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Economic and Social Commission for Asia and the Pacific (ESCAP)

#BACKGROUND GUIDE

HISTORY OF THE COMMITTEE

The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) was established in 1947 in Shanghai, China. Originally named the Economic Commission for Asia and the Far East (ECAFE), the committee was created to help with reconstruction efforts following World War II. The founding members of ECAFE were: Australia, China, France, India, the Netherlands, Pakistan, the Philippines, the Russian Federation (previously USSR), Thailand, the United Kingdom, and the United States of America.[1] The number of countries from outside the region are an indicator of the prevalence of colonial powers during this time.

Since its founding, ESCAP membership has grown to 53 members plus 9 associate members which are not members of the United Nations but have nonetheless joined ESCAP. A much higher percentage of the membership now comes from within the Asia-Pacific region, and colonial influence has fallen since the founding of ECAFE. The countries which make up ESCAP vary greatly in terms of size, population, and economic and social development. Regional cooperation despite these differences has been vital to the success of the Commission's initiatives and policies.

ECAFE devoted most of its focus during its first few decades towards constructing regional systems and procedures to help facilitate the rebuilding of the region.[2] A resolution passed by ECAFE in 1963 created the Asian Development Bank (ADB), which would be hosted in the Philippines capital of Manila. ECAFE hoped that the institution would foster economic growth and cooperation. Following its opening in 1966, the ADB's primary focus for the rest of the decade became food production and rural development.[3]

Throughout the following decade, ECAFE established a number of other significant organizations such as the Asian Institute for Economic Development and Planning (AIDEP) in 1964, the Asian Statistical Institute in 1970, and the Asian Clearing Union in 1973. These institutions all worked alongside other resolutions to address the recovery needs of the continent, still struggling in the aftermath of World War II. P.S. Lokanathan, the first executive secretary of ECAFE identified

[1] "ESCAP Member States and Associate Members," accessed October 16, 2016, http://www.unescap.org/about/member-states.
[2] Richard Jolly, *From ECAFE to ESCAP*, (New York, 2009), http://www.unhistory.org/briefing/20Asia.pdf.
[3] "ADB History," January 25, 2016, accessed October 16, 2016, https://www.adb.org/about/history.

agriculture, industry, energy, transport, and monetary issues as priorities for long-term development.[2]

Throughout the history of ECAFE/ESCAP, the Substantive Division has been responsible for producing the *Survey*, which is a report on the economic and social changes occurring within the region. In 1962, the Economic Development Branch was set up within ECAFE to study various economic paradigms and planning methodologies through experimentation within the region. Until the mid-1970s when ECAFE morphed into ESCAP, they support a dirigisme model of development, which is characterized by capitalist economy that is heavily directed by the state.[2]

Following the name change in 1974, however, ESCAP developed a strong relationship with the United Nations Conference on Trade and Development. This relationship greatly impacted ESCAP policies, and by 1990's, ESCAP adopted a more market-oriented approach, which included focusing on the private sector, free trade, and foreign investments.[2] In 1995, the establishment of the World Trade Organization (WTO) caused ESCAP to become even more firmly committed to its market-oriented policies.[2]

Population management has been another focus of the Commission. In the 1950's and 60's, ECAFE held seminars to discuss population issues and policies. Beginning in 1979, ESCAP has organized regional population conferences and distributed informational materials throughout Asia and the Pacific. Between 1970 and 2005, birth rates fell from 5.0 births per mother to 1.9 in East Asia and the Pacific, and from 5.5 to 3.2 in South Asia.[2]

In 1992, ESCAP underwent significant structural changes in its subsidiary bodies. Five new committees were created to deal with regional economic cooperation; socioeconomic measures to alleviate poverty; environment and natural resource development; transport; statistics; and communication, tourism, and infrastructure.[2] The Commission meets annually to discuss the recommendations of these subsidiary bodies and the executive secretary, and ultimately, these recommendations are passed on to the United Nations Economic and Social Council (ECOSOC).[4]

Since 1947, the Commission has provided a platform for regional cooperation that has been vital to the economic and social growth of Asia and the Pacific. Although post-war reconstruction was the original focus of the committee, its goals have developed to include many other areas.

[4] "About the Commission," accessed October 16, 2016, http://www.unescap.org/commission/about-the-commission.

ESCAP has shown that an organization can make significant changes through discourse, research, common goals, and voluntary cooperation of its member countries.

Topic A: Disaster Prevention in ESCAP Member States

Statement of the Problem

Over 40% of the nearly 4,000 natural disasters that occurred between 2005 and 2014 affect the Asia-Pacific region. Additionally, nearly 60% of disaster-related deaths during that time period occurred within the Asia-Pacific region.[5] The geography of the region, the lack of technology and communication systems, and the poor socio-economic status of many of the region's inhabitants make the area especially vulnerable to the devastating consequences of natural disasters.

The world's two most active fault lines, three ocean basins, many rivers, and numerous snow-capped mountains define much of the geography of the Asia-Pacific region. These features cross many national borders, which further complicates the measures necessary to mitigate damage and recover from disasters. The three ocean basins, located in the Western North Pacific Ocean & South China Sea, the Bay of Bengal & the Arabian Sea, and the South-West Pacific Ocean, allow for cyclones that develop in one to travel throughout the region.[6] Additionally, droughts in the region have affected over 1.6 billion people since the 1970s.[7] Earthquakes, tsunamis, cyclones, flooding, and droughts all occur often on a multi-national level which necessitates stronger regional communication and cooperation.

The economic costs of disasters have risen dramatically throughout the past few decades, from $52 billion in damages in the 1970's to over $520 billion in damages in this past decade. Current trends forecast $160 billion in damages annually within the Asia-Pacific region by the year 2030. Covering these costs stunts the growth of developing economies, especially because the costs of rebuilding the transportation and agricultural sectors after some major disasters are incurred over the course of decades after the event.

The challenges faced in building resilience to disasters cannot be handled on a nation-by-nation basis. The regional impacts necessitate a regional response. However, within states, decentralization can be beneficial. Dispersing authority from central governments to local ones can

[5] "Building Resilience to Disasters," UNESCAP, accessed September 9, 2016, http://www.unescap.org/our-work/ict-disaster-risk-reduction/building-resilience-disasters/about.
[6] Shamika Sirimanne, *Disasters Without Borders* (Bangkok: United Nations, 2015), http://www.unescap.org/sites/default/files/APDR2015%20Full%20Report.pdf, 13.
[7] Ibid., xxiv.

increase the efficiency of service-delivery, the involvement of citizens, and institutional transparency. Building resilience should take place throughout multiple levels of governance.

It is the duty of this committee to create frameworks and influence policy decisions in such a way that protects human life. Any improvement in any part of the region will not only save lives, but also promote greater economic and social stability. By discussing the effects of past disasters, disaster prevention, early-warning systems, policy implementation, information sharing, and funding, ESCAP can hope to contribute to the long-term safety and prosperity of the Asia-Pacific region.

Vulnerability to Disaster

The Asia-Pacific region suffers from susceptibility to many kinds of natural disasters in addition to the high frequency with which each of them occur. Although storms and floods are the most common disasters in the region, from 2005 to 2014, earthquakes and tsunamis were the most significant cause of death, taking the lives of over 200,000 people.[8] Risks vary within the region, however, and certain sub-regions are more vulnerable than others.

Countries in South-East Asia are among the most disaster-prone due to their location along the "Ring of Fire," a large area around the edge of the Pacific Ocean characterized by high volcanic and seismological activity. Typhoons tracks often stretch across the South-Eastern sub-region. Erratic monsoons provide yet another environmental challenge. In total, 512 events took the lives of 177,000 people from 2005 to 2014.[9] The sub-region with the largest number of people affected, however, is East and North-East Asia. Due to the high concentration of economic assets in this sub-region, it also suffers from the highest economic losses due to disasters. Substantial portions of both the South-West and the Pacific sub-regions were also affected.

