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*A WORLD WITHOUT FRONTIERS: SOLUTIONS BEYOND BORDERS
FOR REGIONAL PROBLEMS GOING GLOBAL*

World Meteorological Organization

Study Guide

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Words of Welcome

Dear Delegates,

We are Raphaëlle RIPOCHE and Stijn SERVAES and we are super excited to be serving as your Chairs for the World Meteorological Organisation at KULMUN 2019. A couple of words about us... Raphaëlle just had to cross the border to come to KULMUN from Paris. She is completing the last year of her master's degree there, majoring in humanitarian affairs and international project management while leading the Model UN team of her university as President. Stijn hails from Brussels and studies in Leuven working on a degree in Applied Economics and Business Engineering. It is his third year in the KULMUN association, serving his second term as Treasurer. It will be his first time chairing an MUN committee.

We eagerly look forward to this committee because of its pressing and interesting topics. Risk-reduction and resilience related to natural disasters and especially floods have become more important than they already were due to the impact of climate change on lives around the world, because their occurrence in densely populated areas threatens people and their activities while damaging the environment. Additionally, the most vulnerable countries that have to deal with the effects of climate change are those who have contributed the least to the problem and who do not have the capacity to alleviate it, like, for example, small island nations. Cooperation between developed and developing nations is thus a crucial pillar in an integrated effort to combat the effects of climate change.

Expertise fields of the WMO are global matters at the core: weather and meteorology, water-related issues, climate and the effects of its change on regional balance and thus global stability. Such issues know no border and affect people regardless of where they live. Addressing them as a whole is thus of paramount importance for the solution to be long lasting, inclusive, fitting and efficient.

With that said, we look forward to witnessing some great debate. If you have any questions, feel free to reach out to us on Facebook or email us.

See you in March!

Raphaëlle and Stijn

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Committee Overview

The World Meteorological Organisation is a specialised agency whose role is to promote the establishment of a worldwide meteorological observation system, the application of meteorology to other fields and the development of national meteorological services in less-developed countries¹.

The Convention of the WMO was signed on October 11, 1947 and the organisation itself was established on March 23, 1950. The organisation consists of representatives of 185 countries and 6 territories and meets at least every four years to set general policy and adopt regulations.

It is composed of three bodies:

- The World Meteorological Congress is the WMO's supreme body: it is composed of Permanent Representatives of each member state and territory. Its role is to determine the organisation's policy, and to elect the President and the Vice-Presidents of the WMO, as well as members of the Executive Council. The World Meteorological Congress also appoints the Secretary-General;
- The Executive Council endorses and implements decisions taken by the Congress. It is composed of 36 members who meet annually;
- The Secretariat is appointed by the Congress for a four-year term: it serves as the administrative centre of the organisation. It is composed of six regional associations whose aims are to address problems related to said areas (Africa, Asia, South America, North and Central America, South West Pacific and Europe) and of eight technical commissions (aeronautical meteorology, agricultural meteorology, atmospheric sciences, basic systems, climatology, hydrology, instruments and methods of observation, and marine meteorology).

WMO's work is built around three key areas: climate, weather and water. These topics are addressed through a wide range of actions.

¹Karen Mingst. World Meteorological Organisation. 2018. Retrieved from: <https://www.britannica.com/topic/World-Meteorological-Organization>. Accessed on

Application services	Study of the impact of climate and meteorology on various socio-economic sectors like agriculture and fisheries, energy, transport, health, insurance, tourism, etc.
Capacity development	Development and improvement of human resources and technical and institutional capacities through a support to frame national legislation related to water and climate in accordance with WMO regulations. Said activities also include education and training, regional support, research, partnerships, etc.
Data exchange and technology transfer	Compilation of all the data available acquired through various forms of measurement in order to create weather, climate and water-related forecasts and predictions. This information is also used for long-term decision-making and research.
Observations	WMO relies on a major network of weather stations, upper air stations, moored and drifting buoys, radars and aircrafts. All those devices are involved in data collection, and the organisation is responsible for the establishment, maintenance and continuing expansion of this web.
Research	The Organisation coordinates and runs international programmes to enhance member states' ability to make observations on weather, climate and water as well as their capacity to deliver services and scientific assessments of environmental conditions. ²

Additionally, the organisation publishes the WMO statements on the status of the World Climate once a year. This issue provides details on temperatures at a national, regional and global scale and extreme weather events. This document gives information on long-term climate change indicators (atmospheric concentrations of greenhouse gases, sea level rise, sea ice extent) and helps decision makers to shape their approach towards global warming.

