030 Agenda in Asia and the Pacific*, 2018, p. 8.
[118] Asian Development Bank, 1*00% Electricity Generation Through Renewable Energy by 2050: Assessment of Sri Lanka's Power Sector*, 2017, p. 11.
[119] Asian Development Bank, *Energy Outlook for Asia and the Pacific*, 2013, p. xvi.
[120] UN ESCAP, *A Global Tracking Framework 2017 Regional Assessment Report*, 2018 p. v.
[121] UN ESCAP, *Energy Transition Pathways for the 2030 Agenda in Asia and the Pacific*, 2018, p. 19.
[122] Asian Development Bank, *Energy Outlook for Asia and the Pacific*, 2013, p. xvi.
[123] Ibid., p. 53.
[124] UNDP, *Green Bonds*, 2017.
[125] UN ESCAP, *A Global Tracking Framework 2017 Regional Assessment Report*, 2018, p. 61.
[126] UN ESCAP, *The Role of Asia and the Pacific in Global Governance and Multilateralism*, 2018, p. xvi.
[127] Ibid., p. xv.

(CASA-1000).[128] Member States have been increasingly engaging in free-trade agreements, as shown by the tripling of the number of agreements in the region from 2002 to 2013.[129] More than two-thirds of all free-trade agreements in the region are bilateral, with the majority of all multilateral agreements being formed among Member States in Southeast Asia.[130] The complex network of bilateral agreements throughout the Asia-Pacific region creates redundancies and discrepancies in processes and standards.[131] The Committee on Energy has recommended the consolidation of these bilateral agreements to facilitate energy trade, investments in cross-border infrastructures, and universal standards for regulations on energy production and transmission.[132]

Investing in Renewable Energy

Investment in renewables has been steadily increasing with over half of all new global investment in renewables taking place in Asia and the Pacific.[133] The large majority of investment is happening in a few industrialized economies in the region with solar and wind projects accounting for over 95% of investment.[134] Significant portions of investments are taking the form of small-scale local energy production driven by the decreasing costs of solar power.[135] Investments in renewable energy surpassed investment in coal in 2015, marking an increased commitment to renewables; however, in 2016, investment dropped to $114.8 billion, far behind the estimated annual investment of $298 billion required to meet SDG 7's targets for renewable energy by 2030.[136]

Opportunities for investment in renewable energy comes with inherent risks for investors, such as large initial costs for new infrastructure and the uncertainties of investing in fast-changing new technology.[137] Many private investors have taken the entrepreneurial risk of developing renewable energy production and distribution in economies that already have the modern energy infrastructure and strong financial and legal institutions, but many LDCs lack sufficiently robust financial systems and regulatory frameworks to attract private investors.[138]

Policy instruments designed to reduce risk include strategies like establishing long-term fixed-price agreements for energy, developing reliable and streamlined processes for permitting, and providing training for local workers.[139] Other risk-reduction instruments transfer risk from investors to a third-party via special loans, loan guarantees, and insurance.[140] Another strategy is analyzing and communicating the legislative frameworks and policy instruments that are already in place in a given market, allowing potential investors to better compare and assess investment potential.[141] Risk-reduction analyses already carried out by the UNDP in the Asia-Pacific have included assessments of wind and solar development applications in the region, with specific recommendations on applicable policy and financial risk mitigation instruments.[142]

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[128] UN ESCAP, *Report of the Committee on Energy on its first session*, 2017, p. 2.
[129] Asian Development Bank, *Asian Free Trade Agreements*, 2013.
[130] Ibid., 2013.
[131] UN ESCAP, *The Role of Asia and the Pacific in Global Governance and Multilateralism*, 2018, p. 26.
[132] UN ESCAP, *Energy scene and trends in Asia and the Pacific*, 2016, p. 16.
[133] Frankfurt School-UN Environment Collaborating Centre for Climate & Sustainable Energy Finance et al., *Global Trends in Renewable Energy investment*, 2018, p. 22.
[134] Ibid., p. 27.
[135] Ibid., p. 28.
[136] UN ESCAP, *A Global Tracking Framework 2017 Regional Assessment Report*, 2018, p. vi.
[137] UN ESCAP, *Energy Transition Pathways for the 2030 Agenda in Asia and the Pacific*, 2018, p. 11.
[138] UNDP, *Derisking Renewable Energy Investment*, 2013, p. 11.
[139] Ibid., p. 13.
[140] Ibid., p. 15.
[141] Ibid.
[142] Ibid.

Connecting Rural Communities and Small-Islands

According to UNDP, regional infrastructure for energy distribution in the Asia and the Pacific is an important step toward achieving universal access to energy services.[143] Natural resources in Asia-Pacific are not equally distributed throughout the region and infrastructure development varies accordingly.[144] The inequality is not only between Member States, but also within Member States due to factors of geography, natural resource wealth, and historic patterns of development.[145] SIDS face additional challenges due to their extreme remoteness from other markets, in addition to relatively small population sizes which make it difficult to attract affordable energy imports or energy infrastructure investments.[146] The 2018 *Report of the Second Asian and Pacific Energy Forum* highlights the importance of using current energy resources more efficiently, in line with SDG 7's third target, as a strategy for improving energy security in remote areas.[147] Current strategies for increasing energy access to energy-deficient areas include the extension of existing mainstream power transmission grid systems.[148] Unfortunately, many areas are either too far from large-scale energy producers or have too small of a population to make it economically viable to connect the area to a mainstream power grid.[149] The creation of mini-grids and other off-grid generation like household solar energy systems or distributed renewable energy systems are cost-effective ways to enable access for these isolated areas.[150] Some communities have invested in fitting individual houses with solar energy, while others have been able to develop independent mini-grid systems that are powered by solar or diesel generators, and are able to provide energy to the whole community.[151] SIDS also experience significant risks from climate change.[152] In addition to natural disasters which threaten the integrity of existing infrastructure, the acidification and warming of the world's oceans impacts the fishing agriculture industries that are integral to the economies of SIDS and coastal areas.[153]

Conclusion

The transition to renewable energy is important for the attainment of sustainable development in Asia and the Pacific.[154] The scale of emissions from carbon-heavy energy sources have a direct effect on the standard of living and development of the people living in the region.[155] Air and water pollution in urban areas continues to cause health problems and the rise of ocean levels threatens to envelop coastlines and SIDS.[156] The economic and population growth of the region will continue to increase energy demand.[157] As the rate of electrification continues to increase, Member States and other regional actors need to find ways to meet the demand with renewable energy sources.[158] The vast geography and population of the region presents unique challenges to the development of cross-border energy infrastructures.[159] ESCAP and other regional actors have to further explore alternatives and promote off-grid distribution as a way of meeting the energy needs of rural and other remote areas of the region.[160] With the private sector accounting for the majority of renewable energy investment, ESCAP Member

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[143] Asian Development Bank, 1*00% Electricity Generation Through Renewable Energy by 2050: Assessment of Sri Lanka's Power Sector*, 2017, p. 3.
[144] UN ESCAP, *Enhancing Regional Economic Cooperation and Integration in Asia and the Pacific*, 2017, p. 27.
[145] Ibid., p. viii.
[146] UN ESCAP, *Developing renewable energy in Pacific small island developing States*, 2016, p. 1.
[147] UN ESCAP, *Report of the Second Asian and Pacific Energy Forum*, 2018, p. 3.
[148] UN ESCAP, *Developing renewable energy in Pacific small island developing States*, 2016, p. 1.
[149] UN ESCAP, *Energy Transition Pathways for the 2030 Agenda in Asia and the Pacific*, 2018, pp. vi-vii.
[150] Ibid., p. 30.
[151] Ibid., p. 30.
[152] UNFCCC, *Vulnerability and Adaptation to Climate Change in Small Island Developing States*, 2007, p. 4.
[153] Ibid., p. 4.
[154] UN ESCAP, *Energy scene and trends in Asia and the Pacific*, 2016, p. 1.
[155] Ibid., p. 1.
[156] UN ESCAP, *Developing renewable energy in Pacific small island developing States*, 2016, p. 1.
[157] UN ESCAP, *Enhancing Regional Economic Cooperation and Integration in Asia and the Pacific*, 2017, p. 27.
[158] Ibid., p. 27.
[159] Ibid., p. 27.
[160] UN ESCAP, *Energy Transition Pathways for the 2030 Agenda in Asia and the Pacific*, 2018, p. 30.

States will need to implement policy incentives to reduce investment risks and to encourage the further development of renewables in order to meet SDG 7 targets.[161]

Further Research

During research, delegates should consider the examples of success as well as challenges that many parts of the region are seeing in terms of achieving universal access to energy and the role that renewables play. Delegates should also consider the current limitations of different types of renewable energy and what kinds of barriers they create in terms of achieving SDG 7. How can those limitations affect where and how Member States can transition to renewables? How can the region achieve a transition to renewable energy based on current levels of renewable energy share and the projected growth in total energy demand? Delegates should pay attention to the diverse needs and challenges of Member States in the region based on their specific geographic and political landscapes, as well as how the distribution of resources will shape the regions energy solutions. What role does the private sector have to play in achieving these goals and how can ESCAP and its Member States work to facilitate that role?

Annotated Bibliography

Asian Development Bank et al. (2017). *Asia-Pacific Sustainable Development Goals Outlook.* Retrieved 7 July 2018 from: http://sdgasiapacific.net/download/AP_SDG_Outlook.pdf
> *This report was jointly written by the Economic and Social Commission for Asia and the Pacific, the Asian Development Bank, and the UNDP as part of the Asia-Pacific SDG Partnership. It could serve as an excellent starting point for delegates to become familiar with the SDGs and their respective targets. For each SDG it provides a breakdown of the goal and identifies existing and potential challenges for the goal. It also provides a broad outlook of the goal in the Asia-Pacific context. It is a highly accessible and the current report would be useful to introduce and refresh delegates on the SDGs as well as a point of reference throughout their research.*

Asian Development Bank. (2017). *Harmonizing Electricity Laws in South Asia: Recommendations to Implement the South Asian Association for Regional Cooperation Framework Agreement on Energy Trade.* Retrieved 7 July 2018 from: http://dx.doi.org/10.22617/TCS179071-2
> *The Asian Development Bank provides technical and financial assistance to partners in the Asia-Pacific region to aid in development and cooperation. This report is a part of a collaboration between the Asian Development Bank and the South Asian Association for Regional Cooperation and as a part of a greater effort titled Strengthening Legal Institutions and Enhancing Regional Cooperation in Law, Justice, and Development in South Asia. Delegates may use this report to begin research pertaining to the various legal and policy challenges faced my Member States in relation to energy access and connectivity. The report also includes reviews of legal and regulatory frameworks voluntarily submitted by certain Member States. It also provides examples of how key intergovernmental organizations cooperate with Member States.*

International Renewable Energy Agency. (2018). *International Renewable Energy Agency* [Website]. Retrieved 7 July 2018 from: http://www.irena.org/
> *In addition to providing a number of broad and country-specific reports and policy reviews, this website also provides access to a database of statistics and reports pertaining to the state of renewable energy transition globally. Delegates can use the site to find country-specific profiles that assess progress of technology and investment and include current statistics, projections, and policy reviews and recommendations pertaining to renewable energy and development. The International Renewable Energy*

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[161] UN ESCAP, *A Global Tracking Framework 2017 Regional Assessment Report*, 2018, p. 61.