Although disasters can be itemized separately, one disaster often leads to another. A tsunami in Japan, for example, led to a major nuclear accident in Fukushima. A 2015 earthquake in Nepal caused half a dozen critical landslides, one of which blocked a river in Tibet that contributed to flooding. It is important to understand the interconnectedness of disasters and understand the branching effects a single disaster may have. Recognizing the relationships between multiple connected events can help future preparedness efforts.

[8] Ibid., 3.
[9] Ibid.

Economic costs generated by disasters have been increasing over the past half-century. Damage to the housing, transportation, and agricultural sectors account for most of the economic impact. In 2009, Typhoon Ketsana in the Lao People's Democratic Republic caused flooding in 28,500 hectares of farmland and threatened food security, because the affected provinces were responsible for half of the country's domestic rice production.[10] Many transport networks were not built with a focus on disaster resilience. Landslides, such as those caused by Typhoon Haima in 2001, often block roadways and can affect larger systems such as the Asian Highway and the Trans-Asian railway networks.[11] Emergency repairs stunt traffic flow for both local and regional networks. Higher vehicle operating costs, decreased efficiency, and reduced access to markets are all costly to economies.[12]

The effects of urbanization also need to be taken into consideration. Since 1950, the proportion of the Asia-Pacific population living in urban areas has increased from 20% to over 45%.[13] Although urbanization provides many people with wider ranges of opportunities, poor urban management and chaotic growth have led to unsafe buildings, poor drainage systems, and insufficient roads and water supplies. Mumbai, for example, saw over four hundred casualties and heavy damages to buildings and critical infrastructure in 2005 due to a particularly large monsoon.[14] Coastal areas, lowlands, and river valleys are all very attractive places for settlements due to availability of ports, easy land transport systems, and nutrient-rich soil, respectively, but these locations are also multi-hazard hotspots, being especially prone to cyclones, earthquakes, floods, and landslides. Most attention has been focused on building resilience in megacities; however, smaller cities with fewer than 5 million people account for 60% of the urban population of the Asia-Pacific region.[15]

Environmental degradation further increases the region's vulnerability to disasters. In 1999, a large mainland mangrove forest protected villages from a category 5 cyclone that affected the eastern state of Odisha.[16] A study that compared three villages equidistant from the coastline determined that the mangrove forest lowered the cost of damages to $33 per household, as

[10] Ibid., 16.
[11] Ibid., 21.
[12] "Building Resilience to Disasters."
[13] Ibid.
[14] Sirimanne, *Disasters Without Borders*, 24.
[15] "Building Resilience to Disasters."
[16] Sirimanne, *Disasters Without Borders*, 32.

compared to the unprotected village which saw $44 in damages per household and the village with a breached embankment which saw $154 in damages per household.[17]

Many other ecological features help diminish the effects of disasters as well. In general, root systems are very effective at preventing landslides and avalanches. Wetlands and floodplains control water flow, slowing down run-off after heavy rains and slowly releasing water during droughts.[18] Features of various coastal ecosystems, such as coral reefs, absorb energy from waves and reduce the size and speed of tidal waves. Coastal wetlands help buffer against saltwater intrusion into inland ecosystems which would be harmed by high amounts of salt water.[19] Focusing on protecting the environment would be highly beneficial to disaster resilience efforts.

Regional Cooperation

Most disasters that affect ESCAP member states affect multiple states at once. For that reason, it is necessary that the members of this committee cooperate and encourage their leaders and citizens at home to work across borders to solve problems relating to disaster preparedness and prevention. In addition to political cooperation, avenues for regional communication need to be improved.

Accessing reliable data regarding disasters has been difficult for researchers. There is little consistency in the definitions of some terms which are fundamental to research, such as what exactly constitutes a disaster "event." Measuring of important indicators of disaster impact, such as the number of deaths and economic losses, are also inconsistent. For example, in the case of a major flood, some reports may only count those who died due to drowning and other immediate effects of the flood, whereas other reports may also count deaths that were caused by food shortages and other ramifications of the flood. Common terminology and classification systems are necessary components of effective communication between researchers and data analysts.

Additionally, networks for regional communication need to be improved. Less than 8% of the inhabitants of the Asia-Pacific region have access to reliable and affordable high-speed Internet. The goal of the Asian Information Superhighway, administered by ESCAP, is to increase the availability of broadband Internet throughout the region. Ideally, this would stimulate economic growth and

[17] Ibid.
[18] Ibid., 33.
[19] Ibid.

innovation. In order to achieve this, ESCAP has led inter-governmental negotiations to encourage effective network design, development, and management.[20]

A regional early-warning system would be valuable to all at-risk states. This system could be considered a public good, meaning that one country's use of it would not restrict other countries' access to it. Although most countries could not afford to create such a system on their own, sharing costs with other nearby countries makes such an endeavor financially viable. Furthermore, regional systems provide yet another platform for sharing research, improving risk-assessment, and developing better warning practices. Although some early-warning systems are already in place in certain areas, none are comprehensive enough to meet the needs of the over 4 billion people who live in the Asia-Pacific region.

History of the Problem

The 4.1 billion people who live in Asia and the Pacific region are more likely to suffer the effects of devastating natural disasters than inhabitants of any other region. Those who live in this region are nearly twice as likely to be affected by a disaster than those who live in Africa, six times as likely as those who live in Latin America, and thirty times as likely as those who live in Europe or North America.[21] Earthquakes, tsunamis, cyclones, severe storms, cross-border floods, and landslides are responsible for thousands of deaths and billions of dollars in economic losses annually. Mongolia, Vanuatu, Samoa, and the Democratic Republic of Korea have all recently seen years in which damages from natural disasters exceed their entire GDP for that year.[22]

For as long as the Asia-Pacific region has been settled, disasters have disrupted life for its inhabitants. The 8.0 magnitude Damghan Earthquake in the year 856 A.D. destroyed a 200 mile stretch of Iran and caused approximately 200,000 deaths.[23] In 1138, an earthquake struck the Syrian city of Aleppo. A small shock one day before the main earthquake caused some residents to flee to nearby towns, but the following day, the city walls were shaken to destruction and rocks littered the

[20] *Asian-Pacific Information Superhighway* (Bangkok, n.d.), http://www.unescap.org/sites/default/files/AP-IS-Leaflet-English.pdf.
[21] "Building Resilience to Disasters."
[22] Ibid.
[23] "Damghan Earthquake," 2016, accessed October 6, 2016, https://worldhistoryproject.org/856/12/22/damghan-earthquake.

streets. In addition to the extensive damages to the city, approximately 230,000 people lost their lives.[24] In 1498, the Meio Earthquake and the accompanying tsunami led to the mass transport of sediments into the Hamana River. The closing of the river mouth created a marshy environment. The port town of Hashimoto which relied on this river was soon abandoned due to the cessation of access to the Pacific Ocean via the Hamana River.[25] Although research has been done on these disasters, modern events provide more valuable information for developing resilience to future events.

The Bholo Cyclone

The 1970 Bholo Cyclone in East Pakistan killed an estimated 300,000 to 500,000 people.[26] Although the Indian government had been collecting meteorological data on the cyclone, the Pakistani government was not warned of the impending storm due to the generally hostile Indo-Pakistani relations.[27] The Pakistani Meteorological Department broadcasted a danger report over the radio the day of the storm, but despite this, most people living in the affected area were unprepared for the storm.[28] Had there been greater cooperation between the two states, many lives could have been saved.

