

I O R A



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DIRECTOR'S LETTER

Dear Delegates,

Welcome to King County Model United Nations 2019 and the Indian Ocean Rim Association (IORA). My name is Rithikaa Prakash and I will be serving as your Director for KINGMUN 2019. I am a sophomore at the International Community School, and this is my second year in MUN. I am joined by my Chair Aaliyah Wu, a junior at the International Community School and my Assistant Director, Khushi Tawde, a sophomore in the Cambridge Program at Juanita High School.

The Indian Ocean Rim Association was created in 1997 to develop and bring together the countries bordering the Indian Ocean. Not only does it deal with issues pertaining to the ocean, but it also discusses social issues such as Women's Economic Empowerment and Tourism and Cultural Exchange.

We have selected two topics for the committee: Improving Maritime Security to Prevent Armed Robberies and Terrorism at Sea and Combating Anthropogenic Hazards in the World Hazard Belt. Both these topics are relevant and will allow you to take home important information while allowing for dynamic debate.

The ocean is a never ending span of water and a large portion is still a mystery- above the surface as well as below. The sea is a major route for economic transport but it remains one of the largest unguarded portions of the world. Thus, it is the perfect place for theft and terrorism to occur. It is important to find a solution to this problem as it is crucial for the economy of many countries and the lives and jobs of large populations.

Paralleling this, combating man made hazards is also an important issue as it deals with the way we treat our environment and natural hazards in the Indian Ocean. It is imperative to address this issue as it has direct impact on the long term viability of Indian Ocean resources.

We have written this background guide to provide you with information on the two topics as well as to serve as a starting point for your research. We hope that it is a helpful tool for you to use during debate to discuss creative solutions to the two issues.

Feel free to contact us with any questions you may have, and we look forward to seeing you at KINGMUN 2019

Best of Luck, Rithikaa Prakash Director | Indian Ocean Rim Association

Committee Overview

The Indian Ocean Rim Association (IORA), established in 1997, is an intergovernmental organization based in Mauritius that was created to consider and make recommendations to improve many issues pertaining to the Indian Ocean such as maritime safety and security, trade investment and facilitation, fisheries management, disaster risk management, tourism and cultural exchange, academic science and tech, blue economy, and women's economic empowerment. IORA attempts to resolve these issues through an odd hierarchy secretariat officials and member states. A committee of senior secretariat members meets twice a year to set the agenda and the projects for the IORA member states meanwhile the member states take it upon themselves to fund/lead these assigned projects. Therefore, delegates must keep in mind that IORA works completely on the volition of the member states to act upon or fund IORA approved projects and ideals. Nevertheless, this different style of functionality, will not be affecting normal ROP. IORA welcomes all whether they are beginners looking to improve their diplomacy and debate, or experienced delegates looking to strengthen their debate skills.

Position papers must be submitted on time for delegates to be considered for an award. In the cabinet at KINGMUN 2019, the position papers delegates write will not be like typical position papers. Position papers should be a page long for each topic, briefly summarizing the history; their minister's stance on the topic; past and present country, ministry, and committee actions and policies; past and present international actions and policies; the current situation; and potential solutions in the form of proposed national administrative regulations.

Position Papers are due by April 21st at 11:59 p.m. Please submit them to iora@kingmun.com with your name, country, and "position paper" in the subject line.

Topic A: Improving Maritime Security to Prevent Armed Robberies and Terrorism at Sea

Topic Overview

Spanning over 68.56 million sq. km, IORA serves as the first line of defense for any threats that are encountered in the Indian Ocean. One of IORA's 8 focus areas is maritime safety and security, as it is considered necessary for the economic wellbeing and political peace of the region. IORA faces numerous threats to security at sea, but most prominent and pressing issues are armed robberies and maritime terrorism.

Armed robbery has been concentrated in the waters off of Southeast Asia, Somalia, the Caribbean, and the Gulf of Guinea. Unfortunately, robberies and piracy at sea is often tied in with terrorism. The surplus of valuable ports that reside within the Indian ocean and the value of the commodities sold through Indian ocean trade routes. Terrorists often attack the ports in the Indian Ocean in order to try and disrupt the world's economy and cause panic for countries that rely on trade in the area. This terrorism is often difficult to combat due to the vastness of the ocean and the lack of current existing security measures to protect against potential terrorist attacks.

With the rise of terrorism at sea and armed robberies, it is imperative for IORA to seek a lasting and feasible solution to prevent terrorism from destroying the vibrant trade and peace in the region.

History

Previous insecurities in maritime trade have slowly shifted the international perspective of avoiding natural trade inhibitors to avoiding Somalian pirates with the intention of seizing millions of dollars of raw goods. These maritime invaders have a multitude of abilities that fit under the concept of "piracy" which will inevitably lead to nations/organizations spending huge amounts of money to deal with a small group of thieves. From extortion to kidnapping to shipwrecking, dealing with these invaders requires a plethora of specialized units/teams to eliminate such a common yet cumbersome threat.