²WMO. Our Mandate. 2018. Retrieved from: <https://public.wmo.int/en/our-mandate/what-we-do>

The organisation has laid out seven priorities to be addressed by member states and territories:

- Disaster Risk Reduction (DRR);
- The Global Framework for Climate Services (GFCS): implementation of climate services for countries that lack them;
- The WMO Integrated Global Observing System (WIGOS): to provide for robust, standardized, integrated, accurate and quality assured relevant observations;
- Aviation meteorological services;
- Polar and high mountain regions: reach a better understanding of the implications of changes in these regions on the global weather and climate patterns;
- Capacity development;
- Governance: improve efficiency and effectiveness of the organisation by adopting continuous improvement measures and recommendations based on a strategic review of WMO structures.

DRR and capacity development are topics that will be emphasised the most during the simulations.

Mandate and decision making

The World Meteorological Organisation facilitates the maintenance and expansion of its Members' atmospheric, oceanographic and land-based observational networks; the free unrestricted exchange of the resulting data and information and related capacity development and research in order to optimize the production of weather, climate and water-related services worldwide.

Its decisions are non-binding and the decision-making process of the organisation obeys the two-third majority.

Topic I: Developing a flood risk-reduction and resilience programme

Introduction

Climate change is a pressing issue because of all the repercussions it may have at a global scale, since scientific evidence has proven that it has a great impact on weather phenomena. Storms and cyclones have been happening more and more frequently, and more importantly, increased amounts of rainfall during rain-season were witnessed. The rapid melting of ice in mountains may also cause greater river flows. Finally, the rise of sea levels puts low-lying coastal areas at risk. All those phenomena combined result in the increase of episodes of floods all around the world. Global floods and extreme rainfall events have surged by more than 50% this decade and are now occurring at a rate four times higher than in 1980³. Approximately 70 per cent of all global disasters are linked to hydrometeorological events.⁴

The combined effects of climate change and of the increasing population pressure thus calls for the setting up of a global scheme that would contribute to the alleviation of floods and their aftermath.

According to the Potsdam Institute for Climate Impact Research (PIK), floods are among the most common and devastating natural disasters and they affect more people around the world than any other type of natural hazards. They result in large economic, social and humanitarian losses. Each year, some 250 million people around the world are concerned⁵. Further estimations from the institute established that the need for adaptation is going to be most important in the US, in parts of India and Africa, in Indonesia, and in Central Europe.

³European Academies' Science Advisory Council. Extreme weather events in Europe: Preparing for climate change adaptation 2018.

⁴Floodresilience. How to build an early defense system. 2018. Retrieved from <https://floodresilience.net/how-to-build-an-early-warning-system>

⁵Potsdam Institute for Climate Impact Research (PIK). Adaptation now: River flood risks increase around the globe under future warming. March 2018. <https://www.sciencedaily.com/releases/2018/01/180110141317.htm>

According to the PIK,

the number of people affected by the worst 10 percent of all river flooding events will increase in many places: in Northern America from 0.1 to 1 million; (...) in South America the number of people affected by flooding risks will likely increase from 6 to 12 million, in Africa from 25 to 34 million, and in Asia from 70 to 156 million. The real numbers might be even higher in the future as population growth and further urbanisation is not taken into account.⁶

Floods are one of the greatest obstacles to sustainable development as they threaten ecosystems stability and human activities due to the destructive power of large amounts of water. Many facilities end up being carried off, the erosive force of water may drag dirt from under a building's foundations causing its collapse. Its strength may as well uproot trees and drag large amounts of mud and silt. Communities are exposed to the risk of losing their house as well as the means related to their occupation (equipment, supplies, resources, facility, etc.). Moreover, areas are often left unsuitable for further activities in the aftermath of floods: waters and land may be polluted by various material, from sharp debris to untreated sewage or pesticides. Finally, in situations where affected people are left without drinking water, waterborne diseases might increase the casualties.

Alleviating existing risks

a. Reinforcing existing systems

Risk reduction schemes should be considered before encountering a first flood. Measures should not begin after a disaster but should systematically start with the identification of the risk, assessing and prioritizing those risks, and making decisions on prevention measures. Moreover, monitoring and regularly updating systems is also central.⁷

The need for this kind of anticipatory approach has been acknowledged and promoted through international frameworks, including the Sendai Framework for Disaster Risk Reduction (SFDRR) (2015–2030) and the European Directive (2007/60/EC) on the assessment and management of flood risks (Floods Directive). Such documents are necessary to serve as a framework to guide states' and other non-governmental or smaller scale actors' action.

