

WMO

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ISSUES

1. How can we provide the whole population with secure access to early warning systems for extreme weather events?
2. Weather data collection, why and how can we involve citizens?

This report is the result of the fruitful work and achievement of the WMO committee which was one of the 7 assemblies who gathered during the 13th edition of FerMUN at the World Meteorological Organization on 11-13 January 2023. You will find below the major outcomes followed by the resolutions adopted for each question. Resolutions have been entirely written by the students.

I would like to thank WMO, Campus Biotech and UNOG for their collaboration, warm welcome and trust.

Florence BAUDRY
Head of FerMUN Program

Countries involved in the debate:

Argentina, Australia, Brazil, Canada, Costa Rica, China, European Union, France, India, Indonesia, Italy, Japan, Madagascar, NGO Mercator, Mexico, Philippines, Russia, Salvador, South Africa, Total Energies, USA

Countries of origin of students:

Bénin, Côte d'Ivoire, Denmark, France, Italy, Kuwait, Lituania, Monaco, Morocco, Qatar, Spain, UK

OUTCOME

“Coming together to reach a greater purpose”

The World meteorological organization (WMO) committee was made up of 43 delegates representing 22 delegations.

During the discussion of the first issue, related to early warning systems, the delegations drafted a single resolution, presented by Mexico, which took into consideration the interests of all. The delegations stressed the importance of advancing our knowledge in the field of scientific research to better protect ourselves, as well as the need to develop infrastructure to protect the population from climate disasters. The committee also voted for more original solutions, such as the creation of a climate risk indicator according to the regions of the world, to act in priority in the most affected areas, or the sharing of meteorological data between all countries using the Mping system. Finally they proposed the creation of a policy that sends a message to all phones that have a population alert service, which alerts all users of an upcoming new disaster.

The second issue was data collection and how to involve citizens in it. For this phase of the debate, two resolutions, presented by Japan and Costa Rica, were drafted. The ideas contained in them revolve a lot around awareness and the call for citizen participation in the collection of meteorological data. But there are also other solutions such as the creation of a common fund for financial support to help NGOs with citizen awareness, and the creation of a global network, in cooperation with science organizations, to create projects to make weather data more available to all.

Finally, the committee also noted the importance of cooperation between governments to help the most vulnerable countries with the least access to new technologies to acquire this asset for the future and prosperity of their people. As a result, a consensus was reached and many innovative ideas were reflected in the resolutions adopted by the committee.

COMMITTEE:World Meteorological Organization

ISSUE 1 : How can we provide the whole population with secure access to early warning systems for extreme weather events?

MAIN SUBMITTER: Mexico

CO-SUBMITTER: Argentina, Australia, Brazil, Canada, Costa Rica, China, European Union, France, India, Indonesia, Italy, Japan, Madagascar, NGO Mercator, Philippines, Russia, Salvador, South Africa, Total Energies, USA

The World Meteorological Organisation,

Reminding the importance of early warning systems for the entire world population,

Reaffirming the United Nations Framework Convention on climate change that recognizes the existence of climate change and human responsibility for it,

Reminding the Glasgow climate pact which took place on March 8, 2022, and states the urgent need to scale up actions to improve adaptive capacity, increase resilience and reduce our vulnerability towards the effects of climate change,

Fully aware of the 2021 WMO report on disaster statistics according to which climate, extreme weather or water disaster are responsible for killing 115 people and 202 million of dollars in daily losses,

Deploing that the environmental sector is often under-represented and often inadequately engaged cases of an emergency in a country, especially on the least developed ones,

Noting that the Global Commission On Adaptation found that early warning systems are the most cost-effective off all adaptation measures listed in its “Adapt Now” publication,

Regretting that despite their considerable benefits, one in three people worldwide is still not covered by these systems, and this proportion is almost twice as high in Africa,

Fully believing that coordination should remain at the heart of humanitarian aid,

Noting the significant disparities in access to such systems amongst different regions and populations,