These crimes rose in frequency during the Golden Age of Piracy (1630-1730), and while they did decrease after this period passed, there was still a noticeable amount of maritime crime occuring. Many countries began implementing regulations on imports and exports. Before the 20th century, agreements on how ships can acknowledge the other were signed. In 1900's, there was a rise of internationalisation for maritime laws, which led to the creation of international organizations to protect the ocean.

Other organizations have taken considerable action towards Maritime Safety and Security. The International Maritime Organization (IMO) has adopted various products and addressed it in International Convention for the Safety of Life at Sea (SOLAS) created in 1974. The African Maritime Safety and Security Association (AMSSA) designed the Africa-EU Strategy First Action Plan, a partnership with the European government, to create and execute on new strategies to combat the disaster taking place on their oceans. The U.S. Department of State created U.S. Counter Piracy and Maritime Security Action Plan, which highlights the United States Government's policy for countering piracy, robbery at sea, and related maritime crime.

Since a safe Indian Ocean is crucial for socio-economic development, IORA made Maritime Safety and Security a top priority area of focus in 2011. The Indian Ocean is a major route for international trade and half of the world's container ships, one third of the world's bulk cargo and two thirds of the world's oil shipments use its waters as a through route annually.

Past Action

IORA has made Maritime Safety and Security (MSS) as one of their top concerns they need to tackle. At the IORA Leaders' Summit held in 2017, all 21-member countries gathered in Jakarta, Indonesia to discuss the how they will cooperate with one another to safeguard the Indian Ocean. As a result of the conference, 3 documents were put into effect. The Jakarta Concord, whose key points focus on promoting maritime safety and security, enhancing trade and investment cooperation, promoting sustainable and responsible fisheries management, strengthening academic, science and technology cooperation, fostering tourism and cultural exchange, harnessing and developing cross cutting issues and priority objectives. The IORA Action Plan of 2017-2021 which is currently being progressed by the IORA Working Group on MSS (WGMSS), whose primary goals are stated in Blueprint for Maritime Safety and Security in IORA. The Declaration of Preventing and Countering Terrorism and Violent Extremism in which all member states will focus on "counter[ing] the threat from terrorism and violent extremism, including through enhancing cooperation and coordination of efforts, dialogue and sharing of information, expertise, best practices and lessons learned including on stemming the financing of terrorism". This event was a momentous occasion as it was the First Leaders' Summit held by IORA. IORA has also developed more head projects to tackle MSS, such as the Indian Ocean Dialogue (IOD). There has been a total of 5 meetings, where the 21-member countries send experts, analysts, and other high government officials to discuss strategies and

policies to implement in order to combat issues involving not only MSS but Blue Economy, Disaster Risk Management, and other humanitarian and economic problems relating to the Indian Ocean.

United Nations has also been taking considerable action towards MSS through their specialized agency, International Maritime Organization (IMO). The IMO meets bi-yearly to discuss and adopt a new Strategic Plan for the Organization, a document that outlines tactics and procedures that the IMO will use over a six-year period. The current plan that is in effect is spanning from 2018-2023. The Maritime Safety Committee, a technical body of the organization, took up a proposal by the International Chamber of Shipping to encourage effective action against maritime aspects of mixed migration at sea. Their proposed strategies, such as reconsidering the process of reporting clear lines of travel and establishing humanitarian rescue zones throughout the ocean, fall in line with actions taken by the United Nations. Many countries around the world may not have access to all the technology needed to combat issues brought up by MSS. The United Nations Economic Commission for Africa is having many proposed threats when it comes to MSS, such as illegal arms and drug trafficking, piracy, and armed robbery at sea. The framework presented around solving this issue is a weak one as many African countries have poorly maintained aids to navigation. The absence of modern hydrographic surveys, up-to-date nautical charts as well as maritime safety information are the main pieces of innovation that many african nation are missing. If IORA can somehow unify its member states, disperse and standardize anti-piracy tactics and simply come to compromise, there is hope that there may one day be a unified Indian Ocean.

