2021 report

Munich Re Foundation
From Knowledge to Action

Contents

Cover: Two residents of Thua Thien Hue province in central Vietnam plant mangroves on the coast. The mangroves protect against storm surges and erosion. Read more about our 2021 RISK Award project on page 17.

Editorial

Dear Readers,

Summer was on the way in, and coronavirus was on the way out. That was what we all hoped for, but our hopes were quickly dashed. So in the second year of the coronavirus pandemic, the experiences of the Munich Re Foundation team were really not much different from those of people across the country. We had to come to terms with the reality of contact restrictions, virtual conferences and working from home. And even though many things are now much better organised, the foundation team greatly misses the personal exchanges with project partners on site, at conferences and in our Dialogue Forums – the direct communication that is so important for our work.

But at least only one project had to be mothballed because of the coronavirus. The construction of a fog net system in Bolivia, which was meant to have started back in April 2020, has again been postponed. Because of travel restrictions, the experts from Germany were unable to journey to the Alto Veladero region at the foot of the eastern Andes. The project delay is all the more regrettable because people there rely on alternative sources of water such as fog nets to supplement their meagre water supply, especially in the summer months.

What we are seeing in the Bolivian highlands on a small scale mirrors what we are witnessing across the world, pushing back the realisation of sustainability targets by years. Once again, the people hit hardest by a crisis are those who were already among the poorest. But the pandemic has not just highlighted existing inequalities. It has also shown how important government action is to preserve health and livelihoods.

Specifically, this is also true of the inclusive insurance segment, as became clear at our annual world conference and in the various Learning Sessions. More public-private partnerships are required, along with an extensive exchange of knowledge between the different interest groups and countries. And we need the right regulatory framework conditions. Risk protection and new insurance solutions can help lift people out of poverty again – not least by cushioning the increasingly obvious consequences of climate change.

Adaptation to climate change is also a focus of the 2021 RISK Award. The winning entry is using the prize money to establish a mangrove nursery in the Vietnam province of Thua Thien Hue. Mangroves will then be planted along the coast to offer people better protection and help secure their livelihoods. One thing I am particularly pleased about is that the project strengthens the role of local women in their efforts to increase their communities' resilience to natural disasters.

I hope that you find this overview of the foundation's work over the last year interesting, and that it prompts you to follow the latest developments of the various projects on our website.

Kind regards,
Renate Bleich

MY PHAM, Director of the Centre for Social Research and Development (CSRD), leads our 2021 RISK Award project on disaster risk reduction in Vietnam (page 17).

DR. SIDDHARTH NARAYAN from East Carolina University, a participant of the 2021 Climate Academy, explains the benefits of nature-based solutions for climate adaptation (page 42).

KATHARINE PULVERMACHER, Executive Director of the Microinsurance Network, co-organised the International Conference on Inclusive Insurance 2021 with us and other partners (page 25).

Munich Re Foundation

From Knowledge to Action

With knowledge comes responsibility. Our founder, Munich Re, has been handling global risks for more than a hundred years. Acting responsibly means sharing that knowledge. People in risk situations are ultimately at the core of what the foundation's work is all about. The foundation's task is to minimise the risks to which they are exposed. We address the major global challenges: the fight against poverty, environmental and climate change, water as a resource and risk factor, demographic development and disaster prevention.

Our goal is to find sustainable solutions, prepare people for risks and improve their living conditions. In dialogue with partners worldwide, we provide impetus and develop perspectives.

The foundation in figures 2021

4,600
participants at lectures given by foundation employees

3,100
participants in Munich Re Foundation events, academies, conferences and Learning Sessions

240
international speakers at our events for scientific, political and practical exchange

22
foundation events organised

28,000
mangrove seedlings planted in soil pots (RISK Award project Vietnam)

53
global partnerships with other organisations for our foundation work

1
first-ever international Learning Sessions on fog net technology organised

MORE ABOUT US

→ Munich Re Foundation

We work for the Global Agenda 2030

ICII
Learning Sessions

ICII
Learning Sessions

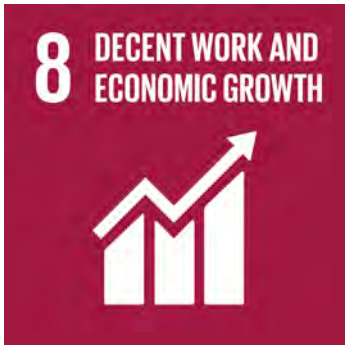
University cooperations
Dialogue Forums
Climate Academy
Energy School Munich
Lectures and committees

Fog nets
ICII
Learning Sessions
RISK Award

Fog nets

Energy School Munich

Our project work is guided by the Sustainable Development Goals (SDGs). The size of the pictograms reflects the focus of our work.



ICII
Learning Sessions

University cooperations
Climate Academy
RISK Award

PAREMIA

Fog nets
ICII
Learning Sessions
PAREMIA
University cooperations
Climate Academy
RISK Award

Unconventional water resources hold vast potential for water-scarce countries and communities

Access to clean drinking water is not a matter of course in many regions of the world. Often, water has to be transported laboriously over long distances to the people day after day, as here in the Anti-Atlas of Morocco.

There is a growing disparity between water resources availability and human population as freshwater resources and population densities are unevenly distributed worldwide. Increasing competition among agricultural, domestic, industrial and energy sectors makes water scarcity prominent in areas characterised as water-stressed or expected to become so in the future.

An essay by DR. MANZOOR QADIR,
Deputy Director, UNU-INWEH

Water scarcity is a limiting factor for economic development and improved livelihoods for an increasing number of countries in the Global South. It is recognised as a potential cause of social unrest, migration, and conflict within and between countries. In many parts of the world, the conventional sources like snowfall, rainfall, river run-off and easily accessible groundwater are being affected by climate change, and supplies are shrinking as demand grows.

A range of unconventional water resources can be combined to bring new water sources for human consumption and food production. Such water resources are generated as a by-product of specialised processes or require special technologies to collect and access water.

Sources of unconventional water resources range from the Earth's seabed to its upper atmosphere, and capturing them requires a diverse range of technological interventions and innovations. Harvesting water from the air consists of rain enhancement through cloud seeding and collection of water from fog, while capturing water on the ground addresses micro-scale capture of rainwater where it would otherwise evaporate. All these techniques address local water shortages. On the groundwater front, tapping offshore and onshore deep groundwater and extending sustainable extraction of undeveloped groundwater are important options in areas where there is potential for additional groundwater resources. Reusing water is the key to water conservation and enhancement opportunities which lead to fit-for-purpose use of treated municipal wastewater and agricultural drainage water. Additional opportunities to develop water resources exist in the form of desalinated potable water. The physical transport of water, such as through towed icebergs and ballast water held in tanks and cargo holds of ships, is receiving attention, but corresponding practices remain in their infancy.

Despite the demonstrated benefits of most of these unconventional water resources, their potential is underexplored by countries that urgently need stable freshwater sources for people and food production. Such water needs will intensify over the coming decades.

There are trade-offs when harnessing the potential of unconventional water resources. In the case of wastewater, its collection and pertinent treatment are prerequisite for its safe and productive use in crop production as well as for environmental and health protection. In contrast, about 90% of wastewater generated in low-income countries is not even collected and is released to the environment untreated. In lower-middle-income countries, about 57% of wastewater is uncollected. Such practices create a missed opportunity in harnessing the potential of wastewater, which is not only a valuable source of water, but also of nutrients and energy.

Desalinated water offers a steady supply of high-quality water. With more than 16,000 desalination plants, seawater desalination is growing faster because of advances in membrane technology and material science. However, the desalination process also produces hypersaline brine, which can harm benthic organisms and translate into observable effects throughout the food chain. Substantial efforts in innovation and research are required here. →

Water embedded in fog is increasingly seen as a source of potable water in dry areas where fog is intense and happens regularly. Nevertheless, a lack of supportive policy actions, limited functional local institutions and skilled communities, gender inequality, and high initial costs are major bottlenecks to the sustainability of fog collection projects. Despite the availability of frequent dense fog, suitable winds, and altitude, the fate of sustainable fog water harvesting needs pre-project situation analysis consisting of economic, societal, social, environmental and health trade-offs.

The policymakers in water-scarce countries need a radical rethinking to integrate the full range of unconventional water resources into water resources planning and policies, public budgets, water pricing and subsidies, and cost recovery mechanisms. The national water agencies and local institutions should cooperate effectively while engaging the private sector actively. Other forward-looking plans and practices are building capacity of institutions and professionals, developing a base of knowledge and best practices, testing water augmentation innovations, and sharing examples of the effective use of unconventional water resources to raise public awareness.