Many political leaders from East Pakistan were highly critical of the Pakistani government's relief effort, which provided only one military transport aircraft and three crop- dusting aircraft.[29] Tensions within Pakistan rose amid the political chaos caused by the insufficient relief effort. The Awami League, a political party, won a landslide victory in the 1970 elections, in large part due to the general dissatisfaction over the manner in which the national government handled the Bholo Cyclone.[30] The tensions within Pakistan eventually sparked the Bangladesh Liberation War, which ultimately led to the creation of Bangladesh.[31]

Although many other factors contributed to this major political change, the Bholo Cyclone

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[24] *Encyclopædia Britannica*, s.v "Aleppo earthquake of 1138," accessed October 6, 2016, https://www.britannica.com/event/Aleppo-earthquake-of-1138.
[25] Vanessa Heyvaert, "Assessing the Impact of 1498 Meio Earthquake and Tsunami Along the Enshu-Nada Coast, Central Japan Using Coastal Geology," *Quaternary International* 308 (December 17, 2012).
[26] "NOAA Researcher's Warning Helps Save Lives in Bangladesh," December 6, 2007, accessed 2016, https://web.archive.org/web/20080517144749/http://www.research.noaa.gov/spotlite/2007/spot_cyclone.html.
[27] Jack Anderson, "Many Pakistan Flood Victims Died Needlessly," *The Lowell Sun*, January 31, 1971.
[28] Arnold Zbitun, "The Day the Cyclone Came to East Pakistan," *European Stars and Stripes*, December 11, 1970.
[29] Anderson, "Pakistan Flood Victims."
[30] Zbitun, "The Day the Cyclone Came."
[31] Ibid.

certainly played a large role in catalyzing the actions that led to the creation of Bangladesh. In states that are already unstable, natural disasters can have dramatic effects. Regional organizations, such as ESCAP, can be utilized to ensure cooperation in the future and mitigate the consequences of natural disasters.

The Indian Ocean Earthquake

In 2004, the Indian Ocean Earthquake and the accompanying tsunami killed over 200,000 people.[32] Although there were several hours between the earthquake and the tsunami, the victims were largely unprepared for the tsunami. There were no sufficient warning systems in place to alert those in danger. Along the Ring of Fire surrounding the Pacific Ocean, there was an extensive and effective tsunami detection system. The Indian Ocean, however, experiences significantly less volcanic activity, so the tsunami warning system for that area was neither as sophisticated nor as effective as the Pacific Ocean's tsunami warning system.

Among the most affected countries were India, Indonesia, Sri Lanka, Maldives, and Thailand. It is estimated that the waves—reaching as high as 30 feet in some places—took the lives of 200,000 people in Indonesia alone.[33] Food, clean water, and medical care were all scarce commodities immediately following the tsunami, and relief workers struggled to bring aid to those in remote areas. Many roads were destroyed, and long-term environmental damage occurred as a result of debris and salt water which destroyed a great deal of plant life. The presence of salt water on farmland was particularly harmful to the agricultural sectors of many of the affected countries.[34]

Conferences on Disaster Resilience

The first global assessment of disasters occurred in 1987: The World Commission on Environment and Development pointed out the devastating effects of disasters on countries' development.[35] The United Nations responded to this conference by designating the 1990s as the International Decade of Natural Disaster Reduction and producing an international framework of

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[32] "Indian Ocean Tsunami Anniversary: Memorial Events Held," BBC, December 26, 2014, accessed 2016, http://www.bbc.com/news/world-asia-30602159.
[33] *Encyclopædia Britannica* (Encyclopædia Britannica, 2016), s.v "Indian ocean tsunami of 2004" by The Editors of Encyclopædia Britannica, accessed October 7, 2016, https://www.britannica.com/event/Indian-Ocean-tsunami-of-2004.
[34] Ibid.
[35] Sirimanne, *Disasters Without Borders*, 140.

action. This framework encouraged governments to create programs that would help mitigate the effects of disaster. Developing countries were especially urged to integrate disaster prevention into their development programs.

There are multiple methods of disaster prevention and damage reduction that have been used by countries across the world. One of the first steps involves developing information and communications technology (ICT). The World Summit on the Information Society, held in part in 2003 and then continued in 2005, aims to measure worldwide progress towards achieving various ICT targets.[36] Many countries within Asia and the Pacific region suffer from a lack of Internet connectivity and a lack of online content written in local languages. Without greater overall access to these resources, residents of this region will continue to be caught by surprise by natural disasters.

Three conferences have been held under the title World Conference on Disaster Risk Reduction in Japan in the years 1994, 2005, and 2015. The first conference in 1994 led to the adoption of the Yokohama Strategy, which established ten main principles for disaster management.[37] The 2005 conference was held less than a month after the aforementioned Indian Ocean Earthquake.[38] One outcome of the second conference was the Hyogo Framework for Action. The Hyogo Framework prioritizes risk awareness, improving early warning systems, building a culture of safety, reducing risks in key sectors, and improving disaster response.

The year 2015, however, saw an end to the Hyogo Framework as the Sendai Framework began development. The Sendai Framework contains four main priorities and seven global targets, all of which it hopes to achieve by 2030. This framework, emphasizing the responsibility of individual states to govern themselves, does not differ greatly from the previous frameworks.[39]Unfortunately, as with the previous frameworks, many states in the Asia and the Pacific region struggle to afford the necessary changes in infrastructure.

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[36] "ICT Indicators," UNESCAP, accessed September 10, 2016, http://www.unescap.org/our-work/ict-disaster-risk-reduction/ict-indicators/about.

[37] Sirimanne, *Disasters Without Borders*, 141.

[38] Ibid.

[39] United Nations General Assembly, "Resolution Adopted by the General Assembly on 3 June 2015," in General Assembly (Sendai City: United Nations General Assembly, 2015).

Past Actions

Following the Indian Ocean Tsunami in 2004, ESCAP established a trust fund to create an early warning system for tsunamis.[40] In 2005, Thailand contributed a founding donation of $10 million.[41] This fund originally focused on tsunamis in the Indian Ocean and Southeast Asian countries, but in 2010, the scope of the fund was expanded to include any other coastal hazards within that region. The Indian Ocean Tsunami Warning System was also set up, and is projected to save an average of 1,000 lives annually.[42] Seismic and sea-level stations were installed in Myanmar, the Philippines, and Vietnam to monitor potential hazards, and these systems share data with regional and global networks. The key principles behind the development of this fund include its clear focus on improving early warning systems, the cooperation and partnership between member states and UN agencies, and peer-review by climatology experts.[43]

The combination of seismic stations, Bottom Pressure Recorders, tide gauges, and a constantly running warning center create a vastly safer environment for those living along the coast of the Indian Ocean. The warning center is capable of issuing notices to people within 10 minutes of any major earthquake. People can choose to register their email addresses and cell phones to receive alerts through those mediums, allowing for an even higher level interconnectivity and disaster awareness.[44]

Another facet of disaster prevention includes the availability of reliable, affordable, high-speed Internet. Less than 8% of the Asia-Pacific region has regular access to the Internet. The Asian Information Superhighway initiative aims to spread broadband Internet across the region. ESCAP has developed maps showing terrestrial Internet infrastructure which helps identify areas with especially high needs for development. Furthermore, ESCAP has tried to guide policy-makers to prioritize a regional communication space. Widespread Internet access would be highly beneficial to

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[40] Sirimanne, *Disasters Without Borders*, 90.
[41] "Indian Tsunami Early Warning System," accessed October 7, 2016, http://www.tsunami.incois.gov.in/ITEWS/earlywarningsystemcomponents.jsp.
[42] Sirimanne, *Disasters Without Borders*, 83.
[43] ESCAP, *Scaling Up Early Warning to Save Lives and Build Resilience in Asia-Pacific*, (n.p.: ESCAP, 2014), http://www.unescap.org/sites/default/files/AC14%20A3A%20TTF%20overview%20final.pdf.
[44] "Indian Tsunami Early Warning System."

both large-scale disaster-related information sharing and to individuals' ability to prepare for disasters.[45]

Unfortunately, despite the effort of the Asian Information Superhighway initiative, broadband connections are highly concentrated. Currently, nearly 75% of all broadband connections are located in East and North-East Asia. Additionally, a concerning wage gap exists between men and women in the Asia-Pacific region, which may be correlated to the lack of Internet connections that women have compared to men.