Current Situation

IORA has made Maritime Safety and Security (MSS) as one of their top concerns they need to tackle. At the IORA Leaders' Summit held in 2017, all 21-member countries gathered in Jakarta, Indonesia to discuss the how they will cooperate with one another to safeguard the Indian Ocean. As a result of the conference, 3 documents were put into effect. The Jakarta Concord, whose key points focus on promoting maritime safety and security, enhancing trade and investment cooperation, promoting sustainable and responsible fisheries management, strengthening academic, science and technology cooperation, fostering tourism and cultural exchange, harnessing and developing cross cutting issues and priority objectives. The IORA Action Plan of 2017-2021 which is currently being progressed by the IORA Working Group on MSS (WGMSS), whose primary goals are stated in Blueprint for Maritime Safety and Security in IORA. The Declaration of Preventing and Countering Terrorism and Violent Extremism in which all member states will focus on "counter[ing] the threat from terrorism and violent extremism, including through enhancing cooperation and coordination of efforts, dialogue and sharing of information, expertise, best practices and lessons learned including on stemming the financing of terrorism". This event was a momentous occasion as it was the First Leaders' Summit held by IORA. IORA has also developed more head projects to tackle MSS, such as the Indian Ocean Dialogue (IOD). There has been a total of 5 meetings, where the 21-member countries

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Case Studies

Case Study 1

At dawn off the coast of the Gulf of Aden, oil tanker MV Zirku was hijacked by Somali pirates on March 21, 2011. The Zirku was caught travelling outside of the Internationally Recommended Transit Corridor within a High Piracy Risk Area on its way to Singapore. Once the ship was attacked by a flurry of RPG and gun fire, the ship acted against the pirates by increasing speed, firing rocket flares and activating the fire hoses. Although due to the ships generally low mobility and lack of preparedness in the face of danger, the Zirku crew was seized and the ship was halted. Vessels such as the Zirku are especially high priority targets for maritime invaders due to the possibilities of them carrying (in this case) 150 million dollars of oil. And considering that hundreds of these shipments are passing through Indian ocean waters monthly, one would think that the pirate seizure of a tanker the morning before the Zirku raid would have deterred any other movement from the area. Overall, the Zirku tanker had mediocre security measurements installed when it came to pirate attacks: it had an insufficient maximum speed of 12.5 knots, the 29 man crew failed to communicate due to language barriers, and the ship had operational deficiencies inhibiting the ship to function at its highest capacity.

Once the Indian navy and coast guard had dealt with the 16 Somali invaders, it was revealed that the pirates initial intentions were to expanding this terrorist enterprise through utilizing the Zirku as a hub for other pirates within the area. This invasion set new expectations for maritime safety by requiring serveyance technology to scan any incoming threats along the path of the ship which would be supported an inevitably pushed by IORA as well.

Case Study 2

On October 6, 2002, an oil tanker called the MV Limburg, was carrying 397,000 barrels of crude oil from Iran to Malaysia. While sailing through the Gulf of Aden, located off the coast of Yemen, the ship got rammed by suicide bombers in a small dinghy rigged with multiple explosives. The collision resulted in a massive fire and 90,000 barrels of oil leaked into the Gulf. Out of the thirteen-member crew, twelve were injured and one was killed during the attack.

Yemeni authorities publicly announced that the attack was actually an accident caused by an electrical fire. US military officials later supported that statement, playing down the possibility of terrorism. However, the terrorist group Al-Qaeda later claimed responsibility for the attack in a statement released by their leader, Osama Bin Laden. Biden's claim was soon backed by the testimony of Al-Qaeda member Ahmed al-Darbhi, who pleaded guilty for planning several maritime attacks in the Indian Ocean, including the assault on the MV Limburg.

The attack resulted in a short-term collapse in the shipping economy in the Gulf of Aden, which forced Yemen to pay 3.8 million dollars worth of port revenues to clean up the spilled oil. It is suspected that the purpose of the attack was to create economic instability. The world's economy is heavily dependent on oil, and any attack that could affect the international trade of the fossil fuel would result in a panic. While Al-Qaeda's attack on the Limburg didn't result in much of a rise in oil prices or disruption to the economy, it was indicative of terrorist's ability to interfere trade in the Indian Ocean and the risks of shipping valuable materials through the area.

Guiding Questions

- 1. Is it better to stop terrorist groups or stop individual crimes?
- 2. What happens if a terrorist or armed robbery group is associated with the government of an IORA member state?
- 3. If there was a group associated with a certain country, should it be a concern of the individual country or the IORA as a whole?
- 4. Would it be feasible, economically, for all member states to combat these terrorist and robbery groups?

- 5. What are some policies that IORA has in place to combat these terrors? How can we update them to keep up with current times?
- 6. What are actions that other organizations are taking that IORA can implement and improve on to better fit the Indian Ocean region?

ADDITIONAL RESOURCES:

Drug Trafficking Routes Proliferate through Indian Ocean

1. https://www.janes.com/images/assets/457/72457/Drug_trafficking_routes_proliferate_through_Indian_Ocean.pdf

This resource is shows popular drug trafficking routes in the Indian Ocean. While drug trafficking itself isn't the most prevalent issue within the piracy and terrorism, this still has a strong hold on the various countries who are plagued by drug trafficking. Those countries who are involved in these issues should visit this resource and discuss about the mitigation of drug trafficking.