The opportunities for international, regional, transboundary and country-level collaboration in harnessing the potential of unconventional water resources are crucial in an era when the world at large is not on track to achieve Sustainable Development Goal (SDG) 6 and water-related targets embedded in other SDGs by 2030. The good news is that water professionals and policymakers worldwide have started considering the role of unconventional water resources in building a future where water is recognised and treated as a highly valuable resource and a cornerstone of the circular economy. Social media can also play a major role in promoting the importance of unconventional water resources, especially in dry areas of the world. ●

DR. MANZOOR QADIR is Deputy Director at the United Nations University Institute for Water, Environment and Health (UNU-INWEH). He works out of Hamilton, Canada.

LINK

→ UNU-INWEH

Municipal wastewater is a valuable source of energy, nutrients and water. However, large quantities are released untreated into the environment, as in this sewer.

Fog nets can produce valuable drinking water in dry but foggy areas. However, the conditions for successful fog use are not in place everywhere.

WATER AS A RESOURCE

Fog net technology has created an oasis of opportunity, a horizon of what can be achieved with local resources. It has linked issues of climate change, drought, migration and livelihoods and made their interconnections clear.

JAMILA BARGACH
Director
Dar Si Hmad

FOGNET ALLIANCE
LEARNING SESSIONS
Fog nets: Every drop counts

Online event, 7 October 2021
Around 40 participants
Project partner:
WaterFoundation

FOG NET PROJECT
CLOUDFISHER
in the Bolivian highlands

Alto Veladero, Bolivia
Project start in September 2019
Duration until 2022
(suspended due to coronavirus since March 2020)
Project partners:
WaterFoundation, Zabalketa, Instituto de Capacitación del Oriente (ICO), Oswald Foundation

COVID-19 stops
project implementation

Our Bolivia project, which started in autumn 2019, had to be suspended again in 2021 due to COVID-19. Once again, the pandemic has slowed down the work of the Munich Re Foundation and its project partners. In the Alto Veladero region, it hardly rains at all from April to November. Drinking water for the population and the village school has to be rationed. The original schedule of installing 14 new CloudFisher Midi collectors with a grid area of around 350 square metres by 2021 is being postponed further into the future. We are in close contact with our project partners and hope to be able to continue the work in 2022 – so that the local people can finally benefit from clean drinking water from the fog nets.

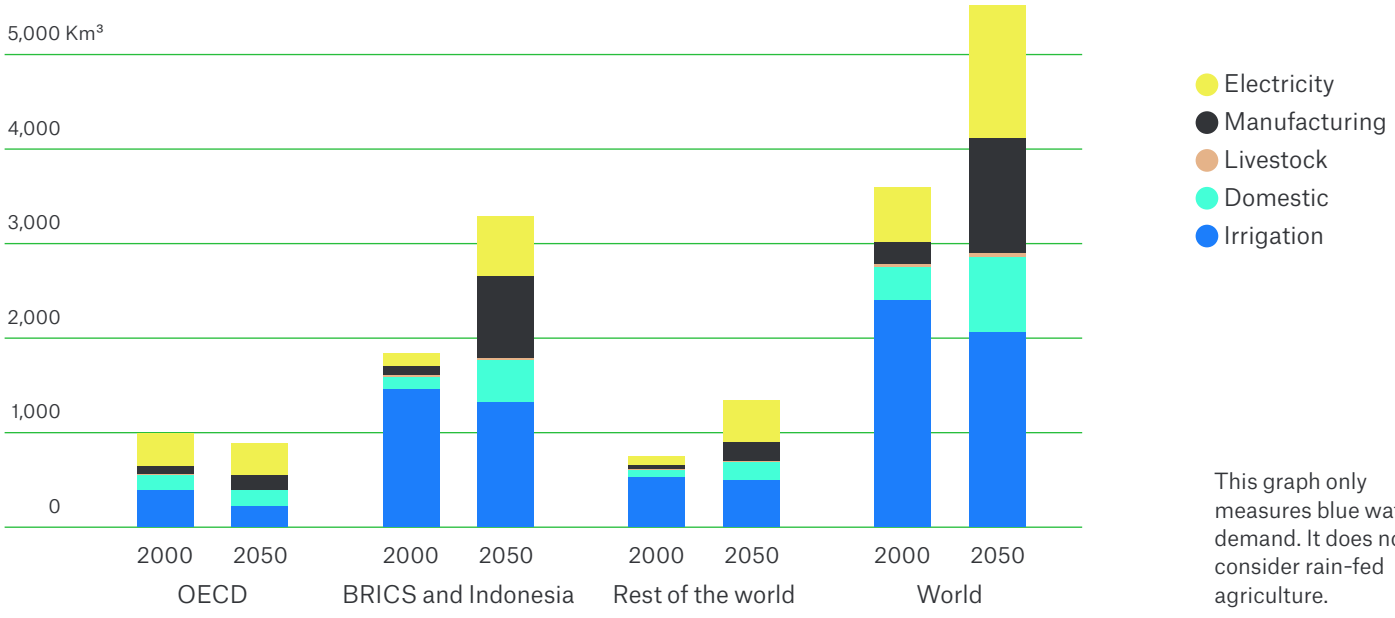
Even in very dry regions with little rainfall, there is often long-lasting fog, as here in Morocco. This can be used as an unconventional water resource through fog nets.

2021 FOGNET ALLIANCE LEARNING SESSIONS Every drop counts

Water shortages are hampering sustainable development in many regions of the world. Traditional approaches to capturing water based on precipitation or groundwater are insufficient to meet the growing demand. Unconventional methods of water collection could provide a solution. For many years, the Munich Re Foundation has supported local projects in areas that are arid but experience frequent fog. These aim to improve water supply through the use of fog collectors. To support the spread of this form of water collection, we also promote a global exchange between fog net experts and interested parties. This was also the aim of the FogNet Alliance Learning Sessions, which were held for the first time in 2021. Where are we in terms of technology, what climatic conditions need to be met, and what are the success factors? The presentations and discussions provided an overview, and gave participants the opportunity to exchange experiences and transfer knowledge.

Workers in Morocco prepare the nets for installation in the field.

Global water demand: Baseline scenario, 2000 and 2050



This graph only measures blue water demand. It does not consider rain-fed agriculture.

Source: Own figure (2022), based on OECD – The Environmental Outlook 2050; output from IMAGE (2012)

The world is suffering from water stress. Over the last two decades, the number of people with proper access to clean drinking water has steadily declined. Half of the world's population may suffer from water scarcity by 2025. Professor Martin Grambow, from the Bavarian State Ministry for the Environment and Public Health, drew attention to the additional problem of climate change, which is interrupting the natural water cycle in many regions. He called for greater awareness of the problem and believed fog nets were an important piece of the puzzle in the efforts to improve global water supply.

FOCUS ON UNCONVENTIONAL WATER RESOURCES

The advantages with fog collectors are that, in contrast to other unconventional water resources such as desalination plants or treated wastewater, they are inexpensive, can be installed without any great technical effort, and are easy to maintain. Manzoor Qadir, from the Institute for Water at the United Nations University, said that national and international water policies did not pay enough attention to unconventional water resources.

The ideal locations around the world for installing fog nets have been well researched. "Wind, fog, and the right size of droplets are the crucial factors," explained Otto Klemm, Professor of Climatology at the University of Münster. These conditions mostly coincide in mountainous terrain close to coastal areas. However, the number of fog days and the intensity of the fog – apart from a small number of exceptions – are declining worldwide. The main causes of this are changes in air quality and climate change.

"Before you begin, you need to carry out an evaluation study at least one year beforehand," explained Peter Trautwein, CEO of the company Aqualonis GmbH. An industrial designer by profession, he has made an invaluable contribution to improving fog net technology and developed the CloudFisher collector type for the WaterFoundation. This new design has a longer service life and can supply up to 1,000 litres of drinking water per night and per collector. One of the countries where the CloudFisher is used is Tanzania. With the support of the Munich Re Foundation, fog nets were installed at six different locations in the country.

Teresa López de Armentia, project manager at the Spanish NGO, Zabalketa, had clear recommendations for the success factors of fog nets: "Make sure you strike a balance between efficiency, simplicity and adaptation to the local conditions," she said. "Bring in local organisations, follow a committed environmental policy, and promote women's participation in the decision-making." She also suggested seeking partnerships with local and international institutions.

CLIMATE CHANGE COULD AFFECT FOG FORMATION

Annette Menzel, Professor of Ecoclimatology at the Technical University of Munich, pointed out that fog nets cannot, of course, solve the global water problem on their own. But, she said, they could push improvements in regions with a semi-arid climate, where every drop of moisture counts. As, for example, on Mount Boutmezguida in Morocco, the site of one of the largest fog net facilities in the world. Using fog nets, the project has succeeded in supplying 30% of the population in the district of Tnine Amellou with clean drinking water. Here, too, the Munich Re Foundation was involved as a donor. Trautwein was certain that fog nets can help counteract the causes of climate-related migration.

