



NGMUN IV

Ryan Sanghavi
Secretary-General

• Armaan Bhojwani
Under-Secretary-General

• Katie Cheung
Chief of Staff

• Oona Lundgren
Conferences Services

ASEAN: Rising Sea Levels



Table of Contents

Letter from the Secretary-General.....3
Letter from the Director.....4

The Association of Southeast Asian Nations, Topic Background.....5
Current Situation.....7

Past International Involvement, Possible Solutions.....9
Bloc Positions, Questions to Consider.....10

Endnotes.....11

Letter from the Secretary General

Dear Delegates,

Welcome to NGMUN 2022! In our third installment of the conference, and our first installment to be held for a second consecutive year, we have developed some of our most ambitious—dare I say thought-provoking—committees to date. You must remember that you are representing the views of your country or your character, not yourself. This will be imperative as you debate issues, especially if you are advocating for a side of the conflict which you yourself do not believe in. We hope to see controversy presented with respect in committees such as UNHRC: Gay Rights or in the Arab League—in other words, we hope to see true diplomacy.

The Nobles MUN club has been one that has grown and developed significantly in recent years. NGMUN started as an idea between two dedicated members of the club, Will Whalen (N' 19) and Julia Temple (N' 20), before my time at Nobles, and NGMUN I was held my freshman year. Since then, though NGMUN's leadership has separated from the MUN club's leadership, our secretariat and daises have grown significantly with regards to their experience and their enthusiasm. The Nobles MUN club has outperformed our wildest expectations since my freshman year, with one of our recent accolades including Best Large Delegation at Harvard MUN 2021. Many of the award winners from that conference and from various others will be chairing committees for NGMUN this year; in other words, our staff is extremely driven, so you should trust their decisions in committee and you should feel free to raise any questions with them or ask for advice at any time.

I would briefly like to touch on our expectations for this conference. Firstly, position papers will be required for any delegate seeking an award at the end of the one-day conference. Not only will position papers expand your own knowledge of the issue and your delegation's stance, they also show your chair and co-chair(s) that you take your position at this conference seriously. Secondly, by all means you should be excited to debate and resolve conflicts, but if discourse between you and other delegates gets too heated, remember that this conference is a simulation. You should exhibit diplomacy, not hostility. Even if you are assigned to a specialized committee where fights and arguments are in the name, there will be no tolerance for directly disrespecting the character of any of your fellow delegates. With that being said, may this conference bring growth for us all. Thanks for opting to spend your weekend with us!

Sincerely,
Ryan Sanghavi
Secretary-General
rsanghavi22@nobles.edu

Letter from the Director

Dear Delegates,

Welcome to the Association of Southeast Asian Nations and to Noble and Greenough MUN!

I am Colin Levine, a sophomore at Noble and Greenough, and I am thrilled to be your chair in ASEAN as we debate and hopefully solve the pressing issue of rising sea levels in Southeast Asia. Having participated in my first Model UN conference in sixth grade, I have attended nearly a dozen conferences on the environment and the different minutiae of the climate crisis. The crisis presents countless challenges which cannot be addressed without considering several conflicting factors such as our modern world's desperation to industrialize. Hence, I look forward to seeing you all develop sound proposals that meet the multifaceted nature of the issue.

A little about me: my main academic interests are history, government, and linguistics. I have ardently studied languages spanning from Swahili and Malagasy, to Haitian Creole and Swedish. At Nobles, I play soccer and tennis, and I help lead our Mock Trial team. I love to cook and relax on a Sunday afternoon with NFL Redzone, and with my dog (Chloe) and cat (Ares) by my side.

I cannot stress enough the greatest fundamental advice that can ever be given in Model UN: Research! Research! Research! You will be able to use a deep understanding of the issue to make compelling arguments for or against any particular proposal, and you will be able to lead the committee with your breadth of knowledge. Study your country's policy and represent it well as if your entire career has been diplomatic service thereof. I would also like to remind all delegates that, as always, Model UN is a collaborative space where all should feel comfortable sharing their honest ideas without fear of ridicule, and any attempt to exclude delegates from that opportunity will not be tolerated.

I hope you are all as excited as I am to dive into the topic and discover innovative solutions to a crisis where present leaders fail to innovate. I would also like to reiterate my commitment to facilitating a welcoming and productive debate environment for each and every delegate. Feel free to reach out if you have any questions about our committee, and I will do my best to respond in a timely manner.