⁶ibid

⁷Thieken, Mariani, Longfield, & Vanneuville. Flood resilient communities – managing the consequences of flooding. 2014. Retrieved from : <https://www.nat-hazards-earth-syst-sci.net/14/33/2014/nhess-14-33-2014.pdf>2014.

This approach is yet to receive significant traction, since only 12% of disaster response funds have been dedicated to risk reduction and 88% to post-event response, repair, or reconstruction⁸. However, a shift in the allocation of such financial resources could be an option to allow countries and communities to be better prepared and to alleviate the consequences of floods when they occur. Thinking about insurance systems or emergency and anticipatory funds are all assets that could mitigate risks.

All in all, measures that can be taken range from:

- insurance subscription (i.e. financial compensation for those who are affected) as it tends to promote a culture of risk management: the costs of flood insurance will rise unless measures to prevent floods are taken. At some point, insurance costs will be so high that they will no longer be affordable or available for people living in high-risk areas;
- flood defense investment to reinforce infrastructure and improve communities' resilience; this also includes cleaning, deepening or widening – where possible – river beds and developing flood relief channels, the development of dams, basins or reservoirs;
- stricter building codes in order for exposed zones not to be accessible for housing or economic activities, hence reducing the potential casualties resulting from floods⁹.

b. Improving warning systems

All floods do not have the same likelihood of happening or the same impact depending on what causes them. Floods are classified according to their likelihood of occurring within a given time frame.

Most of the time, hours or even days are necessary for a flood to develop, giving time for exposed people to prepare for it and eventually evacuate. However, the most damaging events are those that generate quickly, leaving little to no time for warning before everything is swept in its path.¹⁰

⁸Tanner et al. Livelihood resilience in the face of climate change. 2015. Retrieved from : https://www.researchgate.net/publication/269708927_Livelihood_resilience_in_the_face_of_climate_change.

⁹Some balance, however, needs to be established since such places may offer more fertile land to farm or more economic opportunities as most of the economic activities are concentrated there, making the use of the relevant areas necessary. In addition, the likelihood of floods might be aggravated by communities building on wetlands or places that would naturally act as flood buffers otherwise.

¹⁰National Geographic. Reference; floods. 2018. Retrieved from <https://www.nationalgeographic.com/environment/natural-disasters/floods/>

Risk reduction and warning systems are connected in the way that their efficiency may influence the casualties and damages that result from the flood itself. Warning systems are essential, as they allow exposed populations to take action before any fateful event (barricade, evacuation, etc.).

The said efficiency of early warning systems is linked to the system's potential to reach people at risk. Therefore, it should be organised and developed around the people it wants to reach, so that said communities understand quickly how to access it and how it works. Moreover, it should also include some actions to be taken by people at risk before, during or after the flood occurred.¹¹

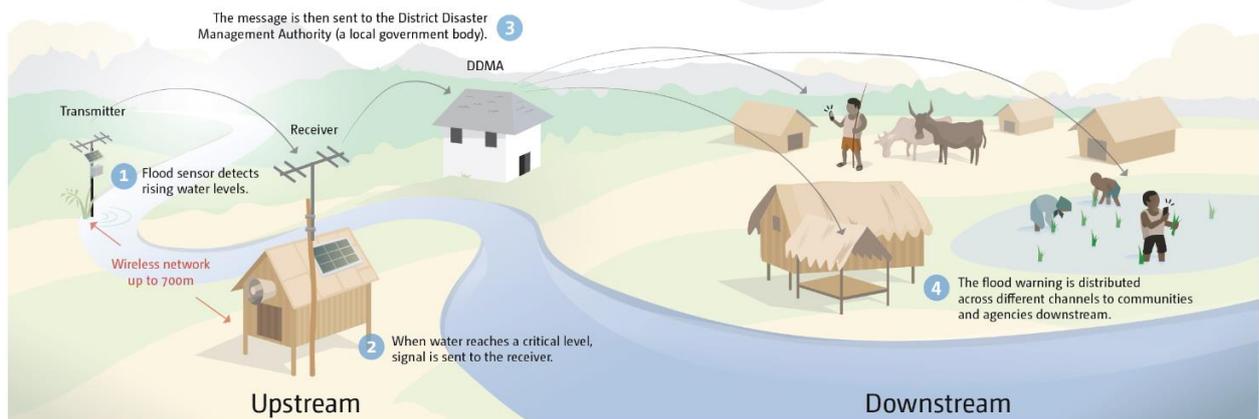
Therefore, developing a functioning early warning system will be based on data collection and analysis at a large scale. This information then needs to be handled cooperatively and shared between local, regional and international organisations in order for programmes and responses to match unique situations.