The event demonstrated the potential benefits offered by fog nets. To ensure the further spread of fog net technology, we will need a reduction in the costs involved, and a better understanding of the impact of climate change on fog formation. In addition, information on the construction and maintenance of fog nets needs to be made available to everyone. ●

ABOUT THE EVENT

The 2021 Learning Sessions were organised by the FogNet Alliance – a cooperation founded by Munich Re Foundation and the WaterFoundation. Organisations from all over the world reported on their experience with fog net projects in Bolivia, Chile, Eritrea, Morocco, Spain and Tanzania.

LINKS

→ WaterFoundation
→ Zabalketa
→ ICO
→ FogNet Alliance
→ Munich Re Foundation

DISASTER PREVENTION AND RESILIENCE

Nature-based solutions for disaster risk reduction can have a great impact especially in the Global South!

MY PHAM
Director
Centre for Social Research and Development (CSRD)

2019 RISK AWARD
Resilient Floating Homes

Dhaka, Bangladesh
Coronavirus-related project interruption ends, March 2021
The funding phase of Munich Re Foundation ends, June 2021
Project partner: University of Dundee, Resilience Solution Bangladesh

2021 RISK AWARD
Nature-based solutions for disaster risk reduction

Awarding ceremony for the 2021 RISK Award
Online event, 28 July 2021
150 participants
Project partner: UNDRR

2021 RISK AWARD
Strong roots, strong women

Thua Thien Hue province, Vietnam
Start of the winning project, 1 August 2021
Project partner: Centre for Social Research and Development (CSRD), UP Transfer GmbH at Potsdam University

A worker from the mangrove protection project plants the seedlings on the coast.
They will later stabilise the banks and protect them from flooding.

2021 RISK AWARD Nature-based solutions for disaster prevention

One of the key aims of the Munich Re Foundation is to prevent disasters by building resilience. We have been funding and promoting such projects for over 15 years. The RISK Award is the mainstay of our project work. We use it to support and develop innovative ideas, and help them gain wider application. The projects are meant to enhance visibility, have an impact and generate enthusiasm. In this context, the fight against climate change, disaster prevention and sustainable development need to go hand in hand. The award is presented every two years by the United Nations Office for Disaster Risk Reduction (UNDRR) and the Munich Re Foundation. The Munich Re Foundation provides an endowment of €100,000 for the winning projects.

The helpers from the RISK Award team prepare soil pots in which the seedlings are grown into young plants in the nursery.

Using ecosystems to prevent disasters and adapt to climate change – that is the idea behind nature-based solutions (NbS). NbS took centre stage at the 2021 RISK Award. The winning team was officially honoured in an online ceremony in July 2021.

Climate change is transforming our world, in some places slowly, in others more rapidly. Disasters are becoming more frequent or more intense. Low-income regions, primarily in the Global South, are worst affected. These areas often lack the financial resources needed to apply technical solutions that would help them cope with the changes they face. For example, sophisticated dyke systems such as those in the Netherlands, used to protect against rising sea levels, are hardly feasible in countries like Bangladesh. NbS can offer alternative solutions in many places. They are often less expensive than engineered systems, are simpler to maintain, and offer the twin benefits of health and environmental protection on the one hand, and disaster prevention on the other. So they not only help to avert disasters but also promote sustainable social development. In this sense, the 2021 RISK Award reflects a combined approach from three key UN frameworks, namely the Sendai Framework for Disaster Risk Reduction (2015—2030), the 2030 Agenda for Sustainable Development, and the Paris Agreement on climate change (2015).

The foundation, together with our project partner UNDRR, and finally the international jury, judged 47 applications from 24 countries – many of them with excellent ideas. The online ceremony with some 150 participants was held on 28 July 2021. The Centre for Social Research and Development (CSRD), Vietnam, and the UP Transfer GmbH at Potsdam University in Germany were declared the winners. Their project is titled: “Strong roots, strong women: Empowering women for community and coastal ecosystem resilience in central Vietnam”. The presenters for the ceremony were Johan Rockström, Director of the Potsdam Institute for Climate Impact Research (PIK), and Mami Mizutori, Special Representative of the Secretary General for Disaster Risk Reduction, UNDRR. ●

LINKS

→ UNDRR
→ RISK Award

2021 RISK AWARD WINNER Strong roots, strong women

Vietnam is under increasing threat from climate change, not least because of its extensive coastline. Apart from storms, it is torrential rainfall and erosion that pose the biggest threats to inhabitants living along the coast. Vulnerable groups, such as children, the elderly and, unfortunately all too frequently, women are worst affected. Women often do not have the same access to risk training, resources or labour markets as men, and are therefore less able to prepare for change. This is where the 2021 RISK Award comes in.

The project team "Strong roots, strong women", in collaboration with women's groups, wants to strengthen the climate resilience of communities in the province of Thua Thien Hue in central Vietnam. Its principal focus is on establishing and expanding a mangrove nursery, which will produce between 15,000 and 20,000 seedlings each year. Women are being trained how to grow the seedlings, shown where and when they can best be planted along the coast, and also instructed on how to organise the nursery. In a second stage, the seedlings will be planted with the help of local inhabitants along several kilometres of coast. Within just a few years, this will produce a natural protective barrier against storm surges and erosion. At the same time, it will stabilise and enrich the ecosystem. The developing mangrove forest also offers protective cover and food for flora and fauna. Some 100,000 people in the Thua Thien Hue lagoon depend directly or indirectly on the ecosystem, generally for fishing. This simple nature-based solution (NbS) can therefore have a triple effect: warding off disaster for everyone, securing livelihoods, and strengthening the role of the women involved.

In addition to establishing the mangrove nursery, a further aim is to generate and communicate information about NbS, and in particular mangroves. Here, too, the project team has several strings to its bow. Regular workshops are held with the employees and voluntary helpers. The project staff also visit schools and talk about their work. A play is to be rehearsed with youth groups that will present the purpose and value of the project in a way that is easy to understand. And finally, the project will be digitally supported by a web platform to allow other interested parties to start and implement their own projects.

We look forward to working with the winners of the RISK Award, the Centre for Social Research and Development (CSRD) in Vietnam, and UP Transfer GmbH at the University of Potsdam. The project was launched back in August 2021. To begin with, the initial work was repeatedly hampered by coronavirus safety measures, and a lot of workshops, public events and voluntary work had to be postponed. However, planning for the mangrove nursery was able to begin in September 2021. The location has now been decided on, the basins for water management have been installed, and 28,000 seedlings were prepared by the team in 2021. ●

LINKS

→ Centre for Social Research and Development
→ UP Transfer GmbH at the University of Potsdam
→ 2021 Risk Award

LINKS

→ University of Dundee
→ Resilience Solution Bangladesh
→ 2019 RISK Award

2019 RISK AWARD BANGLADESH Floating homes: The design is ready, now it's time to realise it

Climate change is forcing coastal residents to adapt their way of living. Floating houses can offer a way out.

ROUFA KHANUM
Project Manager "Floating Homes" in Bangladesh
CEO Resilience Solution

Coastal areas in many parts of Bangladesh are disappearing as a result of the rising sea level caused by climate change, and because of more severe storms and floods. People there do not have time to adapt to the new conditions. This is where the project idea "Living with water", which won the 2019 RISK Award, can make a difference. Floating homes are intended to allow many people in coastal regions to continue living there even when the area floods.

Funding from the 2019 RISK Award has been used to develop plans for floating, flood- and storm-resistant houses in Bangladesh. Bamboo and other renewable resources form the basis for the sustainable concept.

An interdisciplinary team composed of architects, a structural engineer, an energy engineer, and people from various other disciplines developed a comprehensive construction and living concept for floating homes. If large numbers are built, the price for a single unit can drop to less than US$ 2,500, which is cheaper than the cost of constructing many standard homes. The different construction materials, such as bamboo, are sourced from the region, are largely renewable, and extremely robust against natural hazards. The initial target region chosen was Kutubdia Island in eastern Bangladesh, but the concept can be scaled up as required and used in other areas as well.

The new houses have not been planned simply as residential units. The concept also integrates various livelihood options, such as fish farming and aquaculture, hydroponic and vertical farming (growing crops in stacked layers). This improves the food supply and any crops that are surplus to needs can be sold. Solar-energy systems are also planned for each of the housing units, to reduce their dependence on the often unreliable local electricity supply. In the event of a prolonged flood, the houses are not only able to float, but can also continue to supply power to key electrical appliances and devices, such as fridges, mobile phones and the like. As well as the floating homes concept, a further concept was developed for a floating school. During cyclones, the school can be used as an emergency shelter, providing a refuge for hundreds of people.

Using the RISK Award project funds, the idea for floating homes and schools was further developed to market maturity. Stakeholder groups have been defined, supply chains are clear and maintenance plans have been prepared – all with the involvement of local communities. In addition, a complex funding application will be submitted to the UN Global Adaptation Fund. If this is successful, hundreds of houses could be constructed for several thousand people, along with at least ten floating schools.