Indian Ocean Maritime Security: Risk-Based International Policy Development

2. https://digital.library.adelaide.edu.au/dspace/bitstream/2440/97879/2/02whole.pdf

This is a 314-page report, the entirety of the report doesn't need to be read to understand its purpose and the main points of it. It talks about various security challenges of the IORA member states and certain views the member states are taking. This report is highly educational and gives many case studies that go further in-depth and connecting them. Reading the entirety of the report is NOT encouraged, while it is a fantastic resources to cite from, but is understandable lengthy.

Peace and Security Challenges Facing Small Island Developing States

3. https://www.mfat.govt.nz/assets/Peace-Rights-and-Security/peace-securiut-challenges-facing-small-islanddeveloping-states-30-july-2015.pdf

This resource discusses the problems that smaller nations, mainly the island states of IORA, with security and defenses from outside conflicts. The delegates representing smaller states should take a look into this challenges of theirs and they can also find countries who do have similar troubles. The resource also talks about other issues than security such as blue economy and climate change.

Statistics of Pirate Attacks Worldwide

4. https://www.statista.com/statistics/266292/number-of-pirate-attacks-worldwide-since-2006/

This resource is a data collection of pirate attacks on ships around the world since 2006 to 2018. The website also goes further into what areas are most often attacked and which groups are the most responsible today. Other additional resources about cargo ships and exports throughout the world can also be found here. This can help delegates if they wish to get specific statistics for their position paper or their speeches during debate.

Cited

- 1. https://www.un.org/press/en/2010/sc10092.doc.htm
- 2. https://www.un.org/press/en/2013/ga11466.doc.htm
- 3. https://www.iora.int/en/priorities-focus-areas/maritime-safety-and-security
- 4. https://www.iora.int/media/8214/iora-extremism-declaration-7-march-2017.pdf
- 5. https://www.un.org/sustainabledevelopment/climate-change-2/
- 6. https://www.iora.int/en/priorities-focus-areas/disaster-risk-management
- 7. https://en.wikipedia.org/wiki/Paris Agreement
- 8. https://www.iora.int/media/8248/iora_charter.pdf
- 9. https://www.iora.int/en
- 10. http://www.dailymirror.lk/article/A-hub-for-disaster-relief-in-Indian-Ocean-140538.html
- 11. https://www.foreignaffairs.com/articles/oceans/2004-11-01/terrorism-goes-sea
- 12. http://www.iora.int/en/priorities-focus-areas/disaster-risk-management
- 13. http://www.iora.int/en/priorities-focus-areas/maritime-safety-and-security
- 14. http://floodlist.com/asia/vietnam-floods-landslides-june-2018
- 15. http://www.imo.org/en/OurWork/Security/Pages/MaritimeSecurity.aspx
- 16. http://www.futuredirections.org.au/publication/the-indian-ocean-rim-association-for-regional-co-operation-india-takes-the-lead/

- 17. https://www.iora.int/media/23403/150420_press_release_isdp_tanzanian_disaster_workshop.pdf
- 18. https://www.marineinsight.com/marine-safety/9-types-of-maritime-crimes/
- 19. http://www.imo.org/en/KnowledgeCentre/ReferencesAndArchives/HistoryofSafetyat http://www.imo.org/en/KnowledgeCentre/ReferencesAndArchives/HistoryofSafetyat http://www.imo.org/en/KnowledgeCentre/ReferencesAndArchives/HistoryofSafetyat http://www.imo.org/en/KnowledgeCentre/ReferencesAndArchives/HistoryofSafetyat http://www.imo.org/en/KnowledgeCentre/ReferencesAndArchives/HistoryofSafety20at%20sea%20extract.htm http://www.imo.org/en/KnowledgeCentre/ReferencesAndArchives/HistoryofSafety20at%20sea%20extract http://www.imo.org/en/KnowledgeCentre/ReferencesAndArchives/HistoryofSafety20at%20sea%20extract http://www.imo.org/en/Linearchives/HistoryofSafety20at%20sea%20extract http://www.imo.org/en/Linearchives/AndArchives/HistoryofSafety20at%20sea%20extract http://www.imo.org/en/Linearchives/AndArchives/HistoryofSafety20at%20sea%20sea%20extract http://www.imo.org/en/Linearchives/AndArchives/HistoryofSafety20at%20sea%2
- 20. http://www.amssa.net/about/action-plan.aspx
- 21. http://www.sundaytimes.lk/180819/news/disaster-response-us-pacangel-outreach-to-the-indian-ocean-region-307498.html
- 22. https://sustainabledevelopment.un.org/partnership/?p=7675
- 23. http://www.undp.org/content/dam/maldives/docs/Environment%20and%20Energy/disaster%20risk%20profile.pdf
- 24.https://www.iora.int/en/flagship-projects/the-indian-ocean-dialogue
- 25. http://www.imo.org/en/About/strategy/Pages/default.aspx
- 26.https://www.unisdr.org/partners/united-nations/wmo
- 27. https://www.iora.int/en/about/first-leaders-summit
- 28. https://www.unisdr.org/we/coordinate/sendai-framework
- 29. https://www.iora.int/en/events-media-news/news-updates-folder/meeting-of-iora-cluster-group-on-disaster-risk-management-drm
- 30. https://refugeesmigrants.un.org/sites/default/files/stocktaking_imo_arbour.pdf
- 31. https://www.unisdr.org/files/32918 drrintheun2013.pdf
- 32. https://www.thehindu.com/news/cities/chennai/ennore-oil-spill-what-is-happening/article20044550.ece
- 33. https://www.thehindu.com/news/national/tamil-nadu/report-pegs-ennore-oil-spill-at-251-tonnes/article20006432.ece
- 34. https://thediplomat.com/2017/02/the-great-chennai-oil-spill-clean-up/
- 35. https://www.hindustantimes.com/india-news/chennai-oil-spill-could-severely-impact-marine-life-environmentalists-say/story-He1NeiyQcBsIWiLA9t4hcM.html
- 36. https://toxicwasteisbad.weebly.com/toxic-waste-case-study.html