Agency website also contains resources specifically focused on connecting rural and small island communities with off-grid energy projects.

United Nations Development Programme. (2013). *Derisking Renewable Energy Investment* [Report]. Retrieved 10 August 2018 from: http://www.undp.org/content/dam/undp/library/Environment%20and%20Energy/Climate%20Strategies/Derisking%20Renewable%20Energy%20Investment%20-%20Full%20Report%20(May%202013)%20ENGLISH%20(1).pdf

> *The* Derisking Renewable Energy Investment *report, while not specifically developed for the Asia-Pacific region, will provide delegates with a strong understanding of the barriers that exist to investment in renewables, specifically in LDCs. The report provides examples of in-depth, country-specific analyses that demonstrate the unique challenges of specific Member States in terms of their geography, current policy, legislative and regulatory frameworks. It also provides examples of how different forms of renewables may be implemented based on these factors.*

United Nations, Economic and Social Commission for Asia and the Pacific. (2017). *Regional Roadmap for Implementing the 2030 Agenda for Sustainable Development in Asia and the Pacific* [Report]. Retrieved 2 August 2018 from: https://www.unescap.org/sites/default/files/publications/SDGs-Regional-Roadmap.pdf

> *The Regional Roadmap is a current policy instrument produced by the Commission for Asia and the Pacific. Delegates will be able to gain a high-level view of the Commission's recommended policy direction. Delegates should become familiar with the priority areas outlined in the roadmap concerning cooperation, technology, building regional coherence in policy and regulations, and financing for energy development.*

United Nations, Economic and Social Commission for Asia and the Pacific. (2018). *Asia and the Pacific SDG Progress Report 2017.* Retrieved 4 July 2018 from: https://www.unescap.org/sites/default/files/publications/Asia-Pacific-SDG-Progress-Report-2017.pdf

> *This is a region-specific report by ESCAP on the region's progress meeting the SDGs. The report provides tracks progress across all SDGs and their respective targets, which will provide delegates with a broad view of how the region is working to meet all SDGs and how the energy needs of the region, captured by SDG 7, relate to other social, development, or environmental goals. The report provides data, analyses, and projections based on region. It provides breakdowns of progress gaps across the region, within sub-regions and based on other social and economic groups providing an overview of the challenges and disparities specific to each.*

United Nations, Economic and Social Commission for Asia and the Pacific. (2018). *A Global Tracking Framework 2017 Regional Assessment Report.* Retrieved 10 August 2018 from: https://www.unescap.org/sites/default/files/publications/A%20Global%20Tracking%20Framework_Web%202018_0.pdf

> *The Global Tracking Framework can provide delegates with information and evaluation of current and projected progress toward SDG 7. The framework will provide delegates with country-specific data as well as regional comparisons that may aid in evaluating current inequalities. Its primary purpose is to track indicators and progress toward the SDG targets and so may help the delegates understand the pattern of development in different countries.*

United Nations, Economic and Social Commission for Asia and the Pacific. (2017). *Report of the Committee on Energy on its first session(E/ESCAP/73/30)* [Report]. Retrieved 4 July 2018 from: https://undocs.org/E/ESCAP/73/30

> *The Committee on Energy is a sub-committee of ESCAP. The Committee addresses options to identify, develop, report, promote, and assist in implanting policies concerning access to affordable renewable energy. This report will provide delegates with a clear idea of the current working priorities of the Commission including cooperative efforts with regional organizations such as ASEAN. The report addresses the topics of energy*

transition, energy connectivity, and SDG 7 progress. It also references a draft program of work for the future of the Committee. This report provides delegates with more specific examples of policies being proposed and implemented by ESCAP, Member States, and other organizations in the region.

United Nations, Economic and Social Commission for Asia and the Pacific. (2018). *Report of the Second Asian and Pacific Energy Forum*. Retrieved 4 July 2018 from: https://www.unescap.org/commission/74/document/E74_27E.pdf

> *In this report, the Asian Pacific Energy Forum adopts the* Declaration on Regional Cooperation for Energy Transition toward Sustainable and Resilient Societies in Asia and the Pacific *and provides insight to current policy perspectives on achieving* the 2030 Agenda for Sustainable Development*. Issues addressed include clean cooking programs, increasing the share of energy renewables in the market, energy efficiency and low-income households, the role of energy connectivity in achieving national energy targets, and steps to improving energy connectivity across regions. The report also illustrates specific challenges relating to Small Island Developing States, land-locked Member States, and Member States with or without large natural reserves of fossil fuels or other energy resources.*

United Nations, Economic and Social Commission for Asia and the Pacific. (2018). *Strengthening regional cooperation for sustainable energy development in Asia and the Pacific (E/ESCAP/RES/73/8)* [Resolution]. Retrieved 7 July 2018 from: http://undocs.org/en/E/ESCAP/RES/73/8

> *This is a resolution addressing policy options for regional cooperation for greater sustainable energy access and development. It will provide delegates with recent historical context for the importance of renewable energy as well as the special needs of LDCs, landlocked developing states and SIDS. It is also a good introduction to the language, tone, and focus of a resolution of the Commission.*

United Nations, General Assembly, Seventieth session. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*. Retrieved 4 July 2018 from: http://undocs.org/A/RES/70/1

> *Delegates should be familiar with the* 2030 Agenda for Sustainable Development, *as it is the overarching international agreement guiding the current international agenda regarding development. This resolution will provide delegates an understanding of the SDGs and their associated targets. Delegates should pay close attention to SDG 7, but it will also be helpful for delegates to understand the other goals and how energy interacts or aligns with them.*

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II. Information and Communications Technology for Disaster Risk Reduction

"Building resilience is essential for sustainable development in a region with high disaster risk like Asia and the Pacific, and considering the transboundary nature of many natural hazards, regional actions and solutions are indispensable to addressing these shared risks and vulnerabilities."[162]

Introduction

In a 2017 report on disaster risks within the Asia-Pacific region, the United Nations (UN) Economic and Social Commission for Asia and the Pacific (ESCAP) projected that natural disasters in the region will cause 40% of global economic losses between 2020 and 2030.[163] A disaster is considered a "serious disruption of the functioning of a community or society at any scale due to hazardous events interacting with conditions of exposure, vulnerability, and capacity, leading to one or more of the following: human, material, economic and environmental losses, and impacts."[164] While the majority of damage results from floods, storms, droughts, and earthquakes, financial impacts of disaster range between $200-300 billion, with the global average annual loss expected to increase to $314 billion.[165] Disasters also have significant humanitarian consequences, averaging 43,000 deaths globally per year.[166] Disaster Risk Reduction (DRR) involves preventing and reducing disaster risks through local, regional, or global disaster management policies or strategies.[167] DRR is a focused policy objective; related strategies and policies, like the International Strategy for Disaster Reduction provide actionable measures to reduce the negative consequences of disasters.[168]

Advancements in information and communications technology (ICTs) are reducing the consequences and risks for those potentially impacted by disaster.[169] ICTs refers to the "hardware, software, networks, and media for collection, storage, processing, transmission and presentation of information (voice, data, text, images)."[170] While traditional ICTs often refers to technologies such as telephone or radio, the current state of ICTs also includes emerging technologies such as 3-D printing, artificial intelligence, satellites and geospatial monitoring, the Internet of Things (IoT), and robotics.[171] Current challenges for ICTs in DRR revolve around ICTs infrastructure limitations.[172] ESCAP works to further the advancement of both ICTs and DRR as two primary areas of work.[173]

International and Regional Framework

Early strategies toward DRR include the *International Framework for Action for the International Decade for Natural Disaster Reduction* (International Framework) of 1989 and the *Yokohama Strategy for a Safer*

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[162] UNISDR, *Global Platform for Disaster Risk Reduction*, 2018.

[163] UN ESCAP, *Asia-Pacific Disaster Report*, 2017, p. vi.

[164] UN General Assembly, *Report of the Open-Ended Intergovernmental Expert Working Group on the Indicators and Terminology Relating to Disaster Risk Reduction: Note by the Secretary-General (A/71/644)*, 2016, p. 13.

[165] UN ESCAP, *Asia-Pacific Disaster Report*, 2017; UNISDR, *Global Assessment Report on Disaster Risk Reduction*, 2015, p. 54.

[166] UN ESCAP, *Asia-Pacific Disaster Report*, 2017, p. vi.

[167] UN General Assembly, *Report of the Open-Ended Intergovernmental Expert Working Group on the Indicators and Terminology Relating to Disaster Risk Reduction: Note by the Secretary-General (A/71/644)*, 2017, pp. 16, 41.

[168] UN General Assembly, *Report of the Open-Ended Intergovernmental Expert Working Group on the Indicators and Terminology Relating to Disaster Risk Reduction: Note by the Secretary-General (A/71/644)*, 2017, pp. 16, 41; UN General Assembly, *International Strategy for Disaster Reduction (A/RES/68/211)*, 2014.

[169] UN ESCAP, *Artificial Intelligence and Broadband Divide*, 2017.

[170] International Bank for Reconstruction and Development & World Bank, *Information and Communication Technologies A World Bank Group Strategy*, 2002, p. 3.

[171] UN ESCAP, *Frontier Technologies for Sustainable Development in Asia and the Pacific*, 2018, p. iii.

[172] Kundishora, *The Role of Information and Communication Technology ICTs in Enhancing Local Economic Development and Poverty Reduction*, p. 7; UNISDR, *Progress and Challenges in Disaster Risk Reduction*, 2014; ITU, *Achieving Universal and Affordable Internet in the Least Developed Countries*, 2018, p. vi.

[173] UN ESCAP, *Our Work*, 2018.