Sincerely,

Colin Levine (clevine24@nobles.edu)

The Association of Southeast Asian Nations

A regional economic union, the Association of Southeast Asian Nations was originally established in the 1967 Declaration of Bangkok as an alliance of five nations: Thailand, Indonesia, Malaysia, Singapore, and the Philippines. The union first gained international legitimacy in 1979 when its members drafted and ratified the Treaty of Amity and Cooperation in Southeast Asia, following the Vietnamese invasion of Cambodia. Accession to the Treaty is now mandatory for acceptance into ASEAN, but its effect eludes the constraints of Southeast Asia. In addition to being lauded by the United Nations and European Union, 43 parties have now signed the Treaty, including many North and South American states.¹ On November 20, 2007, at the 12th annual ASEAN summit in Cebu, the Association gained a more stringent legal status and framework when its members ratified the ASEAN Charter. Today, ASEAN remains the paramount international union in Asia, overseeing multilateral efforts on all fronts of Southeast Asian life: social, economic, military, political, educational, and more. For example, ASEAN unity has strengthened each member's power when combatting Chinese aggression in the South China Sea. The Association now includes ten member states, with Brunei, Laos, Cambodia, Vietnam, and Myanmar having joined the original five nations. These nations work with a number of other states through extended partnerships in connection with the Association. There are two observer states (Papua New Guinea and Timor-Leste), three nations in the ASEAN Plus Three system (China, Japan, and South Korea), and five additional nations that participate in the annual East Asia Summit (India, Australia, New Zealand, Russia, and the United States). These 20 nations will all be present at our ASEAN committee.

Topic Background

Our committee gathers in the context of drastically rising sea levels, presently 20 centimeters above 1880 levels and projected to rise an additional 84 centimeters by the end of the century. Southeast Asia, in particular, is at extreme risk, due to its abnormally low elevation and the 54% of its populace that lives in low-lying coastal cities.³ Worse yet, in Jakarta, 40% of people live below sea level, kept safe by an ever-deteriorating sea wall.⁴ In addition, Southeast Asia is one of the most susceptible regions to natural disasters such as tsunamis, monsoons, and flooding, all of which will be disastrously exacerbated by the rising seas. Experts grimly forecast that by 2050, Bangkok, Manila, Jakarta, and many other major cities will be entirely underwater, rendering their nations' most crucial infrastructure and economic resources destroyed and millions upon millions displaced or dead.⁵

Though its effects are innumerable, the cause of the rising sea levels is quite simple. Global temperatures have risen by more than a degree Celsius since 1880, projected to rise another 2 degrees by the end of the century.⁶ The primary cause of the temperature rise is a striking increase in greenhouse gas emissions associated with the rapid expansion of the industrial world, among other truly detrimental human practices. Greenhouse gasses in the atmosphere radiate heat in all directions, much of which goes towards the earth's surface. The

reason we do not see the earth's temperature grow more drastically is that the ocean acts as the earth's buffer against major temperature fluctuations. The ocean stores more than 90% of the earth's excess heat, meaning when there is such a colossal amount of excess heat for it to store as there is today, ocean water becomes heated to an unsustainable degree.⁷ When water gains heat, its molecules grow faster and more spread out, causing the ocean to expand and sea levels to rise. There is also more room between the molecules for dissolved oxygen to escape, leading to deoxygenated oceans as we see today.

Current Situation

As previously mentioned, Southeast Asia is particularly vulnerable to rising sea levels, given it already suffers from some of the worst monsoons, tsunamis, and floods in the world. In 2018, the Intergovernmental Panel on Climate Change published a doomsday report warning that only a dozen years remained to keep global temperature rise below 1.5°C or millions of people would experience severe flooding, among other natural disasters that would destroy coastal cities.⁸ In addition to infrastructure and lives, sea-level rise threatens to devastate the Southeast Asian way of life in the form of food, water, and economic insecurity. Firstly, changes in precipitation patterns associated with sea-level rise throw off the region's agricultural sector, destroying fundamental industries such as rice farming. Droughts, in particular, have damaged the rice industry, with yield reduction due to drought amounting to as much as 40% in recent years. The staple food of 557 million people in Southeast Asia, rice production is also impacted by natural disasters. In 2011, flooding alone was estimated to have cost Indonesia approximately 1 344 million tons of rice.⁹ This agricultural crisis is deeply exacerbating preexisting food insecurity and meager economic activity in the region.

Secondly, the other major food and employment source in Southeast Asia, fishing, is also in danger due to rising sea levels. Indeed, given fish need oxygen to survive, the aforementioned deoxygenation of the ocean is causing local fish populations to dwindle. Deoxygenation also engenders reef bleaching, which destroys marine ecosystems and further minimizes fish supply. Local fishermen have seen their yield catastrophically diminished, costing them their incomes and countless villages their basic means of sustenance.