- 37. https://en.wikipedia.org/wiki/Ajka alumina plant accident
- 38. https://en.wikipedia.org/wiki/Maritime_Jewel#History
- 39. https://en.wikipedia.org/wiki/Timeline of al-Qaeda attacks#2002
- 40. http://shippingposition.com.ng/content/star-hijack-last-week-oil-tanker-mt-zirku-hijacked-gulf-aden
- 41. http://www.marsecreview.com/2011/05/security-case-study/
- 42.https://data.worldbank.org/indicator/NY.GDP.PCAP.CD

Topic B: Combating Manmade Hazards in the World Hazard Belt

Topic Overview

The Indian Ocean is called the "World's Hazard Belt" because that area is often prone to both man-made and natural disasters. According to the United Nations Economic and Social Commission for Asia and the Pacific, nearly 50% of the world's natural disasters occur in this region. The list of catastrophes that countries in this area have endured are extensive: the Super Cyclone in Myanmar (2008), Indian Ocean Earthquake (2004), the tsunamis and earthquake in Indonesia (2018), and the landslides and flooding in Vietnam (2018). The devastation that these disasters caused led to economic and societal downfalls that countries take decades to recover from. The region was in desperate need of disaster prevention and management, leading to the topic become a primary focus of the committee

These events triggered IORA to start using Disaster Risk Management techniques to combat and respond to these tragedies and ensure safety for the future. Science and research, as well as funding, are required to ensure that IORA's member states are able to achieve maximum amounts of risk management.

History

Many products of today are plastic or created by petroleum, which has dire effects on the world. Most people recognize that the burning of petroleum, coal, and other fossil fuels emit carbon dioxide that's released to the atmosphere, and there have been correlations to the rising carbon dioxide levels and global warming. However, going back, the rise of the usage of fossil fuels started around the Industrial Revolution in Europe around the late 18th century. With the invention of the steam engine and the sewing machine, creating goods for other countries became faster and easier, leading to more production and thus more usage of fossil fuels. The world was taken by surprise as it was pushed into the Technological Era from 1870 to 1920 and pushed the inventions for transportation and telecommunications. Later, until the Technological Era of today, the world hasn't stopped manufacturing and producing goods, creating a large carbon dioxide emission that hasn't gone down and has started to affect the world's environment negatively.

The United States is currently engaging Humanitarian Assistance & Disaster Response (HADR) training programs that engage with military, governments, and NGOs in those regions to teach the citizens various techniques to be better prepared for natural disasters and humanitarian operations. The United Nations has also initiated partnerships that focus on protecting the citizens of that country and reducing the vulnerability of the islands on the Indian Oceans to these deadly hazards. There are organizations that are using different methodologies to predict future hazards, addressing them, and seeing how they are going to impact their country. The United Nations Development Program (UNDP) uses multihazard and vulnerability assessment to see the strength of the potential hazards and how their resources are going to help the population survive during catastrophe. They use this information to get rid of any potential complications that might arise in the future.

The Indian Ocean Region (World Hazard Belt) is an area that is prone to disasters, both natural and man made. Earthquakes, tsunamis, cyclones, and droughts are just some of the disasters that the region is faced with every few years, making it difficult to protect Island Nations in the World Hazard Belt. oil spills, fires, leakage of poisonous and destructive substances, illegal dumping, and so on are just some of the things that humans that increase the number and extremity of these disasters.