Community-Based Flood Early-Warning System

To enhance the resilience of 45 vulnerable communities to flood hazards, ICIMOD, together with its partners Aaranyak (India) and SEE (Nepal), established the Community-Based Flood Early-Warning System project. The ICT-enabled system uses a flood sensor attached to a transmitter to detect rising water levels. When the water reaches a critical level, a signal is wirelessly transmitted to the receiver. The flood warning is then disseminated via mobile phone to concerned agencies and vulnerable communities downstream. Critical flood levels are set with the help of the local community.

How it Works

The ICT-enabled system installed upstream sends warning signals to flood-vulnerable villages downstream when water reaches a critical level. This gives people time to move out of harm's way, saving lives and property.



momentum4change.org

MOMENTUM FOR CHANGE

<https://susecoengcom.files.wordpress.com/2018/07/communitybasedfloodearlywarningsystem1.png>

¹¹Floodresilience. How to build an early defense system. 2018. Retrieved from <https://floodresilience.net/how-to-build-an-early-warning-system>.

c. Challenges of flood management

- Climate Change

Climate variations and global warming have repercussions on precipitations' intensity, depth, timing, and spatial distribution.

If efforts to tackle climate change are not sufficient to limit its impact, risks that result from it will surpass communities' and people's capacity to adapt. The increase in the occurrence of river floods and of those resulting from extreme weather conditions will be driven by the amount of greenhouse-gases that are released into the atmosphere.¹² In addition, if the rise of temperatures is not limited to 2 degrees Celsius, there is a risk that floods will increase in a wide number of regions to such a degree that communities will hardly be able to adapt to it.

Moreover, sea levels are expected to rise as the world gets warmer. This might as well result in low lying areas being overflowed, the further erosion of coasts and intrusion of saltwater into estuaries and freshwater basins.

- Urbanisation and Population Growth

Population growth and economic growth put pressure on the environment, and the ever-increasing activities of floodplains further increases risks caused by floods. Historically, communities have been establishing in riverine areas as those places offered enhanced economic opportunities due to more fertile land, hence allowing substantial food production and waterways being a privileged transportation channel.

Nowadays, the desire to gain a better access to basic services makes people move from rural areas to cities, which are growing accordingly. This growth occurs primarily in Asia and Africa and is not planned or coordinated, meaning that habitat (some of which are unplanned urban settlements) exerts pressure on landform and watersheds.¹³

Reinforcing Resilience

Resilience is defined by the United Nations Office for Disaster Risk Reduction (UNISDR) as

[t]he ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner,

¹²PIK

¹³UNISDR. Building Back Better. 2009. Retrieved from: https://www.unisdr.org/files/53213_bbb.pdf

including through the preservation and restoration of its essential basic structures and functions.¹⁴

a. Develop and improve prevention mechanisms

National and regional frameworks are necessary to show collective and political support, yet handling natural disasters at a local level has proven to be more effective than managing such hazards at a regional or a national scale¹⁵. Although broad political actions are necessary to set the pace, reasoning at the scale of a river basin, a region or a district contributes to more fitting measures. Nonetheless, action should not only be pursued within the borders of countries: cooperation around major river basins or watershed should be central.

However, the mere nature of preventive measures may cause a lack of immediate awareness of the results to the actors that develop and implement them. In order for stakeholders to be encouraged to develop flood alleviation programmes, a benefit needs to be perceived. In that case, approaches to risk reduction measures have been largely economic. Indeed, a study demonstrated that the majority of measures that were taken to mitigate flooding had a positive cost/ benefit ratio.¹⁶ Additionally, it was suggested that e.g. each pound spent in flood alleviation measures in the UK allowed to save £5 when and after it did happen.¹⁷ Yet in spite of those findings, the investment of various stakeholders remains limited, due to a lack of proper risk awareness, political interest or limited incentives.