World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation and its Plan of Action (Yokohama Strategy) of 1994.[174] The International Framework focuses on reducing the number of casualties and social and economic losses caused by natural disasters.[175] The Yokohama Strategy focuses on drawing attention to developing countries, such as Small Island Developing States (SIDS), and works to improve national capacities, advance regional cooperation, promote new ICT, and mobilize regional resources.[176] During the second World Conference on Disaster Risk Reduction in 2005 in Kobe, the *Hyogo Framework for Action 2005-2015: Building the Resilience of Countries and Communities to Disasters* (Hyogo Framework)*,* was adopted to further improve on the integration of planning and policies, strengthening community-level capacities, and incorporation of risk-reduction strategies.[177] The Hyogo Framework prioritizes focused local risk management and efficient communication for recovery and preparedness.[178]

In January 2014, the General Assembly adopted resolution 68/211 on the "International Strategy for Disaster Reduction," which focused on the current state of disaster reduction, called for a review of the Hyogo Framework*,* and promoted the adoption of a post-2015 framework for DRR.[179] In March 2015, the *Sendai Framework for Disaster Risk Reduction (2015-2030)* (Sendai Framework) was adopted as the new international framework for disaster reduction, acting as a guiding document for long-term, strategically focused, and actionable objectives.[180] The Sendai Framework is built on four principles: to better understand risk, strengthen risk management, promote resilience, and enhance disaster preparedness.[181] Each guiding principle is reflected in both national and local goals, as well as global and regional goals.[182] A variety of goals within the Sendai Framework align with the *2030 Agenda for Sustainable Development* (2030 Agenda), adopted in 2015; key intersections include Sustainable Development Goal (SDG) 11 on sustainable cities and communities, SDG 13 on climate action, and SDG 17 on partnerships for the SDGs."[183] SDG 13 is of particular importance to DRR, as 74% of disaster damages since 1980 have been caused by severe-weather events.[184] The *Paris Agreement*, which was adopted by the 21st Conference of the Parties (COP) of the *United Nations Framework Convention on Climate Change* (UNFCCC) in 2015, focuses on advancing the financing, adaptation, and mitigation of climate-related risks, such as natural disasters.[185] The *New Urban Agenda* was introduced in 2016 at the United Nations Conference on Housing and Sustainable Development (UN-Habitat), and has significant impacts on DRR for urban populations.[186] The *New Urban Agenda* also outlines the impact that urban populations have on climate change.[187]

In 2002, the UN General Assembly adopted resolution 56/183 to establish the World Summit on the Information Society (WSIS) for the purpose of aligning ICTs with the international system's development goals.[188] The 2003 WSIS delivered the *Geneva Declaration and Plan of Action*, which focuses on

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[174] UN General Assembly, *International Decade for Natural Disaster Reduction* (*A/RES/44/236)*, 1989; UN World Conference on Natural Disaster Reduction, *Yokohama Strategy and Plan of Action for a Safer World*, 1994, p. 5.
[175] UN General Assembly, *International Decade for Natural Disaster Reduction* (*A/RES/44/236)*, 1989.
[176] UN World Conference on Natural Disaster Reduction, *Yokohama Strategy and Plan of Action for a Safer World*, 1994, p. 5.
[177] World Conference on Disaster Reduction, *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*, pp. 5-13.
[178] Ibid., pp. 5-13.
[179] UN General Assembly, *International Strategy for Disaster Reduction (A/RES/68/211)*, 2014.
[180] Ibid.
[181] Ibid.
[182] Ibid..
[183] UN DESA, *Sustainable Development Goals*, 2018.
[184] UNISDR, *Disaster Risk Reduction and Resilience in the 2030 Agenda for Sustainable Development*, 2018.
[185] COP 21, *Paris Agreement*, 2015.
[186] UN General Assembly, *New Urban Agenda (A/RES/71/256)*, 2017.
[187] Ibid.
[188] UN General Assembly, *World Summit on the Information Society (A/RES/56/183)*, 2002.

addressing ICTs issues on a global scale.[189] Its framework promoted a variety of actions to advance infrastructure, access to information, capacity-building, ICTs security, multi-benefit access, diversity, and global cooperation.[190] The Geneva Declaration also highlighted the importance of ICTs for disaster risk assessment and prevention.[191] The 2005 WSIS developed the *Tunis Agenda for the Information Society*, which focused its efforts on financial mechanisms for ICT, ICTs governance, and implementation of the Geneva Plan.[192] Clause 91 provided a detailed account of ICTs and their relationships to disaster management, which included cooperation and coordination of developing tools for disasters, promotion of disaster-related information sharing, and standardization of disaster management ICT.[193]

In its fifty-seventh session in 2003, UN General Assembly resolution 57/295 on "Information and Communication Technologies for Development" was adopted, promoting the use of ICTs for development as outlined in the WSIS *Geneva Declaration and Plan of Action*.[194] In 2016, UN General Assembly resolution 70/125, the "Outcome Document of the High-Level Meeting of the General Assembly on the Overall Review of the Implementation of the Outcomes of the World Summit on the Information Society" reviewed 10 years of implementation under the WSIS outcome documents and identified a strong need for greater promotion of ICTs tools for disaster.[195] In 2018, a focus towards sustainable development and ICTs was adopted through UN General Assembly resolution 72/200 on "Information and Communications Technologies for Sustainable Development," which also identified the lack of affordable and accessible disaster-related technologies.[196]

Role of the International System

As many of its Member States are located in disaster-prone regions, ESCAP focuses on building resilience toward disaster, digital inclusion for rural or marginalized populations, and regional cooperation for the advancement of DRR.[197] ESCAP particularly promotes the use of space-based information and data sources.[198] ESCAP's Regional Cooperative Mechanism for Drought Monitoring and Early Warning in Asia and the Pacific combines ICTs and DRR by connecting spatial-based monitoring systems with governments to increase their capacity and ability to withstand potential disaster.[199] Recently, ESCAP has been increasing its focus on emerging technologies such as artificial intelligence to predicts natural disasters through early warning systems, or cloud computing to increase access to disaster-related data.[200] In August 2018, ESCAP hosted the second session of the Committee on Information and Communications Technology & Science, Technology, and Innovation which aimed to address key ICTs challenges, including integration, inclusivity, innovation, space applications, and technology transfers.[201] The session emphasized inclusive technology and innovative policies, enhancement of spatial monitoring

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[189] WSIS, *Geneva Declaration and Plan of Action*, 2003.

[190] Ibid.

[191] Ibid.

[192] WSIS, *Tunis Agenda for the Information Society*, 2005.

[193] Ibid.

[194] UN General Assembly, *Information and Communication Technologies for Development (A/RES/57/295)*, 2003.

[195] UN General Assembly, *Outcome Document of the High-Level Meeting of the General Assembly on the Overall Review of the Implementation of the Outcomes of the World Summit on the Information Society (A/RES/70/125)*, 2016.

[196] UN General Assembly, *Information and Communications Technologies for Sustainable Development (A/RES/72/200)*, 2018.

[197] UN ESCAP, *ICTs and Disaster Risk Reduction*.

[198] UN ESCAP, *Space and GIS for Disaster Management*, 2018.

[199] UN ESCAP, *Regional Cooperative Mechanism for Drought Monitoring and Early Warning in Asia and the Pacific (The Drought Mechanism)*, 2014.

[200] UN ESCAP, *Frontier Technologies for Sustainable Development in Asia and the Pacific*, 2018.

[201] UN ESCAP, *Committee on Information and Communications Technology & Science, Technology and Innovation, Second Session*, 2018.

systems, regional mechanisms for technology transfer, and updates to the *Master Plan for the Asia-Pacific Information Superhighway* initiative.[202]

The United Nations Development Programme (UNDP) addresses the relationship between climate change adaptation and DRR; most recently, through its work at the World Reconstruction Conference in 2017 in Brussels, UNDP focused on the recovery capacities and overall resiliency of communities during natural disasters.[203] In a 2017 report, UNDP identified that governance is a key factor in a population's ability to recover from disaster.[204] As the primary body working toward the advancement of DRR, the United Nations Office for Disaster Risk Reduction (UNISDR) focuses on streamlining DRR related activities throughout UN organizations and activities, as well as monitoring disaster trends and developing potential mitigation strategies.[205] One outcome of the Hyogo Framework is the *Global Assessment Report on Disaster Risk Reduction* (GAR), which is conducted through UNISDR; most recently completed in 2015, the GAR provides a biennial review of natural risks and disasters, and has greatly contributed to the advancement of the Hyogo Framework and creation of the Sendai Framework.[206] The UNISDR created the revised *United Nations Plan of Action on Disaster Risk Reduction for Resilience* in 2017, focusing on the overall coordination, monitoring, and communication for streamlining DRR throughout UN bodies.[207] In a 2015 report, UNISDR noted that advancements in ICTs can greatly reduce mortality, economic losses, and increase the global capacity to meet the goals outlined in the Sendai Framework.[208]

Organizations such as the Global Network of Civil Society Organization for Disaster Reduction work to align and strengthen the ability of civil society organizations in promoting local efforts toward DRR.[209] The Community Practitioners Platform for Resilience works to improve the role women have in community-led grassroots initiatives related to disaster reduction.[210] A large portion of DRR research and advancement comes through UNISDR's Private Sector Alliance for Disaster Resilient Societies (ARISE), a platform to promote private sector investment for disaster resilience ICT.[211] ARISE was created by the Sendai Framework, which identified a lack of alignment between the public and private sectors in DRR.[212] The goals of ARISE include raising DRR awareness in the private sector, sharing knowledge, promoting innovation, and delivering actionable projects to meet the goals outlined in the Sendai Framework.[213]

ICTs for Disaster Monitoring and Early Warning Systems

ICTs and Disaster Challenges
A variety of emerging technologies can support disaster prevention.[214] In order for early warning systems to be effective, they must be accurate, timely, and reliable.[215] In Asia and the Pacific, only 40% of reporting states had early warning systems that met most of these needs.[216] Early warning systems are typically coordinated by individual regions or countries, which creates a challenge in strengthening international and regional warning systems.[217] These systems also suffer from a lack of financial support,

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[202] UN ESCAP, *Report of the Committee on Information and Communications Technology Science, Technology, and Innovation on its Second Session*, 2018.
[203] World Reconstruction Conference, *World Reconstruction Conference 3*, 2017.
[204] UNDP, 1*0 Things to Know: Disaster & Climate Risk Governance in UNDP*, 2017.
[205] UNISDR, *Factsheet on the UN Office for Disaster Risk Reduction (UNSIDR)*, 2015.
[206] UNISDR, *Global Assessment Report on Disaster Risk Reduction*, pp. xii-xiv.
[207] UNISDR, *United Nations Plan of Action on Disaster Risk Reduction for Resilience*, 2017.
[208] UNISDR, *ICTs and the Sendai Framework*, 2015.
[209] GNDR, *Programmes*, 2015.
[210] Huairou Commission, *Community Practitioner's Platform*, 2016.
[211] UNISDR, *Private Sector*.
[212] Ibid.
[213] Ibid.
[214] City of Kobe, *Comprehensive Strategy for Recovery from the Great Hanshin-Awaji Earthquake*, 2010.
[215] UNISDR, *Global Assessment Report 2011 – Gaps and Challenges in Early Warning Systems*, 2011.
[216] Ibid.
[217] UNISDR, *Early Warning Systems in Context of Sendai Framework*, 2016.