1. Encourages the research on natural catastrophes, in order to better foresee their arrival, with the help of :
 - a. the development of the CREWS, an initiative to solve the lack of capacity in early warning systems in vulnerable countries to save lives that need to be spread more widely;
 - b. a global forum for countries and organizations to exchange information on weather issues (with the help of the Mercator NGO) ;

2. Proposes the creation of a meteorological study path in less-developed countries so that experts could be formed directly on the terrain;
3. Urges towards a geographic, meteorological and climatic expertise of all countries or regions of the world :
 - a. to allow all concerned countries to have a precise idea of the natural disaster risks their countries are exposed to;
 - b. financed by a WMO fund;
 - c. In order to have a simulation, presenting ideas of different actions that should be taken;
4. Invites governments to raise awareness on global weather phenomena, based on 4 principles: detecting, alerting, educating, protecting, particularly for those in at-risk areas, all through :
 - a. school forums/talks, held by experts and volunteers, for children whenever they are starting school depending on their country, and adapted to their ages and in all languages existing in that country, on account of the younger generation being more influenceable, more understanding and being tasked with forming the future of our societies,
 - b. prevention sessions in school, to teach students how to react in case of the occurrence of the main natural disasters in that country: tsunamis, earthquakes, hurricanes, storms, floods, etc.
 - c. publications on social media,
 - d. the creation of a website managed by the experts of the UN, that can also provide emergency alerts, in all main languages, from which the population can readily be informed ;
 - e. government funded advertisements, including posters, educational videos and books/brochures, all for free, in order to make the information readily available for everyone, not just school students;
 - f. Government should work with and support local communities to build social resilience and awareness to prepare and deal with natural disasters.
5. Strongly encourages countries to improve and maintain their early warning systems, and close the gaps between less developed countries and those who are more advanced by :

- a. standardizing an alert system, of continuous sound and flashing of strobes (for the hearing impaired) recognizable in all countries, in order to improve civilian reaction time,
 - b. financed by the CREWS,
 - c. encouraging the exchange of warning infrastructures between member states, specifically those already highly developed in the field and less impacted by climate disasters, should send to those who are less developed and more impacted. This will subsequently be replaced with an exchange of information, once the country reaches the point of being able to develop in autonomy ;
 - d. effectively analyzing and verifying the collected data;
 - e. work along with organizations (such as Mercator that can foresee any ocean disaster 10 days in advance);
6. Invites the governments to create a policy such that phone manufacturers have to implement a system called EWS(early warning systems) which will be created by the WMO in collaboration with CRED(Centre for research on the epidemiology of disasters) which sends a message to all phones who have service alerting the population of any imminent danger and the suggested reactions such as the nearest shelter they can seek to and the creation of an app that would alert all users of an upcoming natural disaster;
7. Proposes the establishment of temporary shelters for those of whose houses have been destroyed due to a natural disasters, using the routes that are referred to in clause 8 ;
8. Proposes the development of the infrastructures protecting the population against the climate disasters with the creation of :
- a. construction standard (applying for all new constructions) within a community, depending on the local meteorological risks, aiming to create buildings, more resistant and resilient to natural disasters,
 - b. evacuation routes nearby the most impacted areas and sites ahead of time so that they will take appropriate actions based on early warning information ;
9. Suggests to share all meteorological data between every country, using the Mping system that is already implemented in the United States of America, where every country could :
- a. upload any significant data for the use of every country ;
 - b. read any data that is stored on this cloud ;
 - c. encourage their citizens to participate in collecting data;

10. Encourages the creation of a climatic risk indicator, depending on the countries and regions of the world, in hopes that the UN can focus their efforts on the highest priority areas, decided based on different parameters :
 - a. The exposition to meteorological risks;
 - b. The efficiency of the early warning systems already in place;
 - c. The vulnerability of the populations.

COMMITTEE: World Meteorological Organization

ISSUE 2 : Weather data collection: why and how can we involve citizens?