Since the World Hazard Belt is part of IORA's focus areas, they have taken some measures to combat disasters in the area. Disaster Risk Management has been given focused direction in the development plans for 2017-2021. In 2015, The Ministry of Foreign Affairs of the Government of United Republic of Tanzania in collaboration with the Indian Ocean Rim Association hosted a two-day workshop on "Exploring Preemptive Disaster Risk Management Measures to Ensuring Human Security" in the Indian Ocean region on April 20th and 21st. The workshop on Disaster Risk Management was to bring together officials from IORA Member States and Dialogue Partners to discuss the greater empowerment of the local community across the rim countries in minimizing disasters and risks.

Current Situation

Seeing as the IORA has the best institutes in Disaster Risk Management (DRM) as the Indian Ocean Rim (IOR) is the most prone to anthropogenic hazards and manmade disasters. IORA has been deriving inspiration from the Sendai Framework when tackling the concept of DRM. The Sendai Framework is a 15-year agreement in which all member countries must reduce disaster risk by working with local governments and other stakeholders. This document was adopted in the Third United Nations World Conference on Disaster Risk Management, their top priorities being to invest and enhance disaster preparedness. During the First Leaders Summit in 2017, the IORA Action Plan 2017-2021 was established and the development of DRM is now allowed to grow in a contained form. The Action Plan: explore the idea of creating an IORA Centre of Excellence for Disaster Risk Management and forming a partnership with the Intergovernmental Oceanographic Commission (IOC-UNESCO). A recent meeting held on February 6, 2019 was held by the IORA Cluster Group on Disaster Risk Management to discuss how to advance cooperation between the member countries and building international relationships in order to ease

any problems that may involve using DRM as a solution. They concluded the meeting by creating the Draft Work Plan, which is now being looked over by all the IORA member countries. IORA has made multiple partnerships to tackle the development of DRM. Existing partners include United Nations General Assembly (UNGA) and African Union (AU), while IORA is also seeking to partner with ASEAN, World Bank, International Seabed Authority (ISA) and many others.

The United Nations Office for Disaster Risk Reduction has also acted towards making sure various DRM techniques are implemented in countries that are the most prone to these disasters. In 2013, the UN Chief Executives Board (CEB) endorsed the UN Plan of Action on Disaster Risk Reduction for Resilience. The plan has 3 main phases to it: come up with ideas that will have expected results, all member states part of this plan will have a shared approach to measure impact and progress and implementing the ideas. The goals of the action plan are to limit civilian casualties, ensure minimal environmental damage and maintain some semblance of sovereign unity once a disaster has struck. Another organization coming into this issue is the World Meteorological Organization (WMO). They are the specialized agency of the United Nations in 1951 for meteorology, operational hydrology and related geophysical sciences. Most recently, DRM has become one of the top priorities of the WMO. In 2003, the WMO established the WMO Disaster Risk Management Program in which they provide hazard information for risk assessments, prevention, response, recovery, and risk transfer across sectors, advancing on the creation of their multihazard barlt disaster warning systems, WMO is now realigning its Disaster Risk Reduction Program to the Sendai Framework for Disaster Risk Reduction so they attack all the problems of disaster risk management is introducing while at the same time enhance and coordinate with multiple UN bodies, ICOs, various programs and partners.

Case Studies

On January 28, 2017, the Dawn Kanchipuram and the BW Maple collided and caused a spillage of oil of 251.46 tonnes on the coast of Chennai in Ennore. The collision was caused by human error and fatigue, both ships had failed to keep and eye out for the other and disregarded the usage of anchors, thus crashing the two ships into each other. The oil spill had an area of around 35 kilometers on the coastline of Chennai, it's epicenter in Ernavoor yet patches of oil were still found hundreds of kilometers away from Chennai, in Puducherry and Devanampattinam. The cleanup of the original spill took four months and more than 2,000 volunteers to be rid of most of the oil in the coast.

During the collision of the ship, no human lives were lost; however the aftereffects had caused more than 100 Olive Ryder turtles to die and be washed up on the shore of Chennai. The crew of both ships had grossly misjudged the amount of oil that had spilled and disregarded further possible effects of the spill. Oil spills are very dangerous as the oil in the water will kill the most marine life. Most marine animals depends on the water to have oxygen particles inside it, and with the addition of oil into the coast, the animals aren't able to breath and eventually die. The numerous deaths of fish, prawns, and turtles were all

influenced by the oil spill, though it is hard to say whether the deaths right after the oil spill were directly causing their death. Not only does the marine life take a hit, but so have the lives that are dependent on marine animals: fishing villages. Only until April were the fishing boats able to go out safely to fish and make a living, over 60 villages were impacted by the oil spill. Furthermore, people were cautious to eat the fish that were caught in areas nearby of the oil spill, however it was safe to eat but didn't dissuade many fears of getting sick from eating the fish.