For potential schemes and programmes to be thorough, efforts undertaken should be informed by several disciplines and articulate between criteria such as vulnerability, behavioural aspect, exposure and hazards trends and likelihood. Said disciplines could include:

- hydrological science to give a better understanding of the effectiveness of risk reduction efforts;

¹⁴ibid

¹⁵Jenkins, K., Surminski, S., Hall, J., & Crick, F. Assessing surface water flood risk and management strategies under future climate change: An Agent-Based Model approach. 2017.

¹⁶Hugenbusch, D., & Neumann, T. Cost-benefit analysis of disaster risk reduction: A synthesis for informed decision making .2017. Retrieved from https://www.aktion-deutschland-hilft.de/fileadmin/fm-dam/pdf/publikationen/ADH_Studie_EN_rev3.pdf

¹⁷Department for Environment, Food & Rural Affairs (DEFRA). The property flood resilience action plan. 2016. Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/551615/flood-resilience-bonfield-action-plan-2016.pdf

- ecology to explore the potential of flood risk management solutions based on nature and ecosystems;
- politics, in order to see what governance may be established and how compensation measures could be developed and implemented;
- insurance economics to assess the extent of moral hazards and think through innovative risk transfer measures, and to investigate how insurance could provide incentives to those who may be involved in risk reduction schemes;
- social science to grasp how behaviour, culture and other endemic factors may guide the success of risk reduction efforts, but also to reflect how insurance can influence communities' participation in the process;
- weather forecast; etc.

As of today, the different pillars of flood risk management continue to be considered separately, and this approach hinders the effective development of integrated and complementary mechanisms.

b. Enhance exposed populations' preparedness

Prevention mechanisms are tools that allow populations to deal with the threat of floods in a more sustainable way. For example, flood warning systems, when feasible, will have a greater impact if they deliver information early enough for people to take appropriate action in the time span that they have and to be able to potentially evacuate.

Preparedness refers to the capacity to react in an adequate way to a given situation. When it comes to floods, several interconnected criteria come into play. First, risk data and risk assessment are crucial and rest on the treatment of quality data obtained through operating measuring systems. When it comes to risk assessment, models to be used should be based on a variety of disciplines so as to make sure the end result encompasses all criteria that need to be taken into consideration. Secondly, innovation has a crucial role to play, especially in developing countries. In addition to technological innovation, the fields of economics and insurance could also benefit from innovation, regarding topics such as parametric insurance (insurance schemes adding up to regular protection contracts, and that are triggered by predefined terms) or microinsurance schemes. Finally, and as mentioned earlier, adopting an integrated approach will be linked to the future success of

preparedness frameworks: the behaviour of individuals, businesses, thematic experts and governments have an influence on vulnerability and exposure of communities.¹⁸

Moreover, the role of nature-based solutions, although seldom investigated, should have an important role in enhancing preparedness. The regulating role of ecosystems is often set aside and not considered because of the time span needed for this solution to be effective. The return on investment may take many years to manifest, and this span is often longer than a decision maker's term.

c. Recovery

Immediate action needs to be implemented for the situation to come back to normal after a flooding episode. In order for aid to be effective and for it to reach people in need, it is important to make sure that delivery channels are available to reach affected people and that practical assistance and technical advice is deployed in areas affected by floods to supplement local expertise.

The Sendai Framework is of great importance when focusing on the topics of resilience and recovery. In fact, it introduced the notion of "building back better". This concept was defined by the UNISDR as

[t]he use of the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems.¹⁹

This definition shows how intertwined risk reduction measures and recovery processes are. Addressing one of the issues will only be sustainable if the other is dealt with accordingly.

As a matter of fact, rebuilding a home or shelter for a community in a resilient way will contribute to a lesser impact in the event of a future flood. This may be achieved through the combination of:

- the development of guidance and the provision of training and outreach to increase awareness and familiarity with reconstruction processes;
- the definition of stakeholders, responsibilities and expected recovery capacities of each actor involved in post-disaster planning and recovery operations;

¹⁸EASAC

¹⁹UNISDR

- the increase of funders' awareness and appreciation of recovery financing needs to overcome the focus on response that exists today;
- the promotion of new technology and tools (including social media and big data) and the development of applications for recovery that improve communication, collaboration and cooperation.