This means that we have achieved our primary project goal, offering people help for self-help. Construction of the homes is now the responsibility of the local population. The Munich Re Foundation would like to express its heartfelt thanks to the entire team, which managed to implement the plan with incredible enthusiasm during an extremely challenging period. We will be monitoring further progress and continuing to provide support as best we can. ●

With simple sandbags, this family tries to protect their house in Duyen Hai, Vietnam, against an impending storm surge. Risk management is becoming more and more important in the face of increasing disasters.

INSURESILIENCE Bringing together partners to scale up Climate and Disaster Risk Finance for the most vulnerable

Disaster and climate change impacts threaten development gains and efforts of countries to sustainably reduce poverty. Pre-arranged finance through Climate and Disaster Risk Finance solutions supports the important shift from post-shock responses and crisis management to pre-arranged risk management, with fast and reliable mechanisms in place.

An essay by DR. ASTRID ZWICK, Head of the InsuResilience Secretariat, DELIA KAISER, Advisor InsuResilience Global Partnership, INES MARIA PEREZ MARTINEZ, InsuResilience Global Partnership

INSURANCE IS A KEY ELEMENT FOR CLIMATE ADAPTATION

While the Glasgow Pact, as the main political outcome of COP26, urges governments to strengthen their targets on reducing greenhouse gas emissions in order to keep global warming under 1.5 degrees, it has become clear that significant efforts will be required to adapt to the growing and disastrous impacts of climate change even under a 1.5 regime. Climate-smart adaptation strategies will be needed, especially for countries with a high degree of poor and vulnerable people that do not have good coping strategies in place. In addition, disaster and climate change impacts threaten development gains and efforts of countries to sustainably reduce poverty. Pre-arranged finance, through Climate and Disaster Risk Finance solutions, could come in here as a key element of a comprehensive climate adaptation strategy and could help shift from ex-post crisis management to ex-ante risk management.

CAN A GLOBAL PARTNERSHIP FOR CLIMATE AND DISASTER RISK FINANCE HELP SOLVE THE PROBLEM?

The global landscape for Climate and Disaster Risk Finance and Insurance is fragmented, solutions are not always easily accessible or tailored to the specific needs of vulnerable countries. To address the challenges for the most vulnerable countries, collaborative and coordinated public and private efforts are needed. Through a grand coalition of over 110 members, the InsuResilience Global Partnership ('InsuResilience') is well structured to drive forward ambitious and transformative solutions to close the protection gap in the face of increasing climate volatility. It brings together industrialised and vulnerable countries, the private sector, multilateral organisations, civil society, academia and other networks and initiatives behind a common vision (Box 1).

To date, 22 InsuResilience programmes are active with over 300 projects in more than 100 countries (Box 2). In 2021 alone, these programmes provided climate and disaster protection for over 150 million poor and vulnerable people. Yet, transformative change is needed to significantly increase resilience. To date, InsuResilience has established impactful coalitions such as the Tripartite Agreement between the German Government, the United Nations Development Programme and the Insurance Development Forum (IDF) to develop tailor-made solutions in more than 20 vulnerable countries at sovereign level. Moreover, under the co-chairpersonship of the Microinsurance Network (MiN), AXA Group and InsuResilience, the IDF's Inclusive Insurance Working Group, a group of more than 15 organisations – including the Munich Re Foundation – operating in different markets, is about to support sustainable insurance market development in more than 20 countries to protect individual policyholders. InsuResilience supported the establishment of the Sustainable Insurance Facility launched at COP26 for the protection of micro, small and medium-sized enterprises, initiated and owned by the Vulnerable 20 Group. →

BOX 1

Main targets of the InsuResilience Global Partnership Vision 2025:

- 500 million poor and vulnerable people covered against disaster and climate shocks through pre-arranged risk finance and insurance mechanisms
- 150 million people covered by microinsurance
- 80 vulnerable countries with comprehensive disaster risk finance strategies in place

BOX 2

Support by InsuResilience programmes providing fast liquidity after disasters:

AFRICAN RISK CAPACITY (ARC)
ARC is a sovereign risk pool to provide reliable, rapid financing in the event of droughts, tropical cyclones and other disasters. Since 2014, 62 policies have been signed by the Member States, providing up to US$ 720m of insurance coverage to be paid in the event of a covered loss. This has protected millions of vulnerable populations in participating countries, with actual payouts amounting to almost US$ 65m to facilitate post-disaster response.

GLOBAL RISK FINANCING FACILITY (GRiF)
GRiF is a multi-donor trust fund which provides grants to test, pilot and scale up support to strengthen the resilience of vulnerable countries to climate and disaster shocks. GRiF activities include insurance premium financing, contingent financing, risk financing investments, technical assistance, and capacity building. Fast liquidity through payouts is provided in the case of disasters, as for example in 2021 in Indonesia with a US$ 14m grant to assist building technical capacity, environmental and social management systems.

BOX 3

The services offered by the InsuResilience Solutions Fund (ISF):

As one of the InsuResilience implementing programmes, the ISF is a product development facility designed to promote needs-based insurance products in developing countries and emerging economies, and to increase the financial protection of poor and vulnerable households against extreme weather events and disasters. The fund offers:

- Climate risk analysis for risk management and adaptation strategies
- Advice for the development of innovative insurance solutions
- Co-funding for the development and market introduction of new insurance products

In 2020 alone, the ISF signed five grant agreements to help develop new insurance solutions from Latin America to Southeast Asia, amounting to almost €6m.

COORDINATION, COLLABORATION AND CONVERGENCE ARE KEY TO SUCCESS

Managing climate risks necessitates looking at the full risk continuum, from risk prevention and risk reduction to risk transfer using Climate and Disaster Risk Finance instruments. However, the concept and the potential of these instruments are not well known and understood. Moreover, risk data and modelling is a prerequisite and constitutes another gap for comprehensive climate risk management at national level. Capacity needs to be developed to select the most efficient instrument for each type of risk for each region. So-called "Economic Costs of Adaptation" studies, for example offered by the InsuResilience Solutions Fund (Box 3), could support a country's resilience building. Innovative approaches such as index insurance could be applied if the data situation allows. However, a comprehensive climate risk strategy demands a broad range of knowledge and experience, the collaboration of multiple actors, good coordination of various services offered and ultimately a convergence among a still fragmented climate risk community.

Against this backdrop, InsuResilience has developed guidance and standards such as the Pro-Poor Principles and the Principles for SMART Premium and Capital Support. It has established a Centre of Excellence on Gender-smart Solutions in Climate and Disaster Risk Finance to mainstream the gender dimension into these solutions. A recently developed action plan in collaboration with UNFCCC sets out five elements for Climate and Disaster Risk Finance integration in the nationally determined contributions (NDCs) and a diagnostic tool has been developed to identify entry points for Climate and Disaster Risk Finance in National Adaptations Plans (NAPs).

In the spirit of collaboration, the International Conference on Inclusive Insurance organised by the Munich Re Foundation and Microinsurance Network offers a great knowledge-sharing platform and an opportunity for a space connecting insurance solutions at sovereign and community level.

WHAT COMES NEXT?

2022 will see a stronger push on collaboration for Climate and Disaster Risk Finance at sovereign, community and individual level. InsuResilience will help to raise the voice of the most vulnerable countries. An evidence roadmap was launched by InsuResilience members at COP26 to research cases showing the positive impact of Climate and Disaster Risk Finance. This research will also form the basis for a bigger plan: to develop recommendations for a global architecture of Climate and Disaster Risk Finance linking existing initiatives, structures and actors in a concerted and integrated global effort to increase resilience. InsuResilience as a partnership will continue to join forces with all partners to scale up pre-arranged Climate and Disaster Risk Finance in order to support those who are in need. ●

Insurance solutions are elementary components of sustainable climate adaptation strategies.

DR. ASTRID ZWICK
Head of the InsuResilience Secretariat
InsuResilience Global Partnership
Germany

LINK

→ InsuResilience

INCLUSIVE INSURANCE

INCLUSIVE INSURANCE denotes more than simply insurance that is specifically directed at low-income populations (microinsurance). It also extends to all insurance products aimed at the excluded or underserved market. In developing countries, the majority of the population is categorised as excluded or underserved.

→ Definition, based on IAIS – Issues Paper November 2015

The ICII 2021 took place mostly online. However, some sessions could be conducted in person on site in Jamaica under strict coronavirus requirements.