The current state of the superhighway, although it provides a greater total number of people with access to vital disaster information, contributes negatively to the wage gap. Areas with Internet access tend to attract wealthier individuals who can afford to connect to the Internet. These individuals are then exposed to an even greater number of economic opportunities than the poor. Despite this problem, ESCAP has been continuing to push widespread broadband as a regional imperative.[46] Ideally, all households would have access to Internet connections which would lead to greater equality of opportunity and thus greater economic equality.

A number of other regional and global initiatives led by bodies other than ESCAP also help integrate improved disaster risk reduction. The Asian Disaster Preparedness Centre (ADPC) has been working since 2005 to mainstream disaster risk reduction in various sectors. The Philippines, Cambodia, and Lao People's Democratic Republic took up the first phase. In 2012, the program was extended to include issues of agriculture, infrastructure, urban development, and health and financial services.[47] The South Asian Association for Regional Cooperation (SAARC) adopted its Comprehensive Disaster Management Framework in 2006, which was followed by the SAARC Road Map on Mainstreaming Disaster Risk Reduction in Development. Track-II of the Global Facility for Disaster Reduction and Recovery of the World Bank focuses on hazard mapping and disaster risk reduction policy in development in certain priority countries.[48]

In general, multiple steps have been taken to create a foundation off of which the Asia-Pacific region can improve its effectiveness in responding to disasters. However, there are still many more

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[45] "Asia-Pacific Information Superhighway," accessed September 13, 2016, http://www.unescap.org/our-work/ict-disaster-risk-reduction/asia-pacific-information-superhighway/about.
[46] "Building Resilience to Disasters."
[47] Sirimanne, *Disasters Without Borders*, 158.
[48] "Building Resilience to Disasters."

solutions that can be implemented throughout the region in order to provide greater and more effective relief.

Possible Solutions

Disaster risk reduction needs to be approached from multiple angles. Prevention, preparedness, and repair each have unique problems that must be dealt with via policy reform, research, development programming, warning system implementation, and regional cooperation. While many solutions can help multiple countries at once, it is necessary to remember that each country has different economic, social, and natural environments that require flexibility in resolutions. Meeting the individual needs of developing countries will require different steps than meeting the needs of countries with more established economies and political systems, and although developing countries may have greater needs, their development programs can be shaped to prepare them for future disasters.

Early-Warning Systems

Early warning systems combine research, technology, and "people-centered" networks in order to save lives. Tracking and predicting natural disasters requires immense amounts of research and data analysis. Furthermore, physical devices need to be built and maintained. These devices, such as bottom pressure recorders and tide gauges, can be costly, especially when a large number of them need to be used to monitor large geographical areas. Rather than each country implementing these devices on their own, costs can be reduced when multiple countries share the same systems. Sharing systems also increases the ease with which institutions can share large amounts of data.

However, these systems are only effective as long as they are connected with human networks that can share the information which these systems are aimed at relaying. Additionally, these systems must reliable, trustworthy, and understandable to the people who they are supposed to help. If people are regularly instructed to evacuate due to malfunctions in the early-warning systems, then they will grow wary of listening in the future. Although there are benefits to implementing large, regional systems, it is necessary to remember that different communities require different adjustments, and local implementation cannot be achieved purely through regional

policies. Local networks can be utilized receive and act on warnings by raising awareness and educating communities to take actions to ensure that they remain safe.[49]

Disaster Resilient Infrastructure

When a disaster causes infrastructure to fail, many vital services can be disrupted. If a hurricane creates power outages, water supplies and transportation systems may also be impaired. Damaged roads can hamper evacuation measures and hinder the distribution of medical supplies. For systems to become resilient to disasters, they need to be able to quickly and efficiently anticipate, absorb, and recover from hazardous events. The development of disaster resilient infrastructure combines ideas from many fields of study including engineering, environmental stability, behavioral sciences, disaster risk reduction, and urban development. The measures that are taken to build resilience fall into two main categories: structural and nonstructural.[50]

Structural measures include earthquake-resistant buildings, protective embankments, and flood-control systems, among others. Building structures with earthquake resistance in mind can significantly improve the welfare of areas that are particularly vulnerable to earthquakes. By enforcing laws that require reconstructive measures to upgrade the quality of damaged buildings (rather than simply restoring them to their pre-disaster levels), countries can reduce future damages. Using higher foundations for houses in flood-prone areas can reduce the vulnerability of residents. Roads can be built with larger drainage systems levee banks to prevent erosion from water. Of course, all of these protective measures come with financial costs, but investing now in safer infrastructure often leads to reduced costs in the long run.[51]

Energy and water supply improvements are also considered structural measures. Incorporating stronger building materials, multiple transmission routes, and temperature and humidity limits for power generation plants all improve supply-side efficiency and help protect against disasters.[52] Elevated tube-wells and flood-proof latrines are improvements that have ensured safe water in Bangladesh, and they could be implemented in other areas that are also

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[49] "Early Warning," September 10, 2014, accessed October 4, 2016, http://www.ifrc.org/en/what-we-do/disaster-management/preparing-for-disaster/disaster-preparedness-tools/early-warning/.
[50] *Making Infrastructure Disaster-Resilient*, (Manila, 2013), https://www.adb.org/sites/default/files/evaluation-document/36101/files/learning-lessons-disaster-resilience-3.pdf.
[51] "Early Warning."
[52] Ibid.

especially vulnerable to flooding. Dikes are very valuable in protecting against tsunamis – even when a tsunami hits that overcomes the protective capability of dikes, their presence still reduces the tsunami's force.[53]

Nonstructural measures refer to planning, mapping, management, and financing. Institutional frameworks that guide policy, legislation, and regulations are necessary to ensure successful resilience efforts. Partnerships between local communities, the private sector, development partners, and governments are necessary for effective action. Many recurrent disasters are foreseeable to countries, but they are sometimes neglected when developing lending plans. Disaster risk assessment and hazard mapping would be an important step in leading to informed investment decisions, especially in those regions with relatively predictable patterns of natural disasters.[54]

Ecosystem-based measures complement structural measures in building disaster resilience. Healthy mangroves can help dissipate energy from waves during storms, and reforestation efforts can reduce soil erosion, which helps maintain roads.[55] In Hubei Province in China, reconnecting lakes to the Yangtze River has rehabilitated wetlands to store floodwaters. Maintaining a healthy environment throughout the Asia-Pacific region would have a significant impact on protecting the people of the region.

Financing Disaster Resilience

Many projects that would improve disaster preparedness require funding that governments often cannot supply on their own. Working with the private sector, borrowing from other countries, sharing costs with countries, and prudent investing can all contribute to overcoming those financial limitations. Once money has been acquired to fund disaster efforts, it needs to be efficiently spent. Implementing strict oversight and multiple levels of regulation can help ensure that money is used most effectively.

Governments often borrow money to rebuild after disasters; unfortunately, they usually do not have adequate funds to maintain these safeguard structures. Allocating more money for

[53] Ibid.
[54] Ibid.
[55] Sirimanne, *Disasters Without Borders*, 32.

maintenance would be a prudent investment for countries because doing so may help prevent the need to fully rebuild structures in the future. Financial protection programs increase state capacity for handling emergencies. Developing countries in particular need to improve disaster risk financing and regulatory support.[56]

Bloc Positions

In 2008, ESCAP received a mandate from the United Nations General Assembly to establish subregional offices. ESCAP responded by dividing the large Asia-Pacific region into five subregions: East and North-East Asia, North and Central Asia, South and South-West Asia, South-East Asia, and the Pacific.[57] Although each of these subregions are highly vulnerable to natural disasters, some are more vulnerable than others. Additionally, different types of disasters afflict these different subregions.