MAIN SUBMITTER: Japan

CO-SUBMITTERS: Argentina, Australia, Brazil, Canada, China, France, India, Indonesia, Madagascar, Mexico, Philippines, Russia, Salvador, South Africa

Aware of the fact that very important observational data are missing, especially in developing countries,

Aware of the fact that this lack of well performing observation infrastructure limits monitoring, understanding, and prediction of weather and climate patterns across the globe,

Emphasizing the need of international cooperation for this issue,

Aware of the fact that data are essential to the well understanding of the natural disasters, and so the security of the population,

Approving the creation of the World Meteorological Organization and a World day every 23 March, showing the importance that States attach to the safety and well-being of the population,

Viewing with appreciation the announcement of the establishment of new financing mechanisms to strengthen climate action presented by the UN adopted at the COP26 in Glasgow, UK,

1. Proposes the establishment by the States of a financial support common fund to accompany the actions of associations and NGOs involved in raising citizen's awareness of meteorological risks and in data collection:
 - a. The contributions would be proportional to the country's HDI
 - b. The developed and technology advanced states, with an HDI superior to the median of all the states will contribute to the common fund, encouraging public and private investments whereas the under-developed countries that have received financial or material help will guarantee the sharing of meteorological information;
2. Suggests that all countries, and especially the MEDCs present here create and voluntarily participate to an aid program in cooperation with WMO, the purpose of which will be to increase the meteorological activities in developing countries by :
 - a. providing them with the necessary equipment and technology, the States that lack it the most being prioritized;
 - i. All the replaced technology of developed countries' meteorological agencies will be transferred to the developing countries in need of these devices;

- ii. In any other case, the necessary devices will be financed by the common fund dedicated to this aid program and completed voluntarily by the member states;
 - b. Setting up training courses in meteorology to host professionals or future professionals from developing countries with capacity-building activities by holding seminars and workshops;
3. Invites the states to establish a global network in cooperation with citizen science organizations to create projects on a large scale, in order to make weather data more available;
- a. The aim of the project will be to cover as wide an area as possible, so that information can be obtained, including information on areas where there is usually very little monitoring, with the help of citizen's science;
 - b. The knowledge accumulated from this diverse range of partners will be analyzed by the "professional" meteorological organizations;
 - c. There would be a mobile application dedicated to data collecting by citizens, with the simplest interface possible to capture reports and images of severe weather events in real time when it is safe to do so;
4. Encourages all countries to sensitize the population, so they will be more involved with the weather data collection with :
- a. the implication of schools, with :
 - i. basic classes about climate changes given by the teachers, knowledges will be given depending on the class's level;
 - ii. the coming of international experts and volunteers who will sensitize children in classes, adapted to their grades and in all languages; existing in that country,
 - iii. forums held by experts and volunteers;
 - iv. the organization visits of weather stations that researchers use in order to explain the role they play in weather prediction;
 - b. Official publications on medias and social medias, like advertisements;
 - c. a website managed by the UN, where the information and analyzes are put together with understandable language as soon as possible,
 - d. Diffuse documentary reports created by the UN to explain the mechanics of climate change;
5. Suggests the creation of stations in which people could come and share their meteorological observations to the common worldwide digital cloud. Similar stations where the meteorological data is collected automatically and where the citizens only have to clean and take care of the equipment could also be created with the assurance that they have learned how to do it;

6. Calls, in order to allow the maximum number of citizens to be actively involved in the collection of meteorological data, to make the meteorological and hydrological measuring instruments necessary for this purpose accessible. Therefore, tools such as ... could be made accessible to all through a national distribution, or by default, present in schools, civic and public centers in developing countries:

- a. rain gauges, to collect data on rainfall over a given period, and raise awareness on climate disruption (when abnormal and extreme statistics are collected);
- b. thermometers, especially in areas that do not have access to databases through the Internet;
- c. anemometers to measure air movement in the atmosphere, i.e. wind speed, as a basis for gust forecasts;
- d. this initiative will be financed by the common fund mentioned in clause 1;

7. Calls for the involvement of citizens in the process of collecting weather data. We strongly believe that we need to implement different strategies, such as that: the governments could encourage the citizens to collect weather data themselves by using the mobile phones in geographical zones where weather forecast systems are not available.