This oil spill was only directly affecting a certain part of India and lacked any extreme repercussions. However this small oil spill had taken months to deem safe for smaller ships to go out using over 2,000 volunteers who had dedicated time to manually clean out the sludge. The IORA had no reason to interfere with India's issue of the oil spill, however future oil spills may not just be limited in 35 kilometers but may impact future countries detrimentally. IORA's current lacks any policy on how to deal with oil spills, instead counting on individual countries to deal with the oil spill while the repercussions may extend beyond one country.

On October 4th 2010, an alumina product reservoir burst in Ajka, Hungary. The northwestern corner of the reservoir collapsed causing one million cubic meters of liquid waste from red mud lakes to leak. The mud created a 1-2 meter wave which flooded nearby villages such as Kolontar and Devecser. Initially, 40 square kilometers of land were affected and 10 people died while 150 people were injured severely.

The mud contained non aluminium compounds, sodium hydroxide, Iron (III) oxide, large amounts of lead and other heavy metals. The flow was powerful enough to move vehicles and the mud was considered hazardous considering the large amounts of hazardous chemicals which caused an alkaline reaction if not washed off with clean water. Around 90 people were taken to the hospital after experiencing chemical burns.

On October 11th of the same year, the Hungarian government announced that the managing director of the company had been arrested due to "criminal negligence leading to a public catastrophe." There was also a chance that this red mud could have contaminated Hungary's water ways, emergency workers poured tonnes of plaster into waterways to bind the sludge to prevent it from spreading through the waterways. The Hungarian Army also helped wash out streets and houses in the area, a lot of the land's soil had to be changed as a result of contamination, but due to the plaster being poured into the waterways, a significant amount was contained.

BLOC POSITIONS

High Capacity

Seychelles, Singapore, Australia, United Arab Emirates, Oman

The nations chosen for this bloc were based upon their 2017 GDP per capita, ranging from \$57,700 to \$15,500 USD. Keeping in mind internationally ranked, some of these countries nominal GDP is not on the high end of the spectrum, however, within the IORA, these countries have the highest ranking GDP per capita. This means the countries should be able to invest more for the prevention of anthropogenic hazards and still be able to keep their economy stable without investing too much. And the geographies of these countries are very important to consider, as Oman and Seychelles are island nations, they are more affected by certain hazards like oil spills and the lack of fresh water. The United Arab Emirates is heavily dependent on oil and petroleum in their economy as are many other Middle Eastern states, so their decisions on certain hazards, such as oil spills, may differ from the rest of the committee and should think of alternatives to combat such issues.

Moderate Capacity

India, Iran, Indonesia, Mauritius, South Africa, Sri Lanka, Thailand

These countries in the bloc were chosen due to their lower GDP per capita, going from \$10,500 to \$2000 USD. While some countries are able to invest more into the issue, these countries may not be able to invest as much since their economy may be difficult to keep stable, but able to implement and be involved in the reduction of anthropogenic hazards. Also, many Asian countries have severe air pollution and water pollution issues which should be a focus for these countries.

Low Capacity

Bangladesh, Comoros, Kenya, Madagascar, Mozambique, Somalia, Tanzania, Yemen

These countries all have a relatively poor and/or unstable economy as their GDP per capita are lower than \$2,000 USD. These countries should take caution when investing in the measurements taken to reduce anthropogenic hazards due to the instability of their economy however their involvement with the discussion of measures to take shouldn't be affected. Many of the African nations have issues of soil erosion due to high deforestation. Other countries, Yemen, do face issues of desertification and in turn the lack of fresh water.

GUIDING QUESTIONS

- 1. Which countries contribute the most to the rapid growth of man-made hazards?
- 2. How does each countries socio-economic statuses affect their ability to reduce the anthropogenic disasters and minimize future issues that may come up? How would taking these measures affect their economic status?
- 3. How does each of the country's types of government affect their ability to minimize risk from these hazards?
- 4. What are current disaster risk management techniques countries are being implemented today and are they successful? What are the strengths and weakness of these techniques?
- 5. Is it more effective to direct IORA's focus on preventing these future disasters or cleaning the ocean's current/existing problems?
- 6. What actions should be taken to ensure the safety of citizens if disaster does strike?