technical advancement, and physical access for repair.[218] Most early warning systems lack the ability to transfer information instantaneously; in the ESCAP region, this deficiency is made worse by varying levels of access to technology across different populations.[219] Affordability represents a significant challenge for ESCAP Member States.[220] For this reasons, shared systems have been particularly helpful; one example is the Indian Ocean Tsunami Warning System, which is estimated to save 1000 lives per year.[221]

How ICTs are Used for Disaster Risk Reduction
The United Nations Space-Based Information for Disaster Management and Emergency Response (UN-SPIDER) is a space-based monitoring system that allows for the international community to monitor geospatial environments and better prepare for and manage disasters.[222] These space-based technologies are currently accessible to ESCAP Member States, enabling early warning systems and disaster monitoring.[223] Advances in data sharing and data management have also benefited DRR efforts; researchers can use public social media data to draw more accurate conclusions about potential disasters and communicate findings to disaster responders.[224] These social media tools have allowed for crowdsourced data-creation and extraction for crisis mapping, which supports more accurate assessments of disaster damage and potential community needs.[225] Organizations such as the Humanitarian OpenStreetMap Team and the Digital Humanitarian Network provide online mapping, data analytics, and aerial imaging in order to assist recovery efforts after major disasters.[226]

ICTs for Capacity Building and Resilience

ICT Infrastructure and Accessibility in SIDS
Increasing ICT accessibility through infrastructure coverage and advancement is a growing challenge for local economies.[227] This is of particular importance for rural areas, in order to both improve a community's quality of life and to ensure the effective support of public services.[228] ICT advancement presents an opportunity to reduce the digital divide and increase economic growth in poverty stricken areas.[229] SIDS are particularly affected by disasters, with small, concentrated populations that are uniquely vulnerable to infrastructure losses.[230] Natural disasters can have a great impact on local livelihoods, particularly economic activities.[231]

ICTs for Rural Populations and Climate Change Adaptation
With 70% of the world's poor living in rural areas, their existing vulnerabilities are dramatically heightened during significant external challenges, such as disasters.[232] Aging populations are especially vulnerable, as many elderly people live alone or in extremely remote areas, with limited access to information about potential disasters or support during disasters.[233] Because of rapid urbanization, rural groups are becoming detached from informal safety nets which previously met the needs of some populations, such

[218] UNISDR, *Global Assessment Report 2011 – Gaps and Challenges in Early Warning Systems*, 2011.
[219] ICRC, *Early Warning Systems for Disaster Risk Reduction*, 2016.
[220] UN ESCAP, *Asia-Pacific Disaster Report*, 2017.
[221] Ibid.
[222] UN General Assembly, *United Nations Platform for Space-based Information for Disaster Management and Emergency Response (A/RES/61/110)*, 2006, p. 2.
[223] UN ESCAP, *Frontier Technologies for Sustainable Development in Asia and the Pacific*, 2018.
[224] *Researchers use Twitter and AI to Develop an Early-Warning System for Flood Prone Urban Areas*, First Post, 2017.
[225] UN ESCAP, *ICTs in Disaster Risk Management Initiatives in Asia and the Pacific*, 2016, pp. 9-10.
[226] Ibid., p. 10.
[227] Kundishora, *The Role of Information and Communication Technology ICTs in Enhancing Local Economic Development and Poverty Reduction*, pp. 7-9.
[228] Ibid., pp. 7-9.
[229] Ibid., pp. 8-9.
[230] Fowler, *Risks to Small Island Developing States Spotlighted*, 2017.
[231] Ibid.
[232] UNDP, *Reducing Disaster Risk: A Challenge for Development*, 2004, p. 66.
[233] UNISDR, *Progress and Challenges in Disaster Risk Reduction*, 2014, p. 35.

as religious or social structures and concentrated family units.[234] For rural populations, disaster risk can also include potential agricultural consequences such as drought and crop loss.[235] These risks are further exacerbated by global climate change.[236] SIDS are also uniquely challenged in that they are more adversely affected by climate change due to rising sea levels.[237] Climate change adaptation is "an adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities."[238] The relationship between climate change adaptation and DRR is significant as both work to reduce societal vulnerability and increase resilience among populations.[239] ICTs can support climate change adaptation through the production of decision-based data models, geographic information systems, and knowledge sharing platforms.[240] While data collection and knowledge management systems are great tools for evaluating climate-related disasters, the information provided needs to be timely, reliable, and clearly understandable.[241] Limited infrastructure support and barriers to access will continue to affect the ESCAP's ability to meet the SDG targets by 2030.[242]

ICTs Resilience

Disaster resilience involves preventing potential impacts such as fatalities and economic loss.[243] A "Build Back Better Approach" (BBB), conceptualized by the 215 UN World Conference on Disaster Risk Reduction, works to improve infrastructure and bridge access gaps among rural and urban areas by rebuilding to reduce future vulnerabilities so that forthcoming disasters will have minimal effects on the economic, structural, or societal aspects of a community.[244] The BBB approach ensures that communities, regions, and cities can immediately implement processes to prevent or reduce the effects of disaster in the midst of recovery.[245] The BBB strategy focuses on reducing risks through land use and structure repairs, assisting the social and economic recovery of a community, and involving a broad spectrum of stakeholders for monitoring and implementing recovery efforts.[246]

Conclusion

Because of the variety of costs associated with natural disasters, the ability to improve DRR through ICTs will significantly benefit ESCAP Member States.[247] To meet the SDGs by 2030, the Asia-Pacific region needs to achieve better data practices and strengthen regional ICTs infrastructure.[248] Emerging technologies such as artificial intelligence and cloud computing can expand access to communication and

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[234] Ibid., p. 117.

[235] UNISDR, *Global Assessment Report on Disaster Risk Reduction*, 2015, p. 83.

[236] Ibid., p. 83.

[237] UNISDR, *Science is Used for Disaster Risk Reduction: UNISDR Science and Technical Advisory Group Report 2015*, 2015.

[238] UNISDR, *Disaster Risk Reduction & Climate Change Adaptation in the Pacific An Institutional and Policy Analysis*, 2012, p. 3.

[239] Ibid., pp. 3-4.

[240] Sala, *Information and Communications Technologies for Climate Change Adaptation, with a Focus on the Agricultural Sector*, 2009, pp. 4-5.

[241] Ibid., pp. 4-5.

[242] UN ESCAP, *Asia and the Pacific SDG Progress Report 2017*, 2017.

[243] UNISDR, *Emerging Challenges for Early Warning Systems in Context of Climate Change and Urbanization*, 2010.

[244] UN General Assembly, *Report of the Open-Ended Intergovernmental Expert Working Group on the Indicators and Terminology Relating to Disaster Risk Reduction: Note by the Secretary-General* (*A/71/644*), 2016, p. 11; UN World Conference on Disaster Risk Reduction, *Reconstructing After Disasters: Build Back Better*, 2015, p. 1.

[245] Japan, *Disaster Management in Japan*, 2015, p. 45-46.

[246] Mannakkara & Wilkinson, *Building Back Better in Japan – Lessons from the Indian Ocean Tsunami Experience in Sri Lanka*, 2014*;* Shiomi & Poutan, *Guidance for Build Back Better in Recover, Rehabilitation and Reconstruction*, 2017.

[247] UN ESCAP, *Asia-Pacific Disaster Report 2017 – Leave No One Behind*, 2017, p. 5; UNISDR, *Global Assessment Report on Disaster Risk Reduction*, 2015, p. iv.

[248] UN ESCAP, *Asia and the Pacific SDG Progress Report 2017*, 2017.

response initiatives during disasters; in spite of these opportunities, the region must first resolve systemic barriers of affordability, connectivity, and interoperability before it sees significant benefits.[249]

Further Research

The following questions will be important considerations for delegates: How will emerging technologies such as artificial intelligence or the IoT impact a community's ability to be resilient from disaster? How will rural or vulnerable groups gain access to the growing ICTs technology, and how will they be implemented? How can ICT infrastructure be created and sustained in remote areas to ensure all populations have access to DRR related programs? How can Member States improve communication with rural and vulnerable populations during disasters? What barriers are preventing various Member States from realizing the benefits of ICTs for DRR?

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Japan, Cabinet Office. (2015). *Disaster Management in Japan.* Retrieved 9 July 2018 from: http://www.bousai.go.jp/kyoiku/panf/pdf/WP2015_DM_Full_Version.pdf
> *This document provides a variety of practical examples regarding various disaster management programs and practices in Japan, allowing delegates to better understand real-world applications for DRR. This document provides an extensive amount of detail regarding disaster management, not only from the national perspective, but regarding a lot of work that the United Nations Office for Disaster Risk Reduction is doing. This document also provides a large number of examples on how disaster management both has and has not worked effectively. This document will be useful for delegates in that it provides a detailed range of practical examples of disaster risk management in a variety of contexts.*

United Nations, General Assembly, Sixty-eighth session. (2014). *International Strategy for Disaster Reduction (A/RES/68/211)* [Resolution]. Adopted on the report of the Second Committee (A/68/438/Add.3)]. Retrieved 4 August 2018 from: https://undocs.org/en/A/RES/68/211
> *Adopted by the UN General Assembly, the International Strategy for Disaster Reduction is a guiding document for understanding the future direction for disaster reduction by the international community as a whole. This will be useful for delegates in being able to understand what foundational documents exist, and specifically what the international priorities are for the UN in regard to the topic. This will also serve useful to delegates as it supported the creation of the Sendai Framework.*

United Nations, General Assembly, Sixty-ninth session. (2015). *Sendai Declaration and Framework for Disaster Risk Reduction 2015-2030 (A/RES/69/283).* Retrieved 8 July 2018 from: http://undocs.org/A/RES/69/283
> *The Sendai Declaration and Framework were adopted in March 2015, in Japan, following the conclusion of the Hyogo Framework. The Sendai Declaration and Framework will be useful for delegates as they act as the primary documents, until 2030, on DRR. The four priorities of the framework will allow delegates to better separate the different elements of DRR, and the potential impacts that ICTs can have on its advancements. These priorities include better understanding of risk, strengthening of risk management practices, resilience, and enhancement of disaster preparedness.*

United Nations, General Assembly, Seventy-first session. (2017). *Report of the Open-Ended Intergovernmental Expert Working Group on the Indicators and Terminology Relating to Disaster Risk Reduction: Note by the Secretary-General (A/71/644).* Retrieved 4 August 2018 from: http://undocs.org/A/71/644

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[249] Gaire et al., *Internet of Things (IoT) and Cloud Computing Enabled Disaster Management.*

The goal of the Open-Ended working group is to better understand the status of DRR related initiatives. This report goes into detail on the various definitions relating to disaster reduction, and a plethora of other definitions that will allow delegates to better understand the topic as a whole. This is important to utilize when talking about DRR, as it provides universally agreed upon definitions relating to disaster, and disaster management

United Nations, Economic and Social Commission for Asia and the Pacific. (2017). *Artificial Intelligence and Broadband Divide: State of ICTs Connectivity in Asia and the Pacific 2017* [Report]. Retrieved 9 July 2018 from: https://www.unescap.org/sites/default/files/publications/State_of_ICT2017-Final_16Nov2017.pdf

This report provides an understanding of the current state of ICTs in Asia and the Pacific, specifically artificial intelligence toward development, while providing current technological advancements, priorities, and uses for international development. Delegates will find this useful as it draws upon some of the challenges that the region is facing in terms of technological advancement. This includes aspects such as infrastructure and rural-urban divides. This report also provides an outlook on the effects of artificial intelligence for DRR.