INTERNATIONAL CONFERENCE ON INCLUSIVE INSURANCE Digital Edition

25 — 29 October 2021
Over 1,500 registered participants from 121 countries
Project partner: Microinsurance Network

INSURANCE FOR DEVELOPMENT Online Training

6 April — 7 May 2021 (Spanish) and 1 November — 3 December
124 participants from 56 countries
Project partner: The ILO Social Finance Programme

LEARNING SESSIONS MOZAMBIQUE

"Inclusive Insurance Business Models for Africa — 6th Eastern and Southern Africa Regional Conference on Inclusive Insurance"
Online event, 23 — 25 March 2021
Over 100 participants
Project partner: Association of Insurers of Mozambique (AMS), Instituto de Supervisão de Seguros de Moçambique (ISSM), Financial Sector Deepening Mozambique (FSDMoc)

LEARNING SESSIONS ZAMBIA

"Digital inclusive insurance solutions"
Online event, 18 — 19 May 2021
140 participants
Project partner: TAG Microinsurance Association, FinProbity Solutions, Microinsurance Network, Financial Sector Deepening Zambia (FSD Zambia)

LEARNING SESSIONS CHALLENGES AND OPPORTUNITIES

"Inclusive Insurance in the Central and Eastern Europe and the Transcaucasian (CEET) region"
Online event,
1 — 2 September 2021
140 participants
Project partner: Access to Insurance Initiative (a2ii), International Association of Insurance Supervisors (IAIS), Microinsurance Network, Insurance Supervisory Agency of Slovenia (AZN)

LEARNING SESSIONS ZAMBIA

"Inclusive Agriculture — Insurance Solutions Practitioners & Facilitators Seminar"
Online event, 28 September 2021
120 participants
Project partner: FinProbity Solutions, TAG Microinsurance Association, Access to Finance Rwanda (AFR), Microinsurance Network, Financial Sector Deepening Zambia (FSD Zambia)

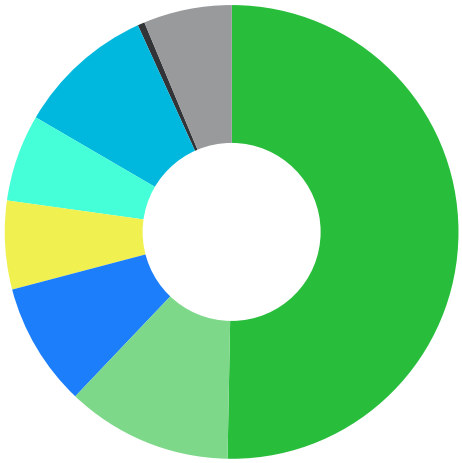
ICII 2021
Inclusive insurance in the post-COVID era

Insurance companies play an important role in combating poverty and promoting sustainable development. But hundreds of millions of people around the world, primarily in emerging and developing countries, have no insurance protection or appropriate risk management. Inclusive insurance concepts can help solve this problem. Each year, the International Conference on Inclusive Insurance brings together hundreds of players to publicise and promote the topic. It is the only platform worldwide where all interest groups can discuss questions, strategies and solutions for integrative insurance products.

106 speakers from all regions of the world discussed challenges and solutions to inclusive insurance in 21 sessions.

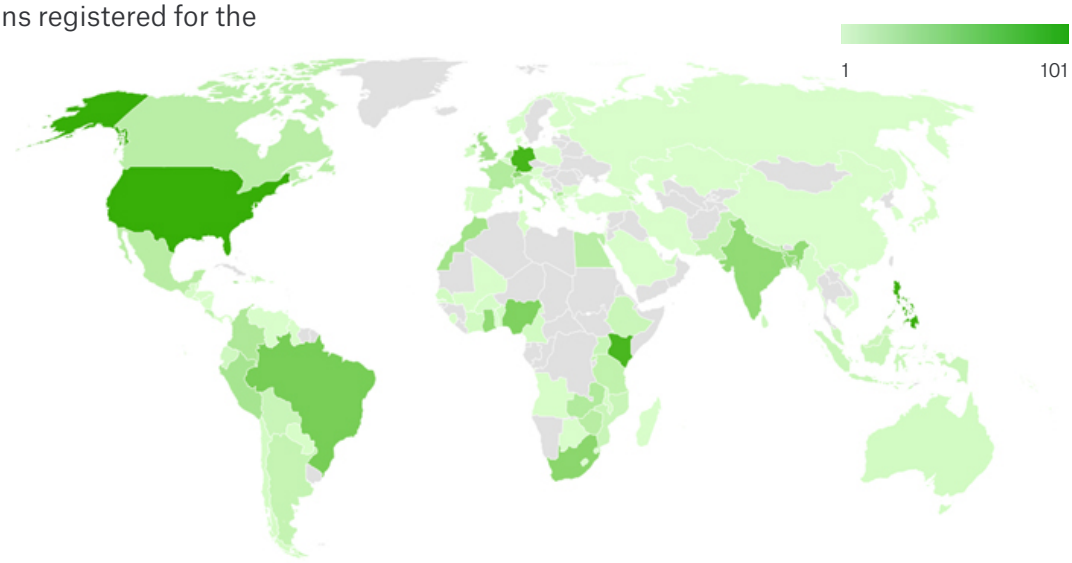
Breakdown of participants at ICII 2021 by work sector

Insurance and finance industry	50.3 %
Donor agencies, development and international organisations	11.8 %
Microfinance and microinsurance providers	8.8 %
Government and regulatory bodies	6.3 %
Academics	6.2 %
Consultants	9.8 %
Media	0.5 %
Other	6.3 %



Source: Munich Re Foundation (2021)

Origin and number of persons registered for the ICII 2021



Source: Munich Re Foundation (2021)

The World Bank estimates that the pandemic will push up to an additional 120 million people into extreme poverty. COVID-19 has already pushed millions of people back into poverty because they lacked adequate protective mechanisms. The pandemic has highlighted the gap in protection for these groups, heightened our awareness of risk prevention, and reinforced the importance of microinsurance. The acceleration in digitalisation resulting from the pandemic can also produce new approaches for inclusive insurance. Alongside the pandemic, climate change is threatening the livelihoods of billions of people who depend primarily on agriculture. This can also lead to serious setbacks in poverty reduction and should spur the insurance industry to do more to help build resilient communities.

According to a recent study, "The Landscape of Microinsurance 2021", carried out by the Microinsurance Network, up to 377 million people in the 30 countries investigated have now taken out microinsurance cover. Health insurance was by far the most common line, followed by casualty, life and credit insurance. As one negative trend, the study noted that the proportion of women insured has fallen by five percentage points. This is despite the fact that women in emerging countries are disproportionately affected by job losses, and limited access to healthcare and social security.

FOCUS ON COMPREHENSIVE SOLUTIONS

Climate-related risks remain one of the greatest challenges with regard to new insurance cover in emerging countries. Neither government programmes nor microinsurance are able, in isolation, to offer reliable and, most importantly, affordable security against these risks. More comprehensive financing is required. The research findings presented at the conference show that more and more products are being developed to offer a comprehensive approach to disaster protection. However, many of these climate risk insurance products are not self-sustaining, and still rely on subsidies.

GROWTH THROUGH DIGITALISATION

How technology can promote growth is also illustrated by health insurance, where digital solutions are simplifying customer registration and administration. In addition, telehealth programmes have proved attractive during the pandemic and improved access to health services in Indonesia, Thailand, the Philippines and Egypt. With this approach, the doctor and patient are physically distant and the consultation and treatment are carried out online. A remaining core challenge is to improve the general public's understanding of financial and insurance issues in order to increase trust and acceptance.

Efficient sales channels are a crucial success factor. Alternative channels such as WhatsApp, or the combination of mobile wallets and insurance, are examples of how the mass market can be conquered. But the downside to digitalisation is that people with no access to the internet lose out – as is the case with many women in emerging countries. Insurers should therefore always offer a combination of digital and offline solutions.

THE WAY TO THE FUTURE

The ICII clearly highlighted the threat that the COVID-19 crisis poses to global financial inclusion. At the same time, it presents opportunities for insurers and public-private partnerships (PPPs). The United Nations Development Programme (UNDP) was in favour of including insurance in the 2030 Agenda for Sustainable Development, as it plays a key role in achieving Sustainable Development Goals (SDGs). The UNDP itself recently launched a programme for insurance and risk financing. It is intended to improve protection for population groups under particular threat from socio-economic, climate and health risks.

With a new microinsurance framework, we aim to provide access to insurance for all Jamaicans.

HON. NIGEL CLARKE
Minister of Finance and Public Service of Jamaica

A further challenge is to extend the range of insurance products for low-income customers. Programmes such as the InsuResilience Global Partnership or the Insurance Development Forum have succeeded in attracting the attention of politicians and major insurers. Strategies for financial inclusion at national level have proved successful and should be expanded. The Minister of Finance of Jamaica, the co-host of ICII 2021, set a good example at the conference by announcing his intention to prepare new legislation on microinsurance. It would be good if more governments could follow this example to reduce existential risks for millions of people.