Questions an Outcome Document Should Answer

- What are the possibilities to develop a uniformed system in order to classify the vulnerability of exposed zones?
- How can it be ensured that early warning systems are developed and both accessible and available to the population? How can those systems be adapted to the specificities of a country, a region or specific communities?
- How can inter-state collaboration be fostered within a specific region (be it at a river-basin or a watershed scale)?
- What actions (immediate or long-term) should countries take in order to alleviate flood-related risks?

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UNISDR. Building Back Better. 2009. Retrieved from: https://www.unisdr.org/files/53213_bbb.pdf

Zschau, J. (2017). Where are we with multihazards, multirisks assessment capacities? In K. Poljansek, M. Ferrer, T. De Groeve, & I. Clark (Eds.), *Science for disaster risk management 2017: Knowing better and losing less*. Luxembourg: EUR 28034 EN, Publications Office of the European Union. ISBN 978-92-79-60678-6.

Further Readings

- Sendai Framework for Disaster Risk Reduction (SFDRR)
https://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf
- Guidelines for reducing flood losses (UNISDR) https://www.unisdr.org/files/558_7639.pdf
- Integrated flood management - concept paper (WMO, 2009)
http://www.floodmanagement.info/publications//concept_paper_e.pdf

Topic II: Loss and damage mechanism applied to Small Island Developing States (SIDS)

Introduction

One of the more pronounced effects of climate change on global weather patterns is the increase in frequency and severity of extreme weather conditions. So-called Small Island Developing States (SIDS) are especially vulnerable to such extremes, not only to rising sea levels, but also to cyclones, storm surges, heavy rains, droughts, and ocean acidification (CO₂ is absorbed by the oceans which leads to the oceans becoming more acidic).²⁰

The impact of climate change on SIDS are not just limited to harsh meteorological phenomena. Climate change has a direct impact on those islands' economies and relating activities. These developing nations all share a specific set of challenges to the sustainable development of their economies, namely limited resources, small size and population, remoteness, dependence on international trade and aid (dependence on import), etc. In addition to damaging agriculture, natural disasters also pose a negative impact on tourism, which is a main source of income for these islands. These islands also often suffer from a demographic problem, seeing as some nationals choose to emigrate to more stable nations with better opportunities.

It comes to no one's surprise that these island nations do not have enough resources and capacity to tackle and alleviate the effects of climate change individually. The international community recognises this issue and thus the mechanism of loss and damage²¹ was created to address the impact of climate change on vulnerable nations in a comprehensive, integrated and coherent manner. The task of the international community now is to further build upon this mechanism and to use it to tackle specific issues which shall be further explored in this study guide.

Historical background

A. Small Island Developing States (SIDS)

Small Island Developing States were first recognised as a specific group of nations during the United Nations Conference on Environment and Development (UNCED), also known as the Earth Summit, in 1992. Since then, periodic reviews and other conferences have dealt with specific

²⁰Information relating to ocean acidification
<https://www.pmel.noaa.gov/co2/story/What+is+Ocean+Acidification%3F>

²¹Warsaw International Mechanism for Loss and Damage

issues concerning SIDS. Agenda 21, a non-binding action plan on sustainable development, is one of the documents that resulted from this conference.²²

In 1994, a UN General Assembly mandated international conference, the first Global Conference on the Sustainable Development of Small Island States, adopted a document called the United Nations Programme of Action on the Sustainable Development of Small Island Developing States, also known as the Barbados Programme of Action (BPOA).²³ In this programme, commitments and principles outlined during the Earth Summit were translated into specific actions and policies. 14 important areas were identified addressing the specific challenges faced by SIDS:

- climate change and sea- level rise
- natural and environmental disasters
- management of wastes
- coastal and marine resources
- freshwater resources
- resources
- energy resources
- tourism resources
- biodiversity resources
- national institutions and administrative capacity
- regional institutions and technical cooperation
- transport and communication
- science and technology
- human resource development

In 1999, a Special Session of the UN General Assembly (UNGASS-22) undertook a comprehensive review on the implementation of the Barbados Programme. The special session adopted the State of Progress and Initiatives for the Future Implementation of the Programme of Action for the

²²Agenda 21 <https://sustainabledevelopment.un.org/outcomedocuments/agenda21>

²³<https://sustainabledevelopment.un.org/conferences/bpoa1994>

Sustainable Development of SIDS, which indicated six problematic areas that need urgent attention:

- Climate change: adapting to climate change and rising sea levels, which could submerge some low-lying island nations;
- Natural and environmental disasters and climate variability: improving preparedness for and recovery from natural and environmental disasters;
- Freshwater resources: preventing worsening shortages of freshwater as demand grows;
- Coastal and marine resources: protecting coastal ecosystems and coral reefs from pollution and over-fishing;
- Energy: developing solar and renewable energy to lessen dependence on expensive imported oil;
- Tourism: managing tourism growth to protect the environment and cultural integrity.