United Nations, Economic and Social Commission for Asia and the Pacific. (2017). *Asia-Pacific Disaster Report 2017 – Leave No One Behind.* Retrieved 8 July 2018 from: https://www.unescap.org/sites/default/files/publications/0_Disaster%20Report%202017%20High%20res.pdf

This report will provide delegates with a strong understanding of current priorities and outcomes of ESCAP in its efforts toward disaster risk reduction. The theme of the report, "Leave no one behind," is important as it not only ensures that all are supported, but that working toward disaster risk reduction requires a regional and collaborative effort. The report provides the current status on preventative and reactive efforts, and outlines some of the opportunities that are affecting both rural and urban populations. This document is also important for understanding the various direct and indirect factors that are affecting people impacted by disaster.

United Nations, Economic and Social Commission for Asia and the Pacific. (2018). *Asia and the Pacific SDG Progress Report 2017.* Retrieved 9 July 2018 from: https://www.unescap.org/sites/default/files/publications/Asia-Pacific-SDG-Progress-Report-2017.pdf

This is an important report for understanding many of the linkages that are affecting advancement of both DRR and information and communication technologies. Understanding the progress of the SDGs in the region will allow delegates to understand how to implement solutions that fit with the current status of the region. The report also provides an outlook on regional and sub-regional differences, and how potential solutions will need to be adapted trough each region.

United Nations, Economic and Social Commission for Asia and the Pacific. (2018). *Frontier Technologies for Sustainable Development in Asia and the Pacific* [Report]. Retrieved 9 July 2018 from: *https://www.unescap.org/sites/default/files/publications/Frontier%20tech%20for%20SDG.pdf*

This document provides a broad understanding of current ICTs objectives within the Asia-Pacific region and provides details into the impacts of technology toward regional development. The document presents opportunities, such as economic, social, or environmental impacts, as well as challenges, such as the technological divide. This document will be useful for delegates as it will allow them to understand how to best implement and sustain new and existing technology in the region, and work toward the advancement of disaster risk reduction techniques.

United Nations Office for Disaster Risk Reduction. (2015). *Global Assessment Report on Disaster Risk Reduction.* Retrieved 11 August 2018 from: https://www.preventionweb.net/english/hyogo/gar/2015/en/home/GAR_2015/GAR_2015_1.html

Acting as the 2015 comprehensive review of DRR for the international community, the Global Assessment Report for 2015 is an extremely comprehensive document that goes into detail on all elements related to DRR. Particularity, this will be important for understanding the current status of DRR, how the international community is currently managing it, current issues, and potential improvements. Not only will this document provide a good understanding on country and regional issues, but there is also a large amount of data accessible from the report that will guide delegates in understanding some details with their topic. The report is a valuable tool for understanding natural disasters and potential risks, as it outlines specific country and regional risks, implications and exposures.

United Nations Office for Disaster Risk Reduction. (2018). *Disaster Risk Reduction and Resilience in the 2030 Agenda for Sustainable Development* [Report]. Retrieved 15 August 2018 from: https://www.unisdr.org/files/46052_disasterriskreductioninthe2030agend.pdf
> *In order to gain a complete understanding of the current status of DRR in relation to the SDGs, a comprehensive review was completed by UNISDR in 2018. This report is important to understand the links between DRR and the SDGs. This document goes into detail on each of the 17 goals and how they are impacting DRR. This is also an important resource for understanding why or how the Asia-Pacific region is not meeting the SDGs.*

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III. Promoting Climate Resilience

"We are the first generation to be able to end poverty, and the last generation that can take steps to avoid the worst impacts of climate change. Future generations will judge us harshly if we fail to uphold our moral and historical responsibilities."[250]

Introduction

The United Nations (UN) Intergovernmental Panel on Climate Change (IPCC) defines climate resilience as "the capacity of social, economic, and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation."[251] The IPCC further defines climate adaptation as "the process of adjustment to actual or expected climate and its effects."[252] Thus, climate resilience is a form of climate adaptation by which cities, regions, countries, and the global community can address the realities of a changing climate.[253] UN Secretary-General António Guterres has called upon members of the international community to support climate-resilient development.[254] The most recent Executive Secretary of the UN Economic and Social Commission for Asia and the Pacific (ESCAP), Shamshad Akhtar, has called upon states in Asia and the Pacific to "promote the transition to low-carbon and climate-resilient societies in our region."[255]

The IPCC has determined that human activity from industry, greenhouse gas emissions, and land use is responsible for the majority of the global temperature increases driving climate change.[256] As human development has increased since the 20th century, temperature increases have continued to accelerate and set new records accordingly, with 2016 and 2017 being the hottest years on record.[257] In Asia and the Pacific, recorded average temperatures for 2017 were 0.88°C and 0.51°C higher than those measured between 1981 and 2010, which increases the likelihood of more intense natural disasters and heat wave episodes in the region.[258] Of the more than 23 million people worldwide displaced as a result of climate change-intensified natural disasters in 2016, 19.5 million came from states that are Member States of ESCAP.[259] Some populations in the region are likely to inordinately feel climate change's effects, such as women, who are more likely to be affected by natural disasters due to their social status.[260] In addition, sea-level rise poses a great risk to many states in Asia and the Pacific, particularly Small Island Developing States (SIDS) or mainland states with major cities and population centers located along their coastlines.[261] To put the threat in numbers, the IPCC predicts that by 2100 the average elevation of the surface of the ocean could rise by 0.5-1 meters.[262] Additionally, temperature increases are expected to dramatically intensify extreme heat events and, by 2100, summers in Asia and the Pacific could be 6°C hotter on average.[263] When temperature increases exceed 7°C, humans are at

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[250] WEF, *Speech by former UN Secretary-General Ban Ki-moon on Tackling Climate, Development and Climate Change at World Economic Forum, Plenary Session on 25 January 2015 in Davos*, 2015.

[251] UN IPCC, *Annex I: Glossary, Acronyms and Chemical Symbols*, 2014, p. 1270.

[252] Ibid., p. 1251.

[253] UNFCCC, *Understanding Climate Resilience*, 2018.

[254] Austrian World Summit, *Speech by UN Secretary-General António Guterres at Austrian World Summit at R20 Austrian World Summit on 15 May 2018 at Austria*, 2018.

[255] UN ESCAP, *Speech by former ESCAP Executive Secretary Shamshad Akhtar Delivered at Asia-Pacific Climate Week High Level Opening on 15 December 2017 in Bangkok*, 2017.

[256] UN IPCC, *Anthropogenic and Natural Radiative Forcing,* **2**014, pp. 661-662, 675-688.

[257] WMO, *WMO Statement on the State of the Global Climate in 2017*, 2018, p. 4.

[258] WMO, *WMO Statement on the State of the Global Climate in 2017*, 2018, pp. 6, 23, 26, 32; Kang & Eltahir, *North China Plain Threatened by Deadly Heatwaves due to Climate Change and Irrigation*, p. 1.

[259] WMO, *WMO Statement on the State of the Global Climate in 2017*, 2018, p. 32; Internal Displacement Monitoring Centre, *Global Report on Internal Displacement*, 2017, p. 38.

[260] Chindarkar, *Gender and Climate Change-induced Migration: Proposing a Framework of Analysis*, 2012, p. 3.

[261] UN ESCAP, *Climate Change Adaptation for Water Management in a Green Economy*, 2012, p. 4.

[262] UN IPCC, *Sea Level Change*, 2014, p. 1140.

[263] Asian Development Bank, *A Region at Risk: The Human Dimension of Climate Change in Asia and the Pacific*, 2017, p. 20.

risk of hyperthermia and even death.[264] Given these regional risks, ESCAP is determined to guide its Member States on the path to climate resilience in order to avoid the worst effects of climate change in the future.[265]

International and Regional Framework

International efforts to address climate change and develop climate resilience began in 1992 with the UN Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil.[266] A major outcome of UNCED was the adoption of *Agenda 21*, one of the first major international agreements to address the issue of climate change and produce a roadmap for international sustainable development.[267] *Agenda 21* outlines objectives and implementation goals for building climate resilience such as sharing information on climate data, developing plans to respond to climate change-intensified natural hazards, monitoring environmental quality, examining how marginalized people are impacted by climate change, studying the environmental and socioeconomic impacts of agricultural land use, collecting data on sea-level rise and its particular impacts on SIDS, and assisting SIDS with adapting to the impacts of sea-level rise.[268]