BACKGROUND

The International Conference on Inclusive Insurance 2021 – Digital Edition was organised by the Munich Re Foundation in cooperation with the Microinsurance Network and the Insurance Association of Jamaica. The majority of the 21 expert forums were held digitally. However, it was possible to hold some events locally in Jamaica under strict COVID-19 regulations. ●

LINKS

→ Microinsurance Network
→ Munich Re Foundation

LEARNING SESSIONS IN ZAMBIA AND MOZAMBIQUE
Inclusive insurance solutions for Africa

The Learning Sessions complement our International Conference on Inclusive Insurance. On a specific regional basis, they examine, both on site and increasingly online, the challenges faced by different players, whether they be regulatory authorities, insurance providers, customers or development organisations. The Learning Sessions act as a platform for expert contributions and an interdisciplinary exchange of ideas. In 2021, we organised or supported three Learning Sessions in Africa. Two were held in Zambia and one in Mozambique. Several hundred participants exchanged opinions on successful business models and their potential, and discussed obstacles to the further spread of inclusive insurance.

INCLUSIVE INSURANCE: BUSINESS MODELS FOR AFRICA

The majority of Africa's rural populations derive their main source of income from farming. Climate change has altered precipitation patterns, making people's income situation more uncertain. Well-designed insurance cover that focuses specifically on climate-related risks in agriculture can help rural households and small farmers to become more resilient. Insurers face three significant challenges: explaining the workings and benefits of insurance to potential customers, overcoming the difficulties involved in launching new agricultural insurance products, and improving digitalisation for policy administration.

TECHNOLOGY IS AN ENABLER, NOT A CURE

Zambia is playing a pioneering role in terms of digitalisation. Starting with some 100,000 insureds in 2009, the market expanded to more than 3 million customers by 2014, primarily from funeral policies sold via mobile phone networks. Today, some 2.4 million low-income people, including 1 million small farmers, enjoy microinsurance cover. The great advantage with digital solutions is that they create greater efficiency on the administration side – in particular with customer registration, premium collection, claims administration and payment. However, digital development is being slowed because of gaps in infrastructure. For example, just 30% of the population of Zambia has an internet connection.

PUBLIC-PRIVATE PARTNERSHIPS MAKE SENSE

The neighbouring state of Mozambique is also regularly affected by storms, floods and droughts. Despite this, only two of the 15 insurers who participated in the current study for the country offer crop insurance. In general, microinsurance covers in Mozambique are still in the early stages of development. The government is endeavouring to increase their range, and public-private partnerships (PPPs) in the field of climate risk insurance are growing in importance. Choosing the right sales channels is also proving a decisive factor. The situation is similar in the health insurance sector: most market-based voluntary microinsurance products have not been successful in the country. But in countries with state health insurance systems, private insurance covers offer a useful complement, provided they create added value for the customer. They include products that are customised to meet the special needs of women, as well as insurance products that guarantee out-of-the-box protection, for example those that cover transport costs to hospital, feature allowances for the purchase of masks, and additional services, such as access to online medical consultations. ●

LINKS

→ Learning Sessions Zambia I
→ Learning Sessions Zambia II
→ Learning Sessions Mozambique

Countries like Mozambique and Zambia are increasingly threatened by climate impacts. Droughts, but also heavy rainfall and storms are causing great concern, especially for people working in agriculture.

The most important challenges for insurers in Mozambique (results of a survey from 2021)

Source: Own figure (2022), based on FSDMoc – The Landscape of Inclusive Insurance Mozambique 2021

LEARNING SESSIONS IN THE CEET REGION

Inclusive insurance in central and eastern Europe — great interest and serious growth potential

Although the concept of inclusive insurance is becoming increasingly established, primarily in Latin America, Asia and Africa, it is still in its infancy in the 31 countries of the CEET region (central and eastern Europe, and the Transcaucasian region). This was good enough reason to analyse the market opportunities and obstacles during regional Learning Sessions.

Insurance markets in the CEET region are extremely diverse in terms of their size, concentration and maturity. The average insurance penetration is roughly one third in comparison with the EU as a whole, with motor insurance accounting for more than half of all premiums.

STRATEGIES FOR FINANCIAL INCLUSION LACKING

So far, inclusive insurance has been unable to establish itself as an independent segment in any of the 31 CEET countries, although products for low-income groups are occasionally offered in 11 countries, primarily in the agricultural sector. Insurance representatives generate almost 40% of the regional gross premium volume, while internet sales, at just 2%, are barely noticeable.

The lack of country-specific strategies for better financial inclusion of the population has proved to be a barrier. What is needed to ensure the positive development of the market are regulatory frameworks, in tandem with measures to convey more information about the benefits and workings of insurance to the general population. Only Albania, Kazakhstan and Latvia are planning a strategy to develop inclusive insurance, but initial attempts have at least been made in ten additional countries.

The protection of people and assets is a key component of sustainable development. Without insurance, it is unlikely that sustainable development will ever be truly achieved.

GORAZD ČIBEJ
IAIS regional coordinator for the CEET Region and Managing Director of the Insurance Supervision Agency, Slovenia

Skopje is the capital of Northern Macedonia. It is emblematic of the CEET region on which we focused during the Learning Sessions. Here, too, many people still do not have access to insurance solutions as a risk management tool.

Type of inclusive insurance/microinsurance in CEET countries

Agriculture/Climate risk
(inclding index-based insurance)

●●●●●●●●

available in 8 countries

Property

●●●●●

5

Health

●●●

3

Accident

●●●

3

Life

●●

2

Credit life

●●

2

Funeral

●

1

Source: Own figure (2022), based on the Report on the Inclusive Insurance Regulatory Landscape in the CEET Region (2021)

AGRICULTURE AND CLIMATE RISKS PLAY A KEY ROLE

Reducing climate risks is becoming increasingly important, especially since agriculture is still a major contributor to people's livelihoods in many CEET countries. But what is really lacking is an established insurance culture. One of the main obstacles to its development are direct government compensation payments following disasters, which are paid according to political priorities.

Overall, there is considerable growth potential for inclusive insurance in the CEET region. Since most countries are fairly small, achieving critical scale remains a challenge. But size is important in order to exploit scale effects. One way to reach this goal would be to have harmonised regulations between different countries. This would allow standardised products to be offered across the region. The regulatory authorities need to address this task, be dynamic and open to innovation, while remaining cautious with the design of a regulatory environment for inclusive insurance.

The level of interest in the CEET Learning Sessions far exceeded the organisers' expectations, clearly illustrating the untapped potential of inclusive insurance. We therefore plan to support further discussions on this topic in the future. ●

LINK

→ Learning Sessions CEET

INSURANCE FOR DEVELOPMENT TRAINING

"Seguros para el Desarrollo" was the first online training course in Spanish to be organised by the Impact Insurance Facility of the International Labour Organization (ILO). A total of 39 participants from 12 countries registered for the seminar, which was held from 6 April to 7 May 2021. The Munich Re Foundation sponsored most of the fees for eight participants from various non-profit organisations. The training of insurance experts is of great importance, particularly in countries where insurance markets remain underdeveloped. We asked two scholarship holders about the impact of COVID-19 on their day-to-day work and the most important insights they took away from the seminar.

EUNICE BORGES TAVARES
Senior Microfinance Expert at the Microfinance Supervision Office of the Republic of Cabo Verde

In your opinion, what are the greatest challenges for inclusive insurance, and what needs to be done to overcome them?

The major challenge facing microfinance is responding to the needs of low-income populations with adequate products meeting their needs. In addition, we need to analyse the current situation caused by the pandemic, and to learn from the impact the pandemic has had on the low-income population, and, based on this analysis, to develop innovative products and services such as digitalised products and services.

How did COVID-19 mainly affect your daily work (other than having to work from home)? What were the main challenges? Could you see any positive development related to inclusive insurance triggered by the pandemic?

The greatest challenge was adapting to a new situation and using digital tools to carry out the daily tasks. Regarding inclusive insurance, I believe there are challenges and opportunities, mainly in terms of digitalisation and savings on unemployment benefits and social pensions, because many people have lost their jobs.

What were your main learnings from ILO's training?

For me it was a great learning experience, particularly market research tools and distribution channels. Since this was my first contact with inclusive insurance and, in addition, because in my country we still don't have microinsurance and we are thinking of creating microinsurance products and developing inclusive insurance. However, I'd like the training to be more practice-oriented to enable greater exchange of experiences and knowledge with colleagues, which unfortunately was not really possible digitally.

A conversation with two participants

EDGAR ARNALDO MORALES SILVA GERENTE
Actuary in the Product Development and Care Underwriting Division at PRYBE, Protecciones y Beneficios S.C. Mexico. PRYBE administers all the insurance programmes of Mexico's savings and credit cooperatives, as well as those of their partners. Together, they provide insurance cover for over three million primarily low-income people.

In your opinion, what are the greatest challenges for inclusive insurance, and what needs to be done to overcome them?