ADDITIONAL RESOURCES:

UNDP pdf on Disaster Risk Profile in the Maldives

1. http://www.undp.org/content/dam/maldives/docs/Environment%20and%20Energy/disaster%20risk%20profile.pdf

Anthropogenic Hazards and risk management case study: India

2. <a href="https://ac.els-cdn.com/\$187704281502008X/1-s2.0-\$187704281502008X-main.pdf?_tid=8657783b-7a7e-44fe-b8ad-f8e4bdf75811&acdnat=1550948049_4d132f2e2e0a1bb2c5df2d8dbc378e1f

Info about Oil Spills

3. https://earthjournalism.net/resources/oil-spills

Video on Bhopal Disaster

4. https://www.youtube.com/watch?v=F YLKnoe9o

Characteristics of Leakage accidents

5. http://www.ijesd.org/papers/348-T009.pdf

Works Cited

- 1. https://www.un.org/press/en/2010/sc10092.doc.htm
- 2. https://www.un.org/press/en/2013/ga11466.doc.htm
- 3. https://www.iora.int/en/priorities-focus-areas/maritime-safety-and-security
- 4. https://www.iora.int/media/8214/iora-extremism-declaration-7-march-2017.pdf
- 5. https://www.un.org/sustainabledevelopment/climate-change-2/
- 6. https://www.iora.int/en/priorities-focus-areas/disaster-risk-management
- 7. https://en.wikipedia.org/wiki/Paris Agreement
- 8. https://www.iora.int/media/8248/iora charter.pdf
- 9. https://www.iora.int/en
- 10. <u>http://www.dailymirror.lk/article/A-hub-for-disaster-relief-in-Indian-Ocean-140538.html</u>
- 11. https://www.foreignaffairs.com/articles/oceans/2004-11-01/terrorism-goes-sea
- 12. http://www.iora.int/en/priorities-focus-areas/disaster-risk-management
- 13. http://www.iora.int/en/priorities-focus-areas/maritime-safety-and-security
- 14. http://floodlist.com/asia/vietnam-floods-landslides-june-2018
- 15. http://www.imo.org/en/OurWork/Security/Pages/MaritimeSecurity.aspx
- 16. http://www.futuredirections.org.au/publication/the-indian-ocean-rim-association-for-regional-co-operation-india-takes-the-lead/
- 17. https://www.iora.int/media/23403/150420_press_release_isdp_tanzanian_disaster_workshop.pdf
- 18. https://www.marineinsight.com/marine-safety/9-types-of-maritime-crimes/

- 19. http://www.imo.org/en/KnowledgeCentre/ReferencesAndArchives/HistoryofSafetyat_Sea/Documents/P.%20Boisson%20History%20of%20safet%20at%20sea%20extract.htm#top
- 20. https://www.state.gov/t/pm/rls/othr/misc/255332.htm
- 21. http://www.amssa.net/about/action-plan.aspx
- 22. http://www.sundaytimes.lk/180819/news/disaster-response-us-pacangel-outreach-to-the-indian-ocean-region-307498.html
- 23. https://sustainabledevelopment.un.org/partnership/?p=7675
- 24.http://www.undp.org/content/dam/maldives/docs/Environment%20and%20Energy/disaster%20risk%20profile.pdf
- 25. https://www.iora.int/en/flagship-projects/the-indian-ocean-dialogue
- 26.http://www.imo.org/en/About/strategy/Pages/default.aspx
- 27.https://www.unisdr.org/partners/united-nations/wmo
- 28.https://www.iora.int/en/about/first-leaders-summit
- 29.https://www.unisdr.org/we/coordinate/sendai-framework
- 30. <u>https://www.iora.int/en/events-media-news/news-updates-folder/meeting-of-iora-cluster-group-on-disaster-risk-management-drm</u>
- 31. https://refugeesmigrants.un.org/sites/default/files/stocktaking_imo_arbour.pdf
- 32. https://www.unisdr.org/files/32918 drrintheun2013.pdf
- 33. https://www.thehindu.com/news/cities/chennai/ennore-oil-spill-what-is-happening/article20044550.ece
- 34. https://www.thehindu.com/news/national/tamil-nadu/report-pegs-ennore-oil-spill-at-251-tonnes/article20006432.ece

- 35. https://thediplomat.com/2017/02/the-great-chennai-oil-spill-clean-up/
- 36. https://www.hindustantimes.com/india-news/chennai-oil-spill-could-severely-impact-marine-life-environmentalists-say/story-He1NeiyQcBslWiLA9t4hcM.html
- 37. https://toxicwasteisbad.weebly.com/toxic-waste-case-study.html
- 38. https://en.wikipedia.org/wiki/Ajka_alumina_plant_accident
- 39. https://en.wikipedia.org/wiki/Maritime Jewel#History
- 40. https://en.wikipedia.org/wiki/Timeline of al-Qaeda attacks#2002
- 41. http://shippingposition.com.ng/content/star-hijack-last-week-oil-tanker-mt-zirku-hijacked-gulf-aden
- 42.http://www.marsecreview.com/2011/05/security-case-study/
- 43. https://data.worldbank.org/indicator/NY.GDP.PCAP.CD