The *Kyoto Protocol to the United Nations Framework Convention on Climate Change* (Kyoto Protocol) of 1997 was one of the first international agreements to cap global greenhouse gas emissions in an effort to stem climate change.[269] Part of its approach included the creation of the Adaptation Fund to assist developing states in financing climate-resilient development and infrastructure.[270] Parties to the *Paris Agreement* (2015) pledged to control the rise of the average global temperatures, particularly at the urging of SIDS and developing states that will experience the most immediate impacts of climate change-induced sea-level rise and severe-weather events.[271] Articles 7 through 10 of the *Paris Agreement* also contain climate resilience strategies, including agreements to prepare early warning systems for natural disasters, to share best practices and knowledge among Member States that will allow them to pursue climate adaptation and resilience, and provide assistance to vulnerable states against the effects of climate change.[272] The *Marrakech Partnership for Global Climate Action* of 2017 outlines goals pertaining to climate resilience, which are to be fulfilled by Member States by 2020; one goal in particular focuses on the involvement of the private sector in climate resilience by incentivizing private investment in resilient infrastructure and sharing of climate data.[273] The United Nations Framework Convention on Climate Change (UNFCCC) Secretariat's *Gender Action Plan* (GAP) of 2017 strives to ensure that women and their concerns are included in climate action and outlines five action priority areas, including capacity-building for women's involvement in climate action, gender parity in the UNFCCC Secretariat, coherence in gender parity across all UN organizations, incorporating women's concerns in executing the *Paris Agreement*, and continuous monitoring and reporting to improve upon GAP's implementation.[274]

In 2014, the Third International Conference on Small Island Developing States produced the *SIDS Accelerated Modalities of Action (SAMOA) Pathway*, which outlines a path for more sustainable, climate-resilient development for SIDS.[275] Specifically, the SAMOA Pathway calls for investment in human capital in the populations of SIDS, climate-resilient eco-tourism, and climate change preparedness.[276] Some

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[264] Ibid., p. 22.
[265] UN ESCAP, *Responding to the Climate Change Challenge in Asia and the Pacific: Achieving the Nationally Determined Contributions (NDCs)*, 2017, pp. iii, 7-9.
[266] UN Division for Sustainable Development, *Agenda 21*, 2018.
[267] Ibid.
[268] UNCED, *Agenda 21*, 1992, pp. 77, 105, 133, 169, 187, 188, 193-195
[269] COP 3, *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, 1997.
[270] UNFCCC, *Adaptation Fund*, 2018.
[271] Ourbak & Magnan, *The Paris Agreement and Climate Change Negotiations: Small Islands, Big Players*, 2017, p. 1.
[272] COP 21, *Paris Agreement*, 2015.
[273] UNFCCC, *Marrakech Partnership*, 2017, pp. 2-4.
[274] UNFCCC, *Gender and Climate Change*, 2017, pp. 3-4.
[275] UN General Assembly, *SIDS Accelerated Modalities of Action (SAMOA) Pathway (A/RES/69/15)*, 2014.
[276] Ibid., pp. 7-8, 20, 23-29.

specific actions identified by the SAMOA Pathway include increased local employment, increasing women's role in local projects and policy development, increasing the educational and training experience of SIDS' workforces, creating accountability for tourism businesses to the local communities that host them, involving marginalized populations in climate planning, and utilizing the Green Climate Fund to finance climate-resilient infrastructure and programs.[277]

In 2015, the UN General Assembly adopted resolution 70/1, "Transforming Our World: the 2030 Agenda for Sustainable Development" (2030 Agenda), which outlines 17 Sustainable Development Goals (SDGs) and 169 targets.[278] Some goals address climate resilience, such as SDG 7 on affordable clean energy, which sets targets for transitioning to renewable energy sources which will help reduce global greenhouse gas emissions that cause climate change.[279] SDG 11 on sustainable cities and communities encourages urban resilience through sustainable architecture and infrastructure which ensures that urban dwellers have access to safe and comfortable dwellings and workplaces in the face of a changing climate.[280] SDG 13 on climate action sets targets for Member States to include marginalized groups in climate change action, making such efforts more comprehensive and effective.[281]

In 2015, the United Nations International Strategy for Disaster Risk Reduction (UNISDR) published the *Sendai Framework for Disaster Risk Reduction 2015-2030* (Sendai Framework), which is the current international strategy to address natural disasters and hazards all over the globe, including those made more devastating due to climate change.[282] The Sendai Framework's targets strive to reduce loss of life, improve hampered economic development, preserve infrastructure of regional and national importance, and foster enhanced international collaboration in disaster reduction efforts.[283] Some of the Sendai Framework's metrics for evaluating the fulfillment of its goals include reductions in disaster-related deaths per 100,000 people from 2015 to 2030, reductions in the number of hospitals and schools damaged by disasters through increased structural resilience by 2030, and an increase in the level of international aid provided to developing states that are vulnerable to climate change by 2030.[284] The Sendai Framework also underscores the importance of implementing these strategies in the areas most impacted by natural disasters, including SIDS who consist a portion of ESCAP's Member States.[285]

With regard to sustainable and climate-resilient urban development, the United Nations Human Settlements Programme (UN-Habitat) convened its third United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador in 2016.[286] Habitat III adopted the *New Urban Agenda* which sets out a common urban vision of equitable, accessible, climate-resilient cities.[287] Member States at the Habitat III committed to providing cities with affordable housing, reliable municipal services, and safe, accessible urban infrastructure.[288] The *New Urban Agenda* also addresses the need for climate resilience through environmental protection of urban hinterlands, hazard mitigation, and renewable energy which will help make cities more resilient during disasters and reduce their contribution to greenhouse gas emissions.[289] ESCAP published its *United Nations Conference on Housing and Urban Development (Habitat III) Regional Report: Transformative Urbanization for a Resilient Asia-Pacific* after the conference to guide its Member States in integrating the goals of the *New Urban Agenda* with their

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[277] UN General Assembly, *SIDS Accelerated Modalities of Action (SAMOA) Pathway (A/RES/69/15)*, 2014, pp. 6-9.
[278] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[279] Ibid., p. 19.
[280] Ibid., pp. 21-22.
[281] Ibid., p. 23.
[282] UNISDR, *Sendai Framework for Disaster Risk Reduction*, 2018.
[283] UNISDR, *Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030*, 2015.
[284] UN General Assembly, *Sendai Declaration and Framework for Disaster Risk Reduction 2015-2030 (A/RES/69/283)*, 2015, p. 12.
[285] UNISDR, *Sendai Framework for Disaster Risk Reduction*, 2018, p. 24.
[286] Habitat III, *About Habitat III*, 2018.
[287] UN General Assembly, *New Urban Agenda (A/RES/71/256)*, 2016, pp. ii-iv, 5-8.
[288] Ibid., pp. 11-13.
[289] Ibid., pp. 8, 14, 18-19.

current policies.[290] The report found that cities in Asia and the Pacific must balance urban economic growth with unchecked urban sprawl while also curtailing the vast number of people living in the region's slums.[291]

Role of the International System

ESCAP has organized numerous conferences, such as the 2017 Asia-Pacific Climate Week in Thailand, alongside other UN institutions including the UNFCCC Secretariat, the United Nations Development Programme (UNDP), the United Nations Environment Programme (UN Environment), among others, to promote climate resilience efforts among its Member States.[292] The Asia-Pacific Climate Week produced the *Regional Climate Action Agenda* which streamlines the financing of climate resilience projects.[293] ESCAP also facilitated the sixth meeting of the Asia-Pacific Forum on Sustainable Development in September 2018 where ESCAP Member States met to determine how to promote inclusive development and ensure that international climate resilience agreements see implementation at the local level.[294] At the session convened in Tbilisi, Georgia, delegates identified the importance of intraregional sharing of aid and resources for dealing with the region's high numbers of natural disasters.[295] ESCAP also administers the Trust Fund for Tsunami, Disaster and Climate Preparedness which helps states within ESCAP to finance climate resilience projects such as the execution of Common Alerting Protocol systems in Maldives, Myanmar, and the Philippines.[296] ESCAP has also created the Public-Private Partnership (PPP) Qualitative Value-For-Money Toolkit which assists ESCAP Member State governments in evaluating which potential PPPs would produce the most cost-effective public works projects, which may be useful for Member States trying to finance climate-resilient infrastructure.[297]

On the global level, the UNFCCC Secretariat is supporting resilience efforts through its Adaptation Committee, which monitors and provides guidance on the implementation of climate adaptation by the members of its Conference of the Parties (COP).[298] The most recent meeting of the Adaptation Committee took place in July 2018 in Tokyo where members discussed implementation strategies for the SDGs and the Sendai Framework.[299] The Adaptation Committee administers the Technical Examination Process on Adaptation (TEP-A), the objective of which is to organize efforts and share best practices among the members of the Adaptation Committee.[300] At the 2017 meeting of the TEP-A, members concluded that National Adaptation Plans (NAPs) could be used to integrate strategies for climate adaptation and risk reduction strategies.[301] NAPs are documents drafted by States parties to the UNFCCC which helps each Member State identify its unique adaptation needs, prepare implementation measures to address those needs, and activate monitoring and reporting mechanisms to track progress.[302] The UNFCCC Secretariat also manages the Least Developed Countries Expert Group

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[290] Habitat III, *United Nations Conference on Housing and Sustainable Urban Development (Habitat III) Regional Report for Asia and the Pacific: Transformative Urbanization for a Resilient Asia-Pacific*, 2016.

[291] Ibid., pp. 7-9.

[292] UN ESCAP, *2017 Asia-Pacific Climate Week*, 2017; UN ESCAP, *Asia-Pacific Ministerial Summit*, 2017.

[293] UNFCCC, *Asia-Pacific Climate Week Calls for Scaling-up Climate Action*, 2017.

[294] UN ESCAP, *Subregional Preparatory Meeting for the 6th Session of the APFSD*, 2018.

[295] UN ESCAP, *Conclusion and the Way Forward North and Central Asian Forum on Implementation of the Sustainable Development Goals*, 2018.

[296] UN ESCAP, *ESCAP Multi-Donor Trust Fund for Tsunami, Disaster and Climate Preparedness*, 2015, p. 6.

[297] UN ESCAP, *Public-Private Partnership (PPP) Qualitative Value-For-Money Toolkit*, 2018.

[298] UNFCCC, *Adaptation Committee*, 2018.

[299] UNFCCC, *Adaptation Committee: Expert meeting on National Adaptation Goals/Indicators and their Relationship with the Sustainable Development Goals and the Sendai Framework for Disaster Risk Reduction*, 2018.

[300] UNFCCC, *Technical Examination Process on Adaptation (TEP-A)*, 2018.

[301] UNFCCC, *Opportunities and Options for Integrating Climate Change Adaptation with the Sustainable Development Goals and the Sendai Framework for Disaster Risk Reduction 2015–2030*, 2017, p. 27.