In Mexico, current regulations do not allow the entry of players such as cooperative entities to the insurance sector; successful experiences throughout Latin America should be taken into account. In addition, new catastrophe reserves should be created to accumulate funds to be able to face situations such as the COVID pandemic, keeping premiums in vulnerable sectors, since these are the sectors with reduced income under such situations, and which, together with increasing premiums, leads to less penetration.

How did COVID-19 mainly affect your daily work (other than having to work from home)? What were the main challenges? Could you see any positive development related to inclusive insurance triggered by the pandemic?

Mobility restrictions and high claim rates in life business led to a reduction in individual product premiums, because our insured population is not digitalised. In the case of group insurance, pressure was put on paying premiums, since they increased up to 100%. In our company, many areas were already digital so we were able to work from home. Medical insurance was the one gaining more weight in the minds of our insureds, because they realised how important it is to have it.

What were your main learnings from ILO's training?

The course covers all areas of the business and applies experiences gathered throughout the world, so participants obtain access to a wealth of knowledge which can be used to develop and improve insurance products valuable for clients. The PACE tool is an innovative one and provides us with an initial framework that can be quickly implemented, so it is one of the most valuable elements of the training. The training is so rich that it helps all areas in the organisation increase their commitment to those insured. ●

LINKS

→ Impact Insurance
→ Munich Re Foundation

CLIMATE CHANGE AND EDUCATION

A girl checks how much energy a lamp needs. Climate change and energy transition are core components of our educational work.

LECTURES ON FOUNDATION TOPICS

40 lectures and speeches by Munich Re Foundation employees at universities and schools, at conferences and on other occasions with an audience of around 4,600 people

2021 DIALOGUE FORUMS

"Small things, big effect"
Online event series,
January 2021 — May 2021
5 events with around
800 participants

DIALOGUE FORUM SPECIAL

"From a throwaway society to a circular economy — Reduce, Reuse and Recycle"
Online event, 24 November 2021
50 participants
Project partners: M:UniverCity and Strascheg Center for Entrepreneurship at the University of Applied Sciences Munich

DIALOGUE FORUM SPECIAL Klimaherbst München

"Climate-smart agriculture, organic farming and more — new paths for agriculture?"
Online event, 20 October 2021
50 participants
Project partner: Netzwerk Klimaherbst München e.V.

ENERGY SCHOOL MUNICH

Munich, school year 2020/2021
Video presentations on the energy transition for 250 pupils
Module "Sun — full of energy" offered as a holiday programme
Project partner: Green City e.V.

PAREMIA Partnerships for ambitious resilience and mitigation action

Analysis of the National Climate Protection Goals (NDCs) of selected countries and development of proposals for more efficient measures
Online workshop for study presentation, 26 May 2021
Project end: May 2021
Project partner:
Germanwatch e.V.

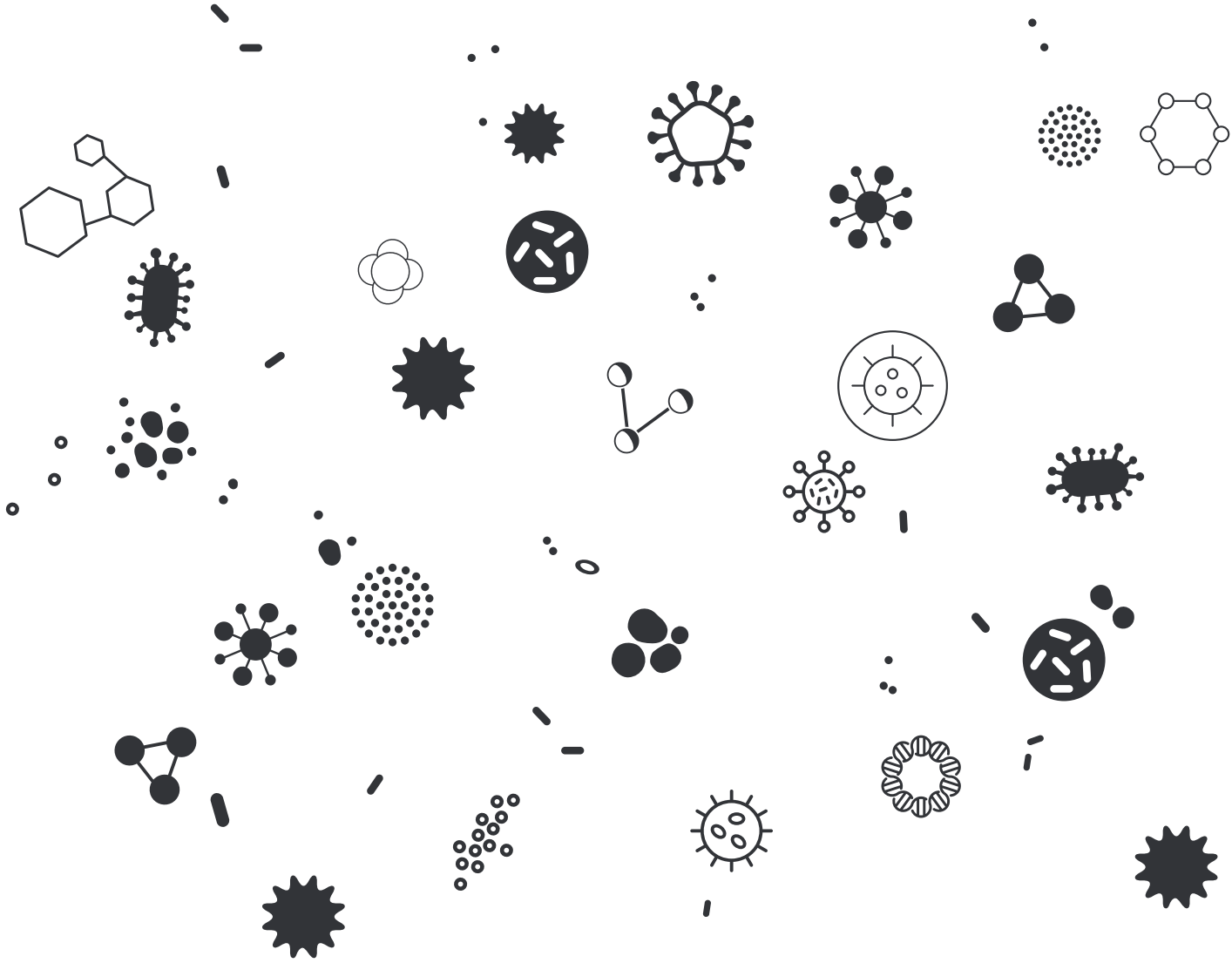
2021 CLIMATE ACADEMY Online

"Nature-based solutions for disaster risk reduction — rethinking urban development"
27 September — 1 October 2021
Around 200 participants
Politicians, researchers, journalists and NGO employees
Project partners: UNU-EHS, UNFCCC

UNIVERSITY COOPERATIONS

Eberswalde University for Sustainable Development
Online Project Seminar of the Master's Programme "Global Change Management"
Munich, 22 — 26 March 2021
28 students

Friedrich-Alexander University Erlangen-Nürnberg, Department of Geography
Online Project Seminar "Climate Adaptation and CO_2 Removal".
Erlangen, 14 — 18 June 2021
10 students



2021 DIALOGUE FORUMS Small things, big effect

The coronavirus pandemic has demonstrated once again that human beings frequently underestimate risks they cannot immediately see. And it is not just new kinds of virus that pose a threat. Microplastics, fine dust, climate-damaging CO_2 molecules and mobile radiation are all consequences of industrialisation and advances in technology — and problems that we need to tackle. The 2021 Dialogue Forums provided experts and the assembled online audience with a perfect platform to increase awareness of these problems and discuss potential remedies.

Climate change and education

Experts are nowadays talking about a completely different kind of pandemic related to the worldwide flood of plastic waste. Despite growing environmental awareness, we still use far too much plastic. According to the United Nations Environmental Programme (UNEP), the world generates around 300 million tonnes of plastic waste every year. And during the coronavirus pandemic, the global mountain of plastic increased by a further 8.4 million tonnes.

MICROPLASTICS ARE EVERYWHERE

If plastic is not recycled or properly disposed of, it turns up sooner or later in the form of microplastics, particles with a diameter of less than five millimetres, in the soil, air and water. "Microplastics are everywhere and there are countless sources for them," explained Nadja Ziebarth from Friends of the Earth Germany (BUND). As well as standard household plastic waste, which slowly breaks down into microparticles, the problem is compounded by abrasion from tyres, textiles, artificial grass and road markings, as well as by special additives for cosmetics.

Dr. Lars Gutow from the Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research (AWI) admitted that we do not know what damage microplastics cause in living organisms because not all plastics are of equal concern. The marine biologist explained that it depends on the kind of additives they contain, for example softening agents, UV stabilisers or flame retardants. "But just because we can't see them doesn't mean they have no effect," he warned.