East and North-East Asia

Consisting of China, Democratic People's Republic of Korea, Japan, Mongolia, Republic of Korea, Russian Federation, and two associate members Hong Kong and Macau, the East and North-East Asia subregion contains one-quarter of the world's population, one-quarter of the world's GDP and international trade, and produces one third of global CO_2 emissions.[58] Most of these countries are also relatively wealthy. Due to the many highly-developed urban areas in many of these countries, they are highly incentivized to invest in protecting themselves against disasters which may threaten their economic centers.

North and Central Asia

The North and Central Asia subregion is comprised of Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, the Russian Federation, Tajikistan, Turkmenistan, and Uzbekistan. These

[56] Ibid.
[57] *ESCAP Connecting the Region*, (Suncheon City, 2014), http://www.unescap.org/sites/default/files/UNESCAP-ENEA%20Connecting%20the%20Subregion.pdf.
[58] Ibid.

countries joined ESCAP following the dissolution of the Union of Soviet Socialist Republics (USSR).[59] Relative to the other countries in the Asia-Pacific region, these countries see few disasters; however, droughts threaten the inhabitants of this subregion. For example, a severe heat wave in 2010 killed 56,000 people in North and Central Asia.[60] These countries would want to ensure that they have consistent access to water. Further researching the effects of climate change on droughts would benefit the sub-region's efforts to mitigate the effects of droughts.

South and South-West Asia

The South and South-West Asia subregion includes Afghanistan, Bangladesh, Bhutan, India, the Islamic Republic of Iran, Maldives, Nepal, Pakistan, Sri Lanka, and Turkey. This subregion is heavily dependent on its agricultural sector.[61] High seismic and flood risks make maintaining a consistent crop production difficult. Further developing the Indian Ocean's early warning system in order to reduce potential losses to agricultural production would be in these countries' best interests. Improving weather prediction and disaster mapping would also help these countries become more efficient within their agricultural sector.

South-East Asia

Brunei Darussalam, Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Timor-Leste, and Viet Nam make up the South-East Asia subregion. This is the most disaster prone subregion, and many countries within it are located along the Ring of Fire. Many major typhoon paths sweep across these countries. Because several of these countries are less developed, there is room to incorporate disaster resilience into their development, whether it is in the form of policy-making, disaster-resistant infrastructure, or integrated early warning systems. Seeking funding from outside the subregion would likely be vital for the development of these countries which are particularly vulnerable to disasters.

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[59] Ibid.

[60] Sirimanne, *Disasters Without Borders*, 3.

[61] Hansa Tangmanpoowadol et al., *Asia and the Pacific: A Story of Transformation and Resurgence*, (Bangkok: UNESCAP, 2014), http://www.unescap.org/sites/default/files/Asia%20and%20the%20Pacific-A%20Story%20of%20Transformation%20and%20Resurgence.pdf.

The Pacific

The countries of the Pacific subregion – American Samoa, Australia, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia, Nauru, New Caledonia, New Zealand, Niue, Northern Marina Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu – are less-densely populated islands in the Pacific Ocean. Although development levels vary greatly within this geographic region, these countries all face similar threats in terms of natural disasters, primarily from activity in the Pacific Ocean itself. Monitoring activity in the Pacific Ocean and developing a subregion-wide warning system would help protect these island nations.

Countries Outside of the Asia-Pacific Region

The countries which are members of ESCAP but not within the Asia-Pacific region should still be interested in helping to protect their investments in the region, in addition to the humanitarian obligations they may have to save lives in this under-developed part of the world. These outside forces can be very helpful in developing policies that account for disasters and technology which could help increase disaster resilience.

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Topic B: Sustainable Development in ESCAP Member States

Statement of the Problem

Despite experiencing the fastest economic growth in human history, the growth in the Asia-Pacific region is not necessarily sustainable.[62] In order for this region to continue making progress, a sustainable development plan is necessary to protect against economic uncertainty, staggering income inequality, and environmental harm. As the largest intergovernmental organization for the Asia-Pacific region, ESCAP is vital for creating a framework to guide the region's development.

Economists have proposed many different explanations for why several countries in the Asia-Pacific region have grown so quickly. It is important to understand how this growth occurred so that it can potentially be emulated by other countries, and also so steps can be taken to continue this progress. Millions of people within this region have already been lifted out of poverty, and helping more people achieve economic stability would help ESCAP realize a piece of its vision of a region founded on mutual economic prosperity.[63] Despite this alleviation of poverty in recent times, over 500 million people in the Asia-Pacific region still suffer from hunger.[64]

ESCAP is comprised of member states with a very diverse set of economic situations. Any resolutions passed by this body will need to account for not only economies such as those of Hong Kong, Korea, Singapore, and Taiwan (known as the "Four Tigers" due to their aggressive economic performance), but also for the majority of economies of countries that have not seen such strong growth.[65] Furthermore, additional thought must be put into how to protect the environment and natural resources available in these states. Short-term gain should not come at the cost of long-term damage to the environment, which would in turn harm long-term economic development. Managing the available labor, capital, and technology will be integral in devising a plan to promote the long-term success of this region.

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[62] "About ESCAP," accessed August 25, 2016, http://www.unescap.org/about.

[63] Ibid.

[64] "10 Facts about Hunger in Asia," The Borgen Project, August 8, 2014, accessed August 29, 2016, http://borgenproject.org/%E2%80%8Bten-facts-hunger-asia/.

[65] Ross Gorte, *U.S. Tree Planting for Carbon Sequestration*, (Washington, D.C.: Congressional Research Service, 2009), https://www.fas.org/sgp/crs/misc/R40562.pdf.

Pollution and Environmental Degradation

ESCAP member countries need to be aware of the problems surrounding water management, deforestation, and air pollution. Fresh water is an essential resource for the agricultural and industrial markets. Many sources of water support numerous users, and poor management can lead to the overuse and degradation of fresh water sources. Dam-building, pollution from factories and human waste, and high rates of groundwater extradition are the main contributors to the scarcity of fresh water in the region.[66]

The rapid rate of deforestation causes large-scale erosion and sometimes soil salinity, which endangers the ability of farmers to grow crops.[67] Poor regulation of forests has led to unsustainable rates of deforestation. The immediate benefits of harvesting trees are outweighed by the long-term harm, as woodland ecosystems require steep investments of time and funds to regenerate. It is very difficult to estimate the cost of reforestation. In some places, estimates range from $250 per acre to $2,000 per acre.[68] Across the region though, the situation regarding deforestation has been improving. Policies adopted by China, India, and Viet Nam have helped to curb the rate deforestation. Countries such as Myanmar, Indonesia, Malaysia, and Cambodia, however, have allowed deforestation to continue on a massive scale. Interestingly, the afforestation policies in China and other parts of Asia may be contributing to the higher rates of deforestation in Indonesia and Malaysia. Afforestation is the act of developing a forest in an area where a forest did not previously exist. Many forests are cleared in these countries in order to make room for palm oil plantations. These two countries produce over 85% of the global palm oil supply, and China and India alone account for 45% of the global palm oil imports.[69]

In many Asian cities, air pollution often exceeds safe levels. A significant amount of this pollution comes from industrial production and transportation. The lack of affordable clean energy forces many people to burn timber and dung for energy. Air pollution also leads to acid rain, which compounds the negative effects of pollution. The health of many residents of urban areas suffers due to their constant exposure to unclean air. An unhealthy workforce is detrimental to the success

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[66] Stephen Howes and Paul Wyrwoll, *Asia's Wicked Environmental Problems*, (Tokyo: Asian Development Bank Institute, 2012), http://www.adb.org/sites/default/files/publication/156203/adbi-wp348.pdf.
[67] Ibid.
[68] *US Tree Planting for Carbon Sequestration*

[69] *Asia's Wicked Environmental Problems*

of an economy.