Thirdly, sea-level rise heavily restricts access to clean drinking water, affecting the loss of a substantial supply of groundwater in addition to the aforementioned droughts. The excess ocean water often permeates sea barriers and ends up in groundwater, rendering it salinated and thus undrinkable. Furthermore, sea-level rise has forced civilians to reconsider their overwhelming reliance upon groundwater. Indeed, groundwater extraction itself is causing cities to lose elevation and sink yet further beneath sea level. When groundwater is extracted from the earth, the soil compacts to fill the space the groundwater once occupied, leading the top layer of soil to drop significantly.¹⁰ Given that most of Southeast Asia is heavily over-reliant on groundwater both for drinking and for agricultural use, the region is facing drastic land sinkage due to its over-extraction of groundwater. Accordingly, the necessary step many nations take is to limit the amount of groundwater their citizens can extract, which unfortunately reduces the drinking water supply for countless civilians and grossly augments water insecurity in the region.

Past International Involvement

There is a long history of international attempts to address the climate crisis. The following is a brief timeline of a few key events in the recent history of climate action.

2005: The Kyoto Protocol comes into effect, which establishes a model for more responsible management of the environment on the part of developed nations. The Protocol establishes a commitment for those nations to reduce their greenhouse gas emissions.

2007: At the 13th ASEAN Summit, centered around “Energy, Environment, Climate Change, and Sustainable Development,” members sign the ASEAN Declaration on Environmental Sustainability. The Declaration primarily comprises a list of different plans and programs to cut emissions and promote a transition to environmentally sustainable practices.¹¹

2012: The Doha Amendment extends the Kyoto Protocol’s provisions until 2020. However, it appears the climate fight has lost international vitality, with several of the world’s largest emitters retracting their support. Only 144 nations ratify the Amendment.

2016: To renew international unanimity in fighting climate change, the world comes together behind the Paris Agreement. This legislation requires not only developed nations but also developing nations to set aggressive long-term targets for cutting emissions to net-zero by 2050. The overall goal of the Agreement is to keep temperature rise below 1.5°C at all costs.¹²

Possible Solutions

There are two primary short-term methods by which nations can protect their coastal communities from rising sea levels. Firstly, nations may take the obvious path, simply building walls to hold out water above their city level. As previously mentioned, Jakarta has taken this course of action, holding their city entirely hostage to the durability of centimeters of seawall. Alternatively, nations can move to elevate cities themselves, raising roads and infrastructure above sea level. However, it must be recognized that neither of these options is, in any way, economical or sustainable in the long run. Indeed, either seawalls or cities will have to perpetually build higher up as sea levels continue to rise; the project will never be complete, nor will the expenses ever end. Nonetheless, cities must be prevented at all costs from drowning in the immediate future as long-term solutions take effect, giving these measures some credibility.

One long-term plan is already in practice, despite its being most infeasible: simple moving populations. Indeed, in face of its capital city already falling under sea level, Indonesia has officially announced that it will move its capital from Jakarta to Borneo by 2024.¹³ In broad terms, it may be prudent to discourage coastal settlements and promote people to move inland and create successful economic centers there. Delegates should realize, however, the reality that urban prosperity and livelihood are by and large grounded in current coastal cities and cannot be simply transported. Furthermore, there will be significant environmental detriments to the deforestation and heavy industrial process that the construction of new cities would entail.

One sustainable, long-term solution to address land sinkage is to pump water into the ground to replace groundwater that has been extracted. Hampton Roads, Virginia, has begun a

program of repumping decontaminated wastewater into the ground, which has proven quite effective in reducing their land sinkage. Similarly, China has employed a system of “Sponge Cities,” where rainwater is allowed to absorb into the ground and travel to natural aquifers. Not only does this program allow the Chinese to consume rainwater in place of groundwater, which minimizes the sinkage effects of groundwater extraction, but it also reduces flooding as the rainwater has somewhere to go instead of accumulating above ground.¹⁴ Another sustainable solution to mitigate flood dangers is the construction of stormwater pumps, which drain water from the city back into the ocean. In response to concerns of these pumps becoming easily overwhelmed in instances of extreme precipitation, Kuala Lumpur has created a more expansive system. Indeed, the Kuala Lumpur Smart Tunnel, a 9.7-kilometer stormwater tunnel, is capable of taking hundreds of thousands of cubic meters of rainwater out of the city and into a tremendous reservoir, from which the collected water can be repurposed.¹⁵

The most general long-term solution, of course, remains for nations to work towards net-zero greenhouse gas emissions, which would entirely attenuate the threat of ongoing sea-level rise. However, the chair hopes that this committee will shy away from broadening its focus to address the entire climate crisis. Rather, the result of this committee should be comprehensive plans for meeting the specific, present threats of rising sea levels.