COMMITTEE: World Meteorological Organization (WMO)

ISSUE 2 : Weather data collection : why and how can we involve citizens ?

MAIN SUBMITTER: Costa Rica

CO-SUBMITTER: Argentina, Canada, European Union, France, Italie, ONG Mercator, Total, USA

The World Meteorological Organization,

Recalling the importance of accurate weather data in predicting and mitigating the effects of natural disasters,

Aware of the role of citizens in collecting and reporting weather data,

Aware of the benefits of involving citizens in weather data collection, including increased accuracy and coverage,

Aware of the need for an inclusive and participatory approach to weather data collection,

Keeping in mind the lack of extensive weather data information in some developing countries which is crucial to the understanding of the climate in the different region of the world and can lead to the reducing of world issues,

Recalling the importance of accurate weather data to the outcome of harvest and thus to the reduction of world hunger,

Recognises the importance of involving marginalized and under-served communities in weather data collection efforts, including rural and indigenous populations, and calls upon Member States to take specific measures to reach and engage these groups

- 1) Invites Member States to create:
 - a. partnerships with schools and community organizations: Governments can work with schools and community organizations to encourage participation in weather data collection; this can help engage young people and create a sense of community involvement in the process;
 - b. playful infrastructures such as museum/exhibits engaging visitors to be active and involving them in sensory activities, motivating them to take part in collecting meteorological data;
- 2) Encourages the promotion of the importance of citizen-collected data:
 - a) governments can raise awareness about the value of citizen-collected data and how it can be used to improve weather forecasting and decision-making; this can help motivate citizens to get involved in data collection efforts;
 - b) The act of citizen weather data collection can be promoted as a prestigious academic award / volunteering act that can be appreciated worldwide and encouraged;

- 3) Proposes the offering of incentives for participation:
 - a) Member States can offer incentives such as rewards or recognition for those who actively participate in weather data collection; this can help encourage more people to get involved in the process and in the community weather stations: these are weather stations that are installed and maintained by community groups, and provide local, real- time weather data to the community and local authorities;
 - b) The more they are invested in their data collection the more they are rewarded. However they are motivated to continue this weather collection since a lack of investment and consistency from the citizens will lead to them losing benefits including energy cost reductions from the major energy companies such as Total Energies or adapted benefits depending on the citizens such as offering to pay off a part of their student loans;
- 4) Urges Member States to ensure that weather data collected by citizens is integrated into national and international weather forecasting and early warning systems, and to prioritize the use of such data in decision-making processes; further fostering the participation of citizens;
- 5) Calls upon Member States to report frequently on their progress in involving citizens in weather data collection and on their efforts to incorporate citizen- collected data into weather forecasting and warning systems;
- 6) Propose the creation of an educational and participative program by:
 - a) teaching kids from a young age on the importance and applications of weather data collection;
 - b) equipping schools with easy to-use and interactive data collection tool-kits specifically curated based on their ages to insure interactivity and learning amongst students while collecting weather data;
- 7) Encourages the sharing of information and resources among Member States of meteorological data to improve the accuracy and effectiveness of weather measurements, including through the establishment of regional and international cooperation networks;
- 8) Proposes to create control areas managed by a guardian where citizens would be able to share data informations about the weather :
 - a) every city with access to a weather control zone available 24/7;
 - b) it could reduce the unemployment rate because of the worker present on the zone who would supervise any information given and ensure that these keepers are trained in advance to supervise in the best way possible;
- 10) Encourages all the countries and corporations to finance a common fund, financed in proportion to the HDI, or according to the will of the corporations, that will finance all the other clauses.