Furthermore, special attention should be given to the means of implementation.

In 2005, an international meeting (Mauritius Meeting) was convened to review the implementation of the Barbados Programme ten years after its adoption. The resulting Mauritius Strategy (MSI) acknowledges that SIDS are fully committed to mobilise all its limited resources to implement all previous agreements but noted that significant financial constraints hinder its implementation. It also identified 5 new priority areas in addition to the 14 outlined in the Barbados Programme:²⁴

- graduation from least developed country status
- trade
- sustainable production and consumption
- health
- knowledge management
- culture

Over the past 27 years, the international community has thus identified problematic areas that need sustainable long-term solutions, however formulating and implementing said solutions are

²⁴<https://sustainabledevelopment.un.org/conferences/bpoa1994>

a different story altogether. The increase in frequency and severity of extreme weather events and trends should signal the international community that they cannot postpone the creation of concrete solutions or policies.

B. Loss and Damage Mechanism

The principle of loss and damage finds its origin in the United Nations Framework Convention on Climate Change (UNFCCC), adopted and signed during the Earth Summit in 1992. It resulted from the fact that developing countries bear disproportionate costs of climate change while having contributed the least to the problem and not having the required capacity to deal with the effects. Article 4, paragraph 3 and 4 of said convention states:

The developed country Parties and other developed Parties(...) shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations (...). They shall also provide such financial resources, including for the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs of implementing measures (...) and that are agreed between a developing country Party and the international entity or entities (...). The implementation of these commitments shall take into account the need for adequacy and predictability in the flow of funds and the importance of appropriate burden sharing among the developed country Parties.²⁵

The developed country Parties and other developed Parties(...)shall also assist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects.²⁶

At the 19th Conference of the Parties meeting of the UNFCCC (2013), the Warsaw International Mechanism for Loss and Damage was established as the main vehicle of the convention to deal with loss and damage (see decision 2/CP.19²⁷ for more details). The Executive Committee of the Warsaw International Mechanism set up a workplan outlining 9 priority areas²⁸ and primarily focused on enhancing cooperation in relation to slow-onset events (e.g. sea-level rise) and non-

²⁵<https://unfccc.int/resource/docs/convkp/conveng.pdf>

²⁶ibid

²⁷<https://unfccc.int/sites/default/files/resource/docs/2013/cop19/eng/10a01.pdf>

²⁸<https://unfccc.int/process/bodies/constituted-bodies/executive-committee-of-the-warsaw-international-mechanism-for-loss-and-damage-wim-excom/workplan#eq-7>

economic losses (e.g. death, brain drain, loss of knowledge and capabilities), and risk management.

One of the problems with the Loss and Damage mechanism is that it is quite a contentious idea for the developed nations, since it requires said nations to compensate losses to developing nations. Developed nations fear that this concept could be used to hold them liable for any damage caused by climate change. This fear has shaped the entire conversation about the extent of loss and damage over the past few decades, and it is the reason why there still is no concrete consensus on a formal definition of loss and damage. Developed nations in general favour a facilitative approach as opposed to a punitive approach.

In 2016, Parties of the UNFCCC negotiated and adopted the Paris Agreement where state parties commit themselves to mitigate climate change as to hold the increase of global average temperature to below 2°C above pre-industrial levels, which would in theory significantly reduce the risks and impact of climate change. Article 8 of this agreement deals with Loss and Damage, and while the developing nations would have liked this article to be more ambitious, it does include one of their most important demands, namely that the Warsaw International Mechanism for Loss and Damage be an integral part of Convention's long-term structure.