[302] COP 17, *Report of the Conference of the Parties on its Seventeenth Session, held in Durban from 28 November to 11 December 2011: Annex - Initial Guidelines for the Formulation of National Adaptation Plans by Least Developed Country Parties*, 2011.

whose purpose is to assist those members of the COP who are Least Developed Countries (LDCs) in the execution of their NAPs.[303]

The 2014 Medellín Collaboration for Urban Resilience is a partnership between more than 4,000 cities worldwide dedicated to increasing urban disaster risk reduction, providing technical expertise on sustainability, and financing urban climate resilience strategies, including reinforced structure, enhanced land use planning and expanded capacity of municipalities to address climate change issues.[304] Medellín also strives to assist cities in fulfilling SDG 11 on sustainable cities and communities of the 2030 Agenda by increasing the resilience of urban structures to withstand disasters, facilitating environmental oversight for natural areas, and providing municipal jurisdictions with the tools they require to address natural disasters as they may emerge.[305] These include the Disaster Resilience Scorecard for Cities, the Quick Risk Estimation Tool, and the Participatory Hazards Mapping Tool, which helps local governments assess how their city would fare under certain natural hazards and develop disaster emergency operations plans.[306] UN-Habitat has also produced the City Resilience Profiling Programme (CRPP) which aims to develop a unified, global package for urban hazard planning that can be universally-applied in cities all over the world.[307] CRPP is currently being developed as a pilot program in 12 cities around the globe; under ESCAP's mandate are Dagupan, Philippines; Balangoda, Sri Lanka; and Wellington, New Zealand.[308]

Resilient Cities and Urban Systems

Climate resilience in cities and urban areas in the Asia-Pacific region is challenged by the mass trend of urbanization, with an estimated 2.5 billion people living in the region's urban areas by 2025.[309] These new urban dwellers will require more food, water, energy, transportation, and housing than city infrastructures are currently designed to provide.[310] As the number of poverty-afflicted people increases as a result of rural-to-urban migration, cities in the Asia-Pacific region that fail to create more affordable housing will likely see these populations erect informal settlements, often in areas that are most vulnerable to climate change such as low-elevation coastal zones, flood plains, and river ways.[311] Additionally, informal and unplanned settlements utilize resources, already constricted by climate change, more inefficiently as a result of inadequate or non-existent infrastructure.[312] UN-Habitat and UNDP recommend that cities address informal settlements and unplanned growth through the adoption of land use plans, zoning, comprehensive building safety standards, and requiring sustainable building materials in construction.[313]

Cities and urban areas around the world, including those in Asia and the Pacific, experience a phenomenon called "urban heat island effect" (UHIE) in which cities experience markedly higher

[303] UNFCCC, *Least Developed Countries Expert Group*, 2018; UNFCCC, *National Adaptation Plan*, 2018; UNFCCC, *Report of the Conference of Parties on its Sixteenth Session, held in Cancun from 29 November to 10 December 2010, Part Two: Action Taken by the Conference of Parties at its Sixteenth Session*, 2011, pp. 4-5.

[304] UN-Habitat, *Medellin Collaboration Expands Commitment to Resilience Beyond 4,000 cities*, 2016; UN-Habitat, *Statement by Habitat III Conference on Medellín Collaboration for Urban Resilience Habitat III Conference*, 2016.

[305] UN-Habitat, *Statement by Habitat III Conference on Medellín Collaboration for Urban Resilience Habitat III Conference*, 2016.

[306] ResilienceTools, *Tools Overview*, 2018.

[307] UN-Habitat, *City Resilience Profiling Programme*, 2018.

[308] Ibid.

[309] UN ESCAP, *The State of Asian and Pacific Cities 2015: Urban Transformations Shifting from Quantity to Quality*, 2015, pp. 21-22.

[310] World Bank, *Developing Countries Need to Harness Urbanization to Achieve the MDGs: IMF-World Bank report*, 2013.

[311] Habitat III, *United Nations Conference on Housing and Sustainable Urban Development (Habitat III) Regional Report for Asia and the Pacific: Transformative Urbanization for a Resilient Asia-Pacific*, 2016, p. 23; UNDP, *Urbanization and Climate Change*, 2013, p. 7.

[312] UN ESCAP, *Climate Change Adaptation for Water Management in a Green Economy*, 2012, p. 43.

[313] UNDP, *Promoting Resilient Housing and Secure Tenure in a Changing Climate*, 2014, p. 4.

temperatures than the surrounding lands in their periphery as a result of too many dark, heat-absorbing surfaces or a lack of adequate urban forestry.[314] As cities become hotter, like the rest of the Asia-Pacific region, UHIE will become more dramatic, making cities dangerously hot during summer months or extreme heat events.[315] Climate change is also expected to increase severe precipitation which can cause cities to become inundated with floodwaters if there are too many impermeable surfaces (i.e. roadways, concrete plazas, development on flood plains) or inadequate flood control infrastructure.[316] Hong Kong and Singapore are actively addressing climate resilience by implementing congestion pricing and ending public subsidies for vehicle parking spaces which will help curb greenhouse gas emissions by reducing driving behavior among its residents.[317] Shanghai has established 325 miles of sea walls with adjacent parkland, which both reduces the likelihood of the city being flooded by climate change-intensified typhoon events and reduces UHIE in the city.[318]

Resilience in Small Island Developing States

Sea-level rise poses a significant threat to SIDS through loss of land, saltwater intrusion into water tables and sources of freshwater, and increased inundation by seawater onto land during natural disasters.[319] SIDS will experience sea-level rise at different rates but some, like the Maldives with 80% of its land only one meter above sea-level, are particularly prone to its effects.[320] Apart from sea-level rise, climate change will disrupt the agriculture-based economies of many SIDS, such as Samoa, Tonga, and Vanuatu, where more than half of exports consist of agricultural products.[321] Acidifying oceans as a result of elevated levels of CO_2 in the atmosphere are expected to wipe out many of the coral reefs that foster fisheries, which will likely put current fishers out of work.[322] The collapse of coral reefs also makes SIDS more vulnerable to coastal erosion and storm-generated waves.[323]

SIDS often experience difficulty in securing investment for infrastructure and development projects due to their possession of significant debt as a portion of their gross domestic product (GDP) and their distance from other countries, which increases the cost of importing goods such as equipment and building materials for infrastructure projects.[324] SIDS also face challenges in becoming energy independent as the vast majority of their energy sources are imported fossil fuels, and the costs of adopting renewable sources of energy are often too high for SIDS governments to afford on their own without external aid.[325] Additionally, insurance for climate change-related natural disasters or sea-level rise may prove too expensive or exclude certain disaster events from their coverage, leaving SIDS' governments in difficult financial positions.[326] The populations affected by rising sea levels in the low-elevation coastal zones or atolls of SIDS will seek to relocate either to larger islands, areas with higher elevation, or cities, placing greater strain on energy, water, and transportation infrastructure.[327] Fiji has taken action to promote resilience, including pre-emptively relocating human settlements that it believes will be submerged as a result of sea-level rise; as of 2014, Fiji has already relocated 42 of its villages outside of predicted sea-

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[314] United States of America, *Learn About Heat Islands*, 2017; US EPA, *Measuring Heat Islands*, 2017.
[315] UNU, *Heat is an Urban Killer*, 2016.
[316] Morton, Both Urban Flooding and Rural Drying to Intensify, *Earth: The Science Behind the Headlines*, 2017.
[317] UN ESCAP, *The State of Asian and Pacific Cities 2015: Urban Transformations Shifting from Quantity to Quality*, 2015, p. 86.
[318] Georgetown Climate Center, *China and US Case Studies: Preparing for Climate Change: Shanghai: Targeting Flood Management*, 2015.
[319] UN ESCAP, *Climate Change Adaptation for Water Management in a Green Economy*, 2012.
[320] Ibid., p. 24.
[321] UN ESCAP, *Integrating Disaster Risk Reduction and Climate Change Adaptation*, 2017, p. 2.
[322] UN ESCAP, *Regional Issues in Disaster Risk Reduction, Including those Related to Climate Change Adaptation, and Policies Related to Mainstreaming Disaster Risk Reduction into Socio-economic Development Planning*, 2013, p. 4.
[323] UN IPCC, *Small Islands*, 2014, pp. 1621, 1641.
[324] OECD, *Climate and Disaster Resilience Financing in Small Island Developing States*, 2016, pp. 8-9.
[325] UN IPCC, *Small Islands*, 2014, pp. 1641-1642.
[326] Ibid., p. 1643.
[327] Ibid., p. 1639.

level rise inundation areas.[328] As a major tourist destination, Fiji is also requiring its hospitality industry to institute water and energy efficiency measures in its facilities to conserve its invaluable water supply and reduce its dependence on foreign sources of fossil-fuel.[329] Some SIDS have been successful in gaining project financing from private institutions such as the Asian Development Bank, which has financed multiple climate-resilient pieces of infrastructure, including bridges, ports, and wastewater systems in Kiribati, Nauru, Solomon Islands, and Fiji.[330] Increased borrowing to finance climate resilience projects by SIDS, however, may prevent SIDS governments from allocating funding to important social institutions like education, healthcare, or pensions.[331]

Involving Women in Resilience Efforts

Women in Asia and the Pacific face systematic barriers to pursuing climate resilience action for their families and communities, including lower literacy rates, less education and training, restricted social roles, and limited political and economic independence.[332] When climate change-intensified disasters strike, women are inordinately impacted due to their socially-defined roles which require them to either flee with their family or remain in the disaster zone due to their socially-inhibited freedom of movement.[333] Women who flee may find themselves victims of sexual violence while in transit or in emergency camps.[334] Additionally, many women in Asia and the Pacific perform domestic activities or have occupations in informal sector jobs, such as street vending or agriculture, all of which are uniquely vulnerable to the impacts of climate change.[335]

The UNFCCC's GAP identifies the critical role women play in climate action and resilience and calls for women's equal participation in policy development and implementation.[336] A 2013 UNDP study found that women were particularly effective in organizing communities to prepare for climate change or implement climate resilience policies.[337] As the backbone of the agricultural workforce of the Asia-Pacific region, women are well-situated to implement climate resilience agricultural policy at the local level and can utilize their knowledge of locally-adapted crops that are more likely to withstand climate change.[338] Climate-resilient water infrastructure and education may also help relieve women in Asia and the Pacific of their water-collecting duties, which will likely become complicated when climate change-intensified droughts and floods lead to water scarcity or contamination.[339] In Papua New Guinea's Nissan District, women self-organized and educated each other about water-saving practices for long periods of drought which helped them gain community leadership positions and the respect of the local men.[340] In the Bangladeshi village of Dakkin Kadamtola, female leadership was crucial in helping more than 460 local farmers in experimenting with and adapting more climate-resilient crops which allowed the farmers to experience upward economic mobility.[341]

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[328] Republic of Fiji, *A Green Growth Framework for Fiji: Restoring the Balance in Development that is Sustainable for Our Future*, 2014, p. 32.

[329] Ibid., pp. 96-97.