Bloc Positions

Developing and industrializing nations are likely to prioritize economic growth over any worries about the climate or sea levels. They are likely to point to the larger emitters as responsible for the crisis and accountable to address its effects. Considering the grand costs that some of the above initiatives would entail, developing nations are unlikely to be able to unilaterally undertake the substantial recourse necessary to mitigate the dangers their communities face. However, they will certainly be eager to work with developed partners to ideate effective funding mechanisms and propitious methods of addressing the issue.

Developed nations have already begun to undertake major initiatives to mitigate the effects of sea-level rise such as the Hampton Roads and Chinese aquifer programs. These nations have, therefore, demonstrated a definite willingness to cover the substantial costs thereof. The willingness of each nation to substantively aid Southeast Asian partners in installing such programs there will, additionally, depend on that nation's general policy towards foreign aid.

Questions to Consider

1. How can infrastructure to combat sea-level rise be made more accessible on a greater level for developing nations? What effective funding mechanisms can be developed?
2. To what extent can nations prioritize sustainable development over rapid growth?
3. How can industries such as agriculture, fishing, and tourism adapt to the reality of coastal submergence and subsidence?
4. How can water sources be reformed to rely less on groundwater and fight sinkage?
5. What systems can be put in place towards natural disaster relief in the growing instances of monsoons and flooding?
6. How can the unsustainable population of coastal cities be combatted and populations be transitioned inland without too high a social and economic cost?

Endnotes

1. Latuperisa-Andresen, Jennifer. Untitled work. Unsplash. Published October 27, 2017. <https://unsplash.com/photos/U1y2ye6nPks>.
2. "Treaty of Amity and Cooperation in Southeast Asia (TAC)." Association of Southeast Asian Nations. Last modified January 2021. <https://asean.org/our-communities/asean-political-security-community/outward-looking-community/treaty-of-amity-and-cooperation-in-southeast-asia-tac/>.
3. "Rising sea levels could put Netherlands under 48 cm of water: report." NL Times. Last modified September 26, 2019. <https://nltimes.nl/2019/09/26/rising-sea-levels-put-netherlands-48-cm-water-report>.
4. Suwa, Aki. "Sustainability and the Automobile Industry in Asia." Published 2020. Routledge. New York, NY.
5. Kimmelman, Michael. "Jakarta Is Sinking So Fast, It Could End Up Underwater." New York Times. Last modified December 21, 2017. <https://www.nytimes.com/interactive/2017/12/21/world/asia/jakarta-sinking-climate.html?mtrref=undefined&gwh=A7783610AC30766114247346CAF7FC97&gwt=pay&assetType=PAYWALL>.
6. "Bangkok Could Be Completely Underwater By 2050." J&C Lao. Last modified October 31, 2019. <https://jclao.com/bangkok-could-be-underwater/>.
7. Sinha, Amitabh. "Global temperature to rise by more than 2 degree Celsius by 2100: IPCC report." The Indian Express. August 9, 2021. <https://indianexpress.com/article/world/united-nations-climate-change-report-temperature-rise-warning-7445494/>.
8. Cooper, Rachel. "The ocean has absorbed more than 90% of the heat gained by the planet." Last modified January 8, 2019. Climate Action. <https://www.climateaction.org/news/the-ocean-has-absorbed-more-than-90-of-the-heat-gained-by-the-planet>.
9. Watts, Jonathan. "We have 12 years to limit climate change catastrophe, warns UN." The Guardian. Last modified October 8, 2018.
10. Redfern, Suzanne K. "Rice in Southeast Asia: facing risks and vulnerabilities to respond to climate change." PDF. <https://www.fao.org/3/i3084e/i3084e18.pdf>.
11. Water Science School. "Land Subsidence." United States Geological Survey. Last modified June 5, 2018. <https://www.usgs.gov/special-topics/water-science-school/science/land-subsidence>.
12. "13th ASEAN Summit." Association of Southeast Asian Nations. November 22, 2007. <https://asean.org/13th-asean-summit/>.

13. "The Paris Agreement." United Nations Framework Convention on Climate Change.
<https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>.
14. "Indonesia's new capital to be moved to Borneo island." Aljazeera. Last modified August 26, 2019.
<https://www.aljazeera.com/news/2019/8/26/indonesias-new-capital-to-be-moved-to-borneo-island>.
15. "Sponge Cities: What is it all about?" World Future Council. January 20, 2016.
<https://www.worldfuturecouncil.org/sponge-cities-what-is-it-all-about/>.
16. "SMART (Stormwater Management And Road Tunnel), Kuala Lumpur, Malaysia." Road Traffic Technology.
<https://www.roadtraffic-technology.com/projects/smart/>.