Articles 8.1, 8.2 and 8.3 state that:

Parties recognize the importance of averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, and the role of sustainable development in reducing the risk of loss and damage.²⁹

The Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts shall be subject to the authority and guidance of the Conference of the Parties (...) and may be enhanced and strengthened, as determined by the Conference of the Parties (...) to the Paris Agreement.³⁰

Parties should enhance understanding, action and support, including through the Warsaw International Mechanism, as appropriate, on a cooperative and facilitative basis with respect to loss and damage associated with the adverse effects of climate change.³¹

²⁹ <https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>

³⁰ *ibid*

³¹ *ibid*

While article 8.1 signifies that loss and damage is an important aspect of climate change mitigation, article 8.3 signifies that the obligations of the Parties are of a cooperative and facilitative character. Article 8.2 commits the Conference of Parties as the long-term custodian of the Mechanism and allows them to further enhance and strengthen the Mechanism, thereby allowing the Mechanism to evolve over the years. Article 8 also states that the Mechanism should cooperate with existing entities outside the framework whose mandate might be better equipped to deal with certain specific aspects (e.g. UN Refugee Agency when dealing with climate refugees).

Recent Developments

The framework for a Loss and Damage mechanism already exists in the form of the Warsaw International Mechanism for Loss and Damage (cf. previous chapter), however the workings of said mechanism has primarily been to set up and formulate working plans and frameworks within which the concept of Loss and Damage will be used. The Paris Agreement does clear up certain issues that plagued progress in the field of loss and damage, namely the explicit adoption of a facilitative approach that excludes liability, to the likely dismay of vulnerable countries. This does however allow for more focused negotiations on what constitutes loss and damage, how to solve it, and how to implement said solutions. Article 8 suggests possible areas of cooperation and facilitation as a starting point. These are:

- (a) Early warning systems;
- (b) Emergency preparedness;
- (c) Slow onset events;
- (d) Events that may involve irreversible and permanent loss and damage;
- (e) Comprehensive risk assessment and management;
- (f) Risk insurance facilities, climate risk pooling and other insurance solutions;
- (g) Non-economic losses;
- (h) Resilience of communities, livelihoods and ecosystems.

The outcome document you will create will be a recommendation to the Conference of Parties serving as the Meeting of Parties to the Paris Agreement, meaning a recommendation to the authority that regulates the Warsaw International Mechanism.

Questions an Outcome Document Should Answer:

- What should constitute a loss or a damage?
- What measures could the Warsaw International Mechanism take when addressing loss and damage?
- Should the Warsaw International Mechanism go beyond a facilitative approach and include liability payments, or should it stay as a voluntary framework?
- Where can the Warsaw International Mechanism cooperate with other entities outside the Framework, be it with other international agencies or non-governmental organisations?
- What kind of policies could the Warsaw International Mechanism implement to prevent loss and damage and/or enhance cooperation?
- How can the resources and expertise available to the WMO be used to aid the Warsaw International Mechanism?

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Further readings

https://climatefocus.com/sites/default/files/20160214%20Loss%20and%20Damage%20Paris_FIN.pdf

<https://unfccc.int/process>

<https://unfccc.int/topics/adaptation-and-resilience/workstreams/approaches-to-address-loss-and-damage-associated-with-climate-change-impacts-in-developing-countries>

Sample Outcome Document

The outcome document will be written in the format of a United Nations Resolution, meaning the document is split into three parts. The entire document reads like one large sentence. An outcome document can only be adopted with a two-thirds majority.

A sample outcome document may be accessed at the following address:
http://www.wmo.int/pages/prog/hwrrp/documents/wmo_827_enCG-XII-Res40.pdf

1. Heading

The heading should include the name of the committee, the topic, the signatories and sponsors of the resolution. Sponsors are the principal authors of the resolution who will defend the content within and when left unamended can only vote in favour of the resolution. Signatories are those who do not necessarily agree with the content but would like to see it debated. A specific number of sponsors and signatories are necessary which shall be defined in the official KULMUN Rules of Procedure.

2. Preambulatory clauses

Preambulatory clauses refer to previous documents and state the reasons and motivations of the committee in addressing the topic. They do not contain specific actions or decisions but are merely there to provide the context of the document. They are italicised and use the gerund. These clauses are separated by commas. Examples of preambulatory phrases include:

Recalling, affirming, deploring, emphasizing, etc.

Bear in mind that these preambulatory clauses CANNOT be amended when the draft resolution is submitted. A new draft resolution should be submitted when one wants to change the content of these clauses.

3. Operative clauses

Operative clauses call for specific actions, recommendations and decisions made by the committee. These clauses are numbered, italicised and underlined. They are separated by semicolons and a full stop at the end of the document. Examples of operative phrases include:

Recalls, affirms, deplores, emphasizes

These clauses can be amended after the draft resolution is submitted by using the procedure outlined in the KULMUN Rules of Procedure.