[330] Asian Development Bank, *Building Resiliency in the Pacific*, 2018, p. 4.

[331] OECD, *Climate and Disaster Resilience Financing in Small Island Developing States*, 2016, p. 58.

[332] UNDP, *Overview of Linkages Between Gender and Climate Change*, 2013, pp. 2-3.

[333] Chindarkar, *Gender and Climate Change-induced Migration: Proposing a Framework of Analysis*, 2012, p. 3.

[334] Republic of Fiji, *Climate Vulnerability Assessment: Making Fiji Climate Resilient*, 2017, p. 75.

[335] UN WomenWatch, *Fact Sheet: Women, Gender Equality and Climate Change*, 2009, p. 1; UN ESCAP, *Gender, the Environment, and Sustainable Development in Asia and the Pacific*, 2017, pp. 10-12, 27; UN ESCAP, *Gender Equality and Women's Empowerment in Asia and the Pacific*, 2015, p. 61.

[336] UNFCCC, *Gender and Climate Change*, 2017, pp. 3-4.

[337] UNDP, *Overview of Linkages Between Gender and Climate Change*, 2013, p. 4.

[338] UN-Women, *Why is Climate Change a Gender Issue?*, 2018, p. 3.

[339] UN WomenWatch, *Fact Sheet: Women, Gender Equality and Climate Change*, 2009, pp. 3-4.

[340] Care Climate Change and Resiliency Information Centre, *Women as Drivers of Change in Papua New Guinea*, 2018.

[341] Care Climate Change and Resiliency Information Centre, *Momotaj Fighting with Climatic Vulnerabilities*, 2018.

Conclusion

As climate change is expected to impact the Asia-Pacific region severely through natural disasters and unprecedented temperature increases, ESCAP has an opportunity to help guide its Member States on a path of climate resilience.[342] Among the issues ESCAP will need to address are balancing urban growth with new climate-resilient urban infrastructure, ensuring women's role in pursuing climate change action, and safeguarding SIDS against the worst aspects of climate change.[343] With guidance from the 2030 Agenda, Sendai Framework, *New Urban Agenda*, and the UNFCCC GAP, ESCAP will need to work diligently in the coming decade to make the goals of these frameworks a reality in Asia and the Pacific.[344]

Further Research

As delegates begin their research, they should consider the following questions: What are the ways in which ESCAP can support the resilience efforts of each Member State within its mandate? What are the ways that ESCAP can promote and improve already existing resilience efforts? How should ESCAP support SIDS and less affluent Member States to stay on track with pursuing their fulfillment of the 2030 Agenda? What are ways that ESCAP can include women in the pursuit of resilience efforts and enact the GAP? How could ESCAP address the increased strains of climate change on urban areas?

Annotated Bibliography

Asian Development Bank. (2018). *Building Resiliency in the Pacific*. Retrieved 11 August 2018 from: https://www.adb.org/sites/default/files/publication/372696/building-resiliency-pacific.pdf
> *The Asian Development Bank published this document which outlines several of the climate resilience-oriented infrastructure projects it has financed in the Pacific region. The document selects certain SIDS as case studies and describes the ways each SIDS is expected to be impacted by climate change and then briefly relates resilience projects that have been launched in those SIDS in response. Delegates interested in focusing on finance for SIDS are strongly advised to read this document. The chart in section 4 will give delegates an idea of which projects the finance investments are being directed into.*

Care Climate Change and Resilience Information Centre. (2018). *Women as Drivers of Change in Papua New Guinea*. Retrieved 12 August 2018 from https://careclimatechange.org/case-studies/women-drivers-change-papua-new-guinea/
> *The Care Climate Change and Resilience Information Centre is an organization that monitors and promotes climate change action efforts in states across the world, including the Asia-Pacific region. The Centre features multiple stories of women in the Asia-Pacific region acting to address climate resilience, such as involving women in town-planning work, in first response groups for natural disasters, and planning for drought. It can be difficult to find case studies about resiliency action so delegates would do well to read the stories featured here. This can help delegates appreciate on-the-ground climate resiliency action that can often be difficult to picture with just policy documents.*

Republic of Fiji, Ministry of Strategic Planning. (2014). *A Green Growth Framework for Fiji: Restoring the Balance in Development that is Sustainable for Our Future*. Retrieved 11 August 2018 from: https://cop23.com.fj/wp-content/uploads/2018/01/GREEN-GROWTH-FRAMEWORK-Fiji.pdf

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[342] Asian Development Bank, *A Region at Risk: The Human Dimension of Climate Change in Asia and the Pacific*, 2017, p. x.

[343] UN ESCAP, *The State of Asian and Pacific Cities 2015: Urban Transformations Shifting from Quantity to Quality*, 2015; UNDP, *Overview of Linkages between Gender and Climate Change*, 2013; UN ESCAP, *Climate Change Adaptation for Water Management in a Green Economy*, 2012.

[344] UN General Assembly, *Sendai Declaration and Framework for Disaster Risk Reduction 2015-2030 (A/RES/69/283)*, 2015; UN General Assembly, *Transforming Our World: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015; UN General Assembly, *New Urban Agenda (A/RES/71/256)*, 2016; UNFCCC, *Gender and Climate Change*, 2017.

The Republic of Fiji published its Green Growth Framework which is a roadmap for the country to more sustainable development and promotes climate resilience through its vision for enhanced land use planning and risk management practices. Many of the policy documents that delegates will examine are often at the international level, so it can help delegates to gain perspective on how an individual Member State is addressing resilience issues. Delegates should direct their attention to the sections focusing on agriculture and tourism given that these make substantial portions of the Fijian economy.

Georgetown Climate Center. (2015). *China and US Case Studies: Preparing for Climate Change.* Retrieved 12 August 2018 from: http://www.georgetownclimate.org/files/report/GCC-Shanghai_Flooding-August2015_1.pdf

The Georgetown Climate Center is an organization run by Georgetown University in the United States that advises the US government on climate change policies. The Center looks at case studies in China and the United States and compares how each country is addressing climate resilience. Thus, the Center is a useful resource for understanding how cities and regions in two of the world's largest states and economies are supporting climate resilience at the local level. Examples include responding to sea-level rise, UHIE, and climate change-intensified droughts.

Organization for Economic Co-operation and Development. (2016). *Climate and Disaster Resilience Financing in Small Island Developing States.* Retrieved 11 August 2018 from: https://reliefweb.int/sites/reliefweb.int/files/resources/114389-WP-v2-PUBLIC-CDRFinSIDs-20170208-webversion.pdf

The Climate and Disaster Resilience Financing in Small Island Developing States document outlines in detail the current situation regarding finance in SIDS. The executive summary will provide a broad overview of the concepts before reading the document's sections in detail. Those delegates who are interested in SIDS finance, however, should read Chapter 3 which discusses how SIDS can potentially lose their relief aid when they graduate to the next level of SIDS income levels.

United Nations Development Programme. (2014). *Promoting Resilient Housing and Secure Tenure in a Changing Climate* [Policy Brief]. Retrieved 8 September 2018 from: http://www.fukuoka.unhabitat.org/programmes/ccci/pdf/3_Promoting_Resilient_Housing_and_Secure_Tenure_in_a_Changing_Climate.pdf

This policy brief quickly identifies the topics of land use, land tenure, and housing policies in Asia and the Pacific and provides some recommendations for Member States to pursue. Particularly, the brief outlines how decreasing affordability, lack of land rights, increasing slum populations, and a lack of effective land use regulations are detrimental to urban resilience. Delegates should look at the policy recommendations on page four and may find them useful for their position papers. Case studies are provided in boxes throughout the document that provide context and real-world examples for the document's content.

United Nations, Economic and Social Commission for Asia and the Pacific. (2012). *Climate Change Adaptation for Water Management in a Green Economy* [Discussion Paper]. Retrieved 8 September 2018 from: https://www.unescap.org/sites/default/files/Climate-Change-Adaptation.pdf

This discussion paper outlines how climate change will alter the availability, quality, and supply of water within the Member States of UN ESCAP. The scope ranges from the effects of sea-level rise to drought in urban areas. The paper divides its perspectives into different geographic profiles: mountain valleys, rivers, coastal areas, and oceanic islands. The document is useful for understanding how water supply in SIDS and cities in Asia and the Pacific risk becoming contaminated by seawater intrusion or less available due to drought. Delegates in particular should focus on chapters 5 and 6 for policy directives.

United Nations, Economic and Social Commission for Asia and the Pacific. (2015). *The State of Asian and Pacific Cities 2015: Urban Transformations Shifting from Quantity to Quality* [Report]. Retrieved 11

August 2018 from:
https://www.unescap.org/sites/default/files/The%20State%20of%20Asian%20and%20Pacific%20Cities%202015.pdf

> *This report is a comprehensive document discussing the urban trends and problems that cities in the Asia-Pacific region are currently experiencing, such as unprecedented urban growth, infrastructure failure, and increased impacts from climate change. For delegates interested in climate change action in urban centers, focus on Chapter 4. The entire document, however, is replete with case studies of how different cities across UN ESCAP's field of operation are addressing the issues of urbanization and climate change. Delegates are advised to study these and use them in their position papers.*

United Nations Entity for Gender Equality and the Empowerment of Women. (2018). *Why is Climate Change a Gender Issue?* [Policy Brief]. Retrieved 12 August 2018 from:
https://www.uncclearn.org/sites/default/files/inventory/unwomen704.pdf

> *This policy brief outlines basic concepts as to why gender is a necessary filter for viewing climate change. Specifically, the brief outlines how climate change has particular impacts on women and what can be done to address them. Delegates who want to address women's lack of involvement should consult this resource. The margins of each page feature easy-to-read statistics about how women are impacted by climate change. These will make good additions to delegates' position papers and working papers.*

United Nations, General Assembly, Seventieth session. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)* [Resolution]. Retrieved 28 July 2018 from:
http://undocs.org/A/RES/70/1

> *This document contains the 2030 Agenda with the 17 SDGs and their 169 targets. While most, if not all, of the goals overlap with strategies to address climate resilience in some extent or another, some SDGs are particularly relevant, specifically: SDG 7 (Affordable and Clean Energy), 9 (Industry, Innovation, and Infrastructure), 11 (Sustainable Cities and Communities), and 13 (Climate Action). SDG 7, Target 7b promotes climate resilience by connecting SIDS and LDCs with modern energy infrastructure which will allow those states to transition away from fossil fuels. In particular, Targets 13.2, 13.3, and 13ab of SDG 13 advocate for climate resilience through climate change education programs, nationwide policies and funding for climate adaptation, and the inclusion of minority groups in climate planning.*

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