Case Studies: Growth in China and India

Since 1980, the GDP of China has grown at an incredible rate, sometimes exceeding 10% annually.[70] Reforms in agriculture in 1978 are generally agreed upon to be the cause of this growth, but the foundation was laid by prior to these reforms. Although the collectivization of agriculture is not generally regarded as a reliable method of development, the collectivization policies implemented in China in the 1950's were accompanied by policies that were aimed at improving public health, education, infrastructure, and agricultural technology. Flaws have been embodied along with its implementation, and the Chinese government later initiated changes.Once China began its de-collectivization process, it created millions of small, independent farms.[71]

In addition to the economic growth it spurred, increased agriculture production also helped with food security in China. One measure of food security is the amount of food available per capita. The daily 1,717 kcal available per person in the 1960's almost doubled by the year 2000 to over 3,000 kcal per person per day.[72] However, during that time agriculture has become more commercialized and farmers are vulnerable to changes in market prices. Fortunately, 50% of the land area is irrigated, which lessens the risk associated with production for farmers.[73]

India experienced a more gradual rise in their GDP growth rate during that same time period, and it was not until after instituting economic reforms in 1991 that India reached an average annual GDP growth rate of approximately 6%.[74] Although lower than China's growth, 6% was still greatly above that of the average wealthy nation (3.2%).[75] From the late 1970's to the late 1980's, poverty in India (based on India's official poverty line) decreased from 51% to 39%.[76]

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[70] "GDP Growth (annual %)," 2016, accessed August 25, 2016, http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=IN-CN.

[71] Purushottam Mudbhary, *Rapid Growth of Selected Asian Economies*, (Bangkok: Food and Agriculture Organization of the United Nations, 2006).

[72] *Asia's Wicked Environmental Problems*

[73] *Asia's Wicked Environmental Problems*

[74] "About ESCAP".

[75] "DEPweb: Beyond Economic Growth, Chapter 4," 2004, accessed August 26, 2016, http://www.worldbank.org/depweb/english/beyond/global/chapter4.html.

[76] *Asia's Wicked Environmental Problems*

Much of the success seen in the India economy during this time period is attributable to the Green Revolution. During the Green Revolution, India imported high-yielding varieties of seeds which helped to ameliorate India's food crisis. However, many experts raised concerns over these seeds. Some worried that they would make crops within the country more vulnerable to a widespread disease that would severely harm production. Others feared that these crops would exacerbate the income gap between larger farms in more prosperous regions and smaller farms with less developed irrigation systems. The potential for environmental degradation as a result of increased fertilizer, pesticide, and weedicides made the use of these crops even more controversial.[77]

Public goods in the form of infrastructure, technology, and research have all been vital to the growth of the Chinese and Indian economies. Whereas China has seen great returns on its continued investments in these public goods, India has faltered, neglecting these public goods in recent years and instead relying on unsustainable farm subsidies and market manipulations.[78] Both China and India, however, need to implement policy and institutional reforms in order to stimulate non-farm employment.

Other consequences of rapid economic growth include growing income disparities and environmental degradation. Although the poverty rate in both countries has declined, relative poverty has been increasing.[79] As the poor begin to see an increase in their income, the wealth see a disproportionately large increase in theirs. This has been leading to civil unrest. China and India have tried to address this problem by lowering taxes and attempting to create more jobs in rural areas, but these are not long-term solutions to the problems.[80] Additionally, pollution levels in the air, water, and soil have all been rising due to decisions that prioritize short-term economic growth over long-term environmental sustainability.

Despite the fact that China and India have made relatively small investments in research and technological development, the infrastructure they do have in place allows for their potential for developing new technologies to be higher than that of the smaller countries that surround them. Intellectual property laws may somewhat limit the spread of new technologies throughout the region, but smaller countries within the Asia-Pacific region can still expect to benefit from the

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[77] Donald Freebairn, "Did the Green Revolution Concentrate Incomes? A Quantitative Study of Research Reports," *World Development* 23, no. 2 (1995).
[78] *Asia's Wicked Environmental Problems*
[79] Ibid.
[80] Ibid.

advances made in China and India.[81]

Energy in Southeast Asian Countries

As member countries of the Association of Southeast Asian Nations (ASEAN) move to industrialize, they face a higher demand for energy. For many years, countries such as Brunei, Indonesia, Malaysia, and Thailand have been producing large quantities of fossil fuels, much of which they have been exporting to other nations.[82] The Philippines, Myanmar, and Vietnam have much younger fossil fuel industries. Singapore, with no domestic fossil fuel sources, has maintained relevancy in the fossil fuel market by attracting those with the technical expertise to establish major oil refineries.[83] With plans for regional energy grids, increased nuclear power generation, and new hydropower development projects, Southeast Asian countries can expect an increase in regional energy trading over the coming years.[84]

Much of the fossil fuels that have been exported to northeast Asian countries will soon remain within the ASEAN region.[85] Cooperation between the northeast and Southeast Asian countries would be to the benefit of all parties involved. An oil-stockpiling program creates somewhat of a safety net for the two regions, but there has been a great deal of contention over the details of these stockpiles. The main questions include: how much oil should be stored; where should the stockpile exist; who should be responsible for the stockpiles (governmental agencies vs private corporations); and under what circumstances should the stockpile be released?[86]

Although Japan has been eager to share energy-saving technology and methodology with ASEAN member nations, many of the solutions are costly to implement. Japan has encouraged ASEAN countries to remove energy price subsidies because rational pricing mechanisms often lead to more efficient consumption of energy.[87] However, simply suggesting the removal subsidies has triggered violent protests from those whose livelihood depends on the current state of energy

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81 *Asia's Wicked Environmental Problems*
82 "Did the Green Revolution Concetrate Incomes?"
83 Elspeth Thomson, "ASEAN and Northeast Asian Energy Security: Cooperation or Competition," *East Asia* 23, no. 3 (2006).
84 Ibid.
85 *Rapid Growth of Selected Asian Economies*
86 Ibid.
87 Ibid.

markets.[88]

Reducing exports from the ASEAN region might assist their development in the context of the world economy, but their fossil fuel reserves are beginning to be depleted. There has been some success in implementing renewable energy sources in this region, however. From 2006 to 2014, the capacity for hydroelectric energy production doubled within the region.[89] During this time period, hydroelectric energy accounted for 71-78% of all renewable energy.[90] Geothermal energy is a relatively untapped resource, only being used by the Philippines, Indonesia, and Thailand. Although these countries have shown great interest in continuing to invest in geothermal energy, few other countries in this region have expressed interest in taking advantage of this potential power source. Solar power does not make up a particularly large portion of the available power sources in ASEAN countries. Since 2006, however, solar power capacity has increased by almost 5,000% to provide X% of the region's energy.[91]

International Cooperation

The countries within the Asia-Pacific region are heavily linked and dependent on each other for energy, technology, trade, and the health of the environment. In order for countries within the Asia-Pacific region to accept the guidance of an international organization such as ESCAP, suggestions should be thorough and thoughtful, addressing the needs of all relevant parties.

Any proposed plan for the sustainable development of the Asia-Pacific region must answer questions regarding energy sources, poverty and famine reduction, environmental preservation, intraregional trade, and funding. Sharing research between countries, exchanging information about the results of implemented policies, and coordinating with various non-governmental organizations (NGOs) will help to create a coherent response to issue of sustainable development. Governmental policy suggestions and negotiations between countries will assist in creating a strong, economically stable Asia.

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[88] Ibid.

[89] "ASEAN and Northeast Asian Energy Security"

[90] Ibid.

[91] ASEAN Centre for Energy, *ASEAN Renewable Energy Development*, (Jakarta: Renewable Energy Support Programme for ASEAN, 2016), http://cloud.aseanenergy.org/s/b22poojwrRnggo1#pdfviewer.

History of the Problem

Since the 1960s, the Asia-Pacific region has seen unprecedented rapid economic growth. Factors such as initial conditions, natural resources and geography, economic policies, and population demographics have combined to create this growth. However, not all countries within the region have had such optimal conditions. Furthermore, there are many challenges to sustaining this growth in a manner that would allow for future generations to meet their needs.

Although countries in the Asia-Pacific region have been able to use an extraordinary amount of natural resources to further the development of their economies, it is not possible to continue doing so without severely diminishing the supply of resources necessary for future growth. In recent years, the effects of relatively unchecked energy usage have started to become tangible in the form of global warming and rising costs for necessary resources, which in turn contributes to the issues of hunger and economic inequality.

Poverty and Inequality

Between 1990 and 2011, those with incomes below $1.25 a day (which is the benchmark for "extreme poverty" as defined by the ESCAP team which produced the report "Fostering Sustainable Development in Asia and the Pacific") has fallen from 1.6 billion to 743 million.[92] However, if the benchmark is raised to $2, the number of those in poverty increases from 743 million to 1.64 billion over that same time period. In many of the countries in the Asia-Pacific region, social protection expenditure is less than 2% of the GDP.[93] Social protection expenditures include cash benefits, provision of goods and services, and tax-breaks which are usually directed towards the elderly, sick, unemployed, or disabled.[94]

The Bangkok Declaration, also known as the ASEAN Declaration, was created in August 1967 and bound the countries of Southeast Asia in an effort to promote regional cooperation for the sake of social and economic growth, cultural development, and regional stability.[95] The Association of

[92] Ibid.
[93] Economic and Social Commission for Asia and the Pacific, "Fostering Sustainable Development in Asia and the Pacific," in Asia-Pacific Forum on Sustainable Development (Pattaya: Economic and Social Commission for Asia and the Pacific, 2014)
[94] "Social Spending," OECD.org, 2016, accessed September 27, 2016, https://data.oecd.org/socialexp/social-spending.htm.
[95] ASEAN, "The ASEAN Declaration," in Bangkok Convention (Bangkok: ASEAN, 1967).

South-East Asian Nations (ASEAN) works closely with many international and regional organizations, including ESCAP. ASEAN's decision to promote peace through non-interventionist policies and hundreds of annual meetings has helped create a foundation for poverty reduction and prosperity.[96] After 1974, ESCAP worked closely with the UN Conference on Trade which created a bias within the committee against the policies of the World Bank and the International Monetary Fund. However, in the 1990's, ESCAP began to support a more market-oriented approach to development.[97]

Although has been a dramatic decrease in the percentage of hungry people within the Asia-Pacific region, absolute numbers have been increasing because of the growing population. Seventy percent of all malnourished children live in Asia.[98] The Green Revolution in India and major agricultural reforms in China have helped to ameliorate this problem, but there is still much work to be done to ensure that inhabitants of this region do not go hungry.

The technological innovations, globalization, and market-oriented reform which have been key elements to the economic success of the Asia-Pacific region have also contributed heavily to income inequality. Skilled laborers, individuals with capital to invest, and individuals in urban and coastal settings are favored over unskilled laborers, manual laborers, and individuals in rural and inland settings. Technological advances increase the relative value of skilled laborers who are educated and experienced enough to work with newer technologies. Thus, unskilled laborers have a relatively more difficult time finding work that pays well.

There is generally a consensus among policy makers and researchers that globalization has been an important driver of economic growth in Asia. Global financial integration could help the poor have access to financing options for various investments, but that would make them even more vulnerable to financial crises.[99] However, financial integration has been shown to benefit the poor on the whole.[100] Those who live near major trade routes and urban centers predominantly see the

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[96] "ASEAN: The Way Forward," McKinsey&Company, May 2014, accessed September 1, 2016, http://www.mckinsey.com/industries/public-sector/our-insights/asean-the-way-forward.
[97] Richard Jolly, *From ECAFE to ESCAP*, (New York: Ralph Bunch Institute for International Studies, 2009), http://www.unhistory.org/briefing/20Asia.pdf.
[98] "Asia Hunger Facts," November 2, 2015, accessed August 31, 2016, http://www.worldhunger.org/asia-hunger-facts/.

[99] Kanbur, Ravi, Changyong Rhee, and Juzhong Zhuang. *Ineqality in Asia and the Pacific*. New York: Routledge, 2014. http://www.adb.org/sites/default/files/publication/41630/inequality-asia-and-pacific.pdf.
[100] Ibid.

positive impacts of market-oriented reform, combined with globalization and technological progress. This contributes to the income gap between city-dwellers and those who live rural areas.

Resource Management and the Environment

The problem of climate change, although a universal concern, is especially threatening to certain areas of the Asia-Pacific region. Pacific islands and certain low-lying parts of Bangladesh, Cambodia, Sri Lanka, and Vietnam (among others) are highly vulnerable to rising ocean levels and extremely rainy conditions. Furthermore, climate change can harm food production efforts and serve as a catalyst for the spread of diseases due to its effect on weather patterns.[101]

Heavy resource use has been necessary for the success that the Asia-Pacific region has accomplished. This region accounts for over half of the global use of minerals since the 1990's, and currently, nations in this region use three times as many resources per unit of GDP than the world average.[102] These unsustainable rates of resource will harm development in this region, and in 2009-2010, approximately 21 million people in the Asia-Pacific region fell back below the poverty line. The alarming rate of energy consumption creates a large burden on developing countries. In Mongolia and Sri Lanka, the cost of energy imports has grown to exceed 20% of their respective GDPs.[103]

From their founding in 1947, ESCAP, originally the Economic Commission for Asian and the Far East (ECAFE), has been active in promoting improvements to transportation and communications with projects such as the Asian Highway and the Asian Railway network.[104] These projects sought to not only increase connectivity within the region, but also to standardize procedures and equipment to increase efficiency. In 1992, in order to further promote efficiency in the transport of goods, ESCAP endorsed the development of an Asia-Europe transport system.[105] Projects such as these are intended to help reduce the usage of energy and other resources.

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[101] Plante, Christopher. "Throughout Asia: Environmental Degradation, Global Warming, and Security." April 18, 2007. Accessed August 31, 2016. http://asiafoundation.org/2007/04/18/throughout-asia-environmental-degradation-global-warming-and-security/.

[102] *ASEAN Renewable Energy Development*

[103] Ibid.

[104] "The ASEAN Declaration".

[105] Ibid.

Past Actions

During the Rio+20 United Nations Conference on Sustainable Development in 2012, member states began the process of developing a list of sustainable development goals (SDG) that would work in conjunction with the Millennium Development Goals and the post-2015 development agenda.[106] The conference adopted guidelines intended to promote environmentally friendly economic policies and financing opportunities.[107] Plans were also made to convene a high-level political forum in 2017, the theme of which will be "eradicating poverty and promoting prosperity in a changing world.[108]

In May 2014, ESCAP held a forum on sustainable development in Pattaya, Thailand. This forum discussed the integration of sustainable development policies, means of implementation, shaping regional processes, and partnerships for financing and technology-sharing. Delegates identified disaster preparedness, consumption reduction, strengthening intraregional integration, affordable access to information and communication technology (ICT), improving public health, and law enforcement as vital areas on which to focus.[109] Furthermore, delegates recognized that certain groups such as women, the elderly, and the disabled be given priority in the development agenda. The forum recommended the establishment of centers of excellence for the purpose of sharing knowledge and information and the establishment of subregional bodies to support the implementation of regional policies. Mrs. Kanchana Patarachoke, a high ranking official in Thailand, noted that within her country, the problem of inequality of opportunities across geographic regions, increased obesity juxtaposed with increasing in malnutrition in other regions, rising teenage pregnancy rates, and continued inefficiency in energy consumption are indications that that previous efforts have been insufficient.[110]

One year later, during the second Asia-Pacific Forum on Sustainable Development in May 2015, ESCAP published a document discussing regional monitoring and review for the

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[106] "United Nations Conference on Sustainable Development, Rio+20," accessed 2016, https://sustainabledevelopment.un.org/rio20.html.
[107] Ibid.
[108] "High-Level Political Forum on Sustainable Development," accessed September 7, 2016, https://sustainabledevelopment.un.org/index.php?menu=1556.
[109] Ibid.
[110] Bektas Mukhametjanov and Kanchana Patarachoke, "Chair's Summary of the Inaugural Meeting of the Asia-Pacific Forum on Sustainable Development," in Asia-Pacific Forum on Sustainable Development (Pattaya: Economic and Social Commission on Asia and the Pacific, 2014).

implementation of development goals.[111] In addressing the failures to fully meet all of the Millennium Development Goals, forum participants emphasized the lack of consideration put into regional monitoring and review mechanisms (RMRM). Building political support, creating financing opportunities, selecting individuals for leadership roles, and incorporating RMRM into implementation plans were all listed as areas of focus by the forum.[112]

Possible Solutions

Any proposed solutions must consider the highly diverse situations of the various ESCAP member states. What may work for a more-developed country such as China may not necessarily be completely transferable to a less-developed country such as Bangladesh. Moreover, differences in available resources and differences in the social and political landscapes of these countries must also be considered when drafting a resolution for the Asia-Pacific region as a whole.

Three of the main factors that influence production include labor, capital, and technology. Increasing these factors together should increase production within a country. Problems arise due to the difficulties associated with increasing any one of these inputs. Labor is limited not only by population, but also by obstacles such as lack of available transportation. Increasing capital requires either importation or domestic development of machinery, equipment, and buildings, both of which necessitate investments of time and/or money. Technological advancements also require significant investments of time, money, and labor.

Infrastructure

Investing money in infrastructure could be beneficial to countries within the Asia-Pacific region. Such investments would provide benefits to large numbers of people and allow for easier transportation and communication. Investing in infrastructure has the benefits of stable cash flows and economic insensitivity for the owners. Because infrastructure is generally monopolistic in nature

[111] United Nations Economic and Social Commission for Asia and the Pacific, "Regional Monitoring and Review Mechanism for Effective Implementation of the Post-2015 Development Agenda," in Asia-Pacific Forum for Sustainable Development 2015 (Bangkok: United Nations Economic and Social Commission for Asia and the Pacific, 2015).
[112] Ibid.

and demand for it is relatively inelastic, it can continue to be a source of profit for whoever owns and operates it. When a company decides to build a bridge, for example, they then control passage between two places. They can charge however much they want to cross it, and because a bridge is such a vital piece in a transportation network, the people who depend on it will be willing to pay higher tolls due to the lack of alternatives. Improvements to infrastructure have many long-term benefits and generally stimulate economic activity. Additionally, the act of building infrastructure creates jobs in and of itself.

There are, however, many difficulties associated with developing infrastructure in developing countries. The cost of improving infrastructure often far exceeds the available budget for the government. Public-private partnerships (PPPs) can help make up for the funding deficits. In developing countries, public officials often lack the expertise to organize the complicated, long-term arrangements of a PPP, so it may be necessary for third-party involvement to negotiate PPPs.[113] In addition to potentially prohibitive financial costs, infrastructure often also requires a steep time investment. Roads, for example, are often built on predictions for traffic conditions thirty years into the future. Furthermore, payoffs on investments in infrastructure are often less when implemented by weaker institutions, such as those with more corruption or less education.[114]

Research on how international and domestic institutions can lead infrastructure investments in emerging and developing economies has been scarce, and there is not yet much data on which leadership models are the most effective. Governments and potential investors have different goals when building infrastructure, so they must both do independent research to make sure they can both meet their needs when cooperating on large projects.[115]

Managing the Environment

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[113] "How Can Developing Countries Afford to Invest in Infrastructure?," 2016, accessed August 28, 2016, https://www.weforum.org/agenda/2014/11/how-can-developing-countries-afford-to-invest-in-infrastructure/.

[114] Antonio Estache and Grégoire Garsous, *The Impact of Infrastructure on Growth in Developing Countries*, (n.p.: International Financial Commission, 2012), http://www.ifc.org/wps/wcm/connect/054be8804db753a6843aa4ab7d7326c0/INR+Note+1+-+The+Impact+of+Infrastructure+on+Growth.pdf?MOD=AJPERES.

[115] Georg Inderst and Fiona Stewart, *Institutional Investment in Infrastructure in Emerging Markets and Developing Economies*, (Washington D.C.: Public-Private Infrastructure Advisory Facility, 2014), http://www.ppiaf.org/sites/ppiaf.org/files/publication/PPIAF-Institutional-Investors-final-web.pdf.

Many responses to environmental concerns address multiple areas of interest simultaneously. The distribution of new stoves in developing countries leads to co-benefits by not only helping mitigate the effects of climate change with improved efficiency but also reducing indoor air pollution, which in turn reduces negative health consequences that arise from polluted air.[116]

Changes in resource management could also help address environmental issues. Resources are utilized by people who are often geographically distant from where the resources are harvested, and there is rarely effective regulation. Environmental needs differ between countries, cities, and even neighboring communities. Rather than implement blanket policies for large, diverse areas, management could come from local stakeholders instead. These stakeholders would be more knowledgeable about how to effectively manage the resources that they work with every day. The dependence of their livelihoods on these resources would motivate them to maintain them.

Scientific research is another necessary component of the environmental sustainability effort. The best policy decisions are often influenced by scientifically gathered data. Sharing research and discoveries across the region could help improve energy efficiency and habitat preservation. Small failures, if carefully observed and studied, can be treated as lessons to prevent larger environmental disasters.

Discrepancies between private and social costs of production need to be rectified in terms of pricing. Often, the prices of goods will not reflect the environmental costs stemming from production. Pricing reform could help reduce the demand for environmental degradation if goods that incurred greater environmental costs were to have higher prices. Increasing the price of energy is a very sensitive decision due to the importance of energy usage in production and infrastructure in developing companies. Alternatively, subsidies could incentivize environmentally beneficial practices.

Corruption among public officials also poses a threat to the environment. Local officials have been known to accept bribes in exchange for not enforcing national laws. However, corruption is only a part of the issue of general institutional ineffectiveness. Many regulating bodies operate on limited budgets and struggle to find qualified staff members. Resolving these issues will be necessary for the enforcement of any policy changes.

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[116] "Fostering Sustainable Development".

Bloc Positions

Although the Asia-Pacific region is, as a whole, underdeveloped, there is nonetheless a wide range in development from country to country. There are many factors that tie the countries in this region to one another, and these factors underscore the importance of regional cooperation. However, more developed countries have different needs than less developed ones.

Least Developed Countries

Of the fifty-three ESCAP member states, twelve are listed as the "least developed" within the region.[117] Afghanistan, Bangladesh, Bhutan, Cambodia, Kiribati, Lao People's Democratic Republic, Myanmar, Nepal, Solomon Islands, Timor-Leste, Tuvalu, and Vanuatu are in great positions to set themselves up for long-term, sustainable success as they work to build infrastructure, policies, and bureaucracies. Whereas other countries have already established unsustainable habits in energy production, agriculture, transportation, and many other sectors, these countries can set a precedent of green growth. In order to accomplish this, many of these countries will need assistance from foreign policy-makers and foreign investors.

Developing and Developed Countries

The remaining countries in the Asia-Pacific Region will have to take different approaches to sustainable development. Instead of being able to build their economies on sustainable practices, these countries will have to reform their current practices in order to ensure a viable economic future. New infrastructure should be developed with sustainability in mind, and repairs to old infrastructure should be done in such a way that promotes long-term efficiency by prioritizing longevity over cheaper, short-term alternatives. These countries will also have to make concerted efforts to restore and protect the environment. Doing so will not only help ensure plentiful natural resources for future generations, but it will also help ameliorate the effects of natural disasters.

[117] "ESCAP Member States and Associate Members," accessed October 18, 2016, http://www.unescap.org/about/member-states.

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