"There is now an estimated 150 to 200 million tonnes of plastic waste in our oceans. As we can't remove it, the material slowly becomes more brittle from UV radiation, and gradually decomposes into microplastics," Gutow explained. We remain in the dark – quite literally – about exactly how much microplastic is now really in the oceans. We can currently trace particles up to 10 micrometres in size (a micrometre is one millionth part of a metre). Smaller components, of which there are many more, therefore remain unidentified.

DR. DORIS HAFENBRADL
Microbiologist and Managing Director of Electrochaea GmbH, Planegg

PROF. ACHIM ENDERS
Head of the Institute for Electromagnetic Compatibility at Braunschweig Technical University

CHRISTOPH BEUTTLER
Carbon Dioxide Removal Manager of Climeworks

NADJA ZIEBARTH
Microplastics expert at Friends of the Earth Germany (BUND)

DR. SEBASTIAN PORKERT
Managing Director and founder of ECOFARIO

DR. BARBARA OLFE-KRÄUTLEIN
Research Group Leader at the Institute for Advanced Sustainability Studies, Potsdam

JÖRN GUTBIER
Chairman of the association "diagnose:funk"

PROF. SABINE FUSS
Head of the Working Group Sustainable Resource Management and Global Change at the Mercator Research Institute on Global Commons and Climate Change (MCC), Berlin

PLASTICS FROM RENEWABLE RESOURCES

BUND expert Ziebarth stressed that biodegradable plastics are not a good alternative in this context. "Biodegradable means there are bacteria that will break up the plastic, and a particular temperature and level of humidity are required for this to happen," she explained. In the same way, plastics made from renewable resources such as corn starch or sugar are not the solution. "As the plastic degrades, it makes no difference for the environment whether the polyethylene (PE) has been produced from petroleum or sugar," she pointed out.

So how can we solve the problem? "Even though we cannot identify the detailed consequences of microplastics on the environment, we should take a precautionary approach and reduce output," Gutow argued. Because microplastics will be with us for all eternity, and their quantity is increasing exponentially. Dr. Sebastian Porkert, founder and CEO of ECOFARIO, is focused on technical solutions. His start-up constructed a system that can filter out microplastics from wastewater cheaply and efficiently. Porkert saw politicians as partly to blame, since consistent legislation could help mitigate the problem. "I think it is dangerous to rely on technical solutions," Gutow pointed out, "because then you stop thinking about how we can avoid plastic."

BUND expert Ziebarth summed up the discussion with an appeal to politicians: "What we need is a social transformation. There is no point in just tinkering with the problem every now and again. This is a political issue and measures to address it will not fail because of opposition from consumers." According to a representative survey, 84% of consumers today are already in favour of more bans and regulations being introduced for microplastics. However, politicians will have to overcome the powerful lobby from the oil and chemical industries. One ray of hope is the EU's 2019 Directive on Single-use Plastics. This has established the legal framework for more sustainable handling of plastics. ●

LINK

→ 2021 Dialogue Forums

PROF. ARMIN NASSEHI
Sociologist at the Ludwig Maximilian University, Munich

PROF. PHILIPP OSTEN
Medical historian and Director of the Medical History Museum, Hamburg

PETER SÄNGER
CEO of Green City Solutions, Berlin

DR. LARS GUTOW
Marine biologist at the Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research (AWI), Bremerhaven

DR. INGE PAULINI
President of the Federal Office for Radiation Protection

DR. BETTINA HOFFMANN
Federal policy spokesperson for environmental policy and environmental health for the Green Party (BÜNDNIS 90/DIE GRÜNEN)

PROF. MELANIE BRINKMANN
Infection biologist at Helmholtz Centre for Infection Research and at Braunschweig Technical University

DR. ALEXANDRA SCHNEIDER
Head of the Environmental Risks Working Group of Helmholtz Centre Munich's Institute of Epidemiology, German Research Center for Environmental Health

DIALOGUE FORUM SPECIAL
From a throwaway society to a circular economy — Reduce, Reuse and Recycle

In cooperation with M:UniverCity,
the innovation network of Munich University of Applied Sciences

The longevity of products must be massively improved.

SOPHIE ZIELCKE
Head of Sustainability, Grover, Berlin

We must achieve an absolute reduction in resource consumption.

JANINE KORDUAN
Officer for circular economy at Friends of the Earth (BUND), Berlin

A circular economy on its own is not enough, our economic system as a whole is not sustainable.

OLGA WITT
Blogger and author of "Zero Waste"

Students need to question the teaching of the linear economic system.

PROF. DR. GEORG ZOLLNER
Sustainability officer for circular economy, University of Applied Sciences, Munich

In the final analysis, the plastic problem is due to the fact that our production and consumption systems are unsustainable. The need for a shift towards a more consistent circular economy is therefore becoming more and more urgent, if only to preserve raw materials. Human beings are consuming as many ecological resources as if they lived on 1.7 Earths. But a circular economy on its own is not enough. Olga Witt, blogger and author of the book "Ein Leben ohne Müll" (Zero Waste), argued at the special Dialogue Forum that we need a completely new system, and we have to learn to think differently.

MULTI-USE INSTEAD OF SINGLE USE

Corinna Caspari from Relevo illustrated what a new way of thinking could look like. The start-up offers a multi-use solution for tableware. Registered users can take away their food in partner restaurants in multi-use dishes and return them to any other partner restaurant. The environmentally friendly multi-use sets can be used more than 1,000 times – a great example of a successful initiative to protect resources.

RENT INSTEAD OF BUY

The company Grover takes a different approach. Under a subscription model, users can rent electronic entertainment devices, such as smart phones, laptops or play consoles. "After the products are returned, they are cleaned and if necessary repaired, and are then available for the next customer," explained Sophie Zielcke, Head of Sustainability at Grover. This allows the maximum use to be made of each product and also reduces electronic waste.

"Ecodesign is the key concept for reducing absolute resource consumption," argued Janine Korduan from BUND. She added that changes to framework conditions were needed, such as binding targets for protecting resources and multi-use quotas, as well as a standardised approach in Europe. This would make it easier for companies to move further in this direction. She called for greater transparency for consumers regarding how much carbon or raw materials could be saved with more conscious behaviour, so as to offer incentives for more sustainable consumption.

ENVIRONMENT SHOULD COME WITH A PRICE

Professor Georg Zollner, Sustainability Officer at the University of Munich, advocated more interdisciplinary thinking. He sees the current approach to business administration as part of the problem. "Students need to challenge their professors and question the teaching of the linear economic system." he said. "They need to think backwards and in an interdisciplinary way for economics to become part of the solution." And because business speaks only one language, a price should be put on the environment, he argued. This is where the start-up Common comes in. It has committed itself to measuring environmentally friendly behaviour in terms of the number of kilograms of carbon saved, and to reward such conduct with so-called green coins. In this way, employers can offer their employees a completely new type of social benefit, for example if they travel to work by bicycle rather than by car. "We are turning carbon emissions into a currency and offering an incentive system to make people behave in a more environmentally conscious way," explained CEO Enée Bussac.

Zollner warned that our society hasn't yet realised that we cannot continue living for the next 50 years in the same way we have done up to now. Instead of being Europe's leading producer of packaging waste, Germany should set its sights on becoming European champion in saving waste, he said. A lot would be gained, he added, if Germany, as a successful industrialised nation, could manage to place itself at the head of a global movement for a fair and resource-saving economy. ●

LINKS

→ M:UniverCity
→ University of Applied Sciences Munich
→ Munich Re Foundation

Leapfrogging cannot solve everything, but it definitely helps to increase agricultural production.

CATHERINA HINZ
Executive Director of the Berlin Institute for Population and Development

MÜNCHNER :KLIMA HERBST

DIALOGUE FORUM SPECIAL WITHIN THE MÜNCHNER KLIMAHERBST Climate-smart agriculture, organic farming and more — new paths for agriculture?

Our aim must be to make agriculture more energy-efficient, adaptive, diverse, regional and loss-free.

DR. CHRISTIAN HÜLSEBUSCH
Executive Director of the German Institute for Tropical and Subtropical Agriculture, Transdisciplinary and Socio-Ecological Land Use Research (DITSL)

There is no single approach to achieving greater sustainability in agriculture. Instead, we need to balance environmental, social and economic targets, while also taking the local situation into account.

CHRISTEL WELLER-MOLONGUA
Head of Department Rural Development and Agriculture at the German Society for International Cooperation (GIZ)

Through its emissions of greenhouse gases, the agriculture sector has a significant impact on climate change. Yet at the same time, the industry is particularly affected by the global increase in temperatures. This Dialogue Forum, part of the annual event series Münchner Klimaherbst, examined the question of how to make agriculture in the Global South more environmentally friendly, while at the same time ensuring food security.

"Our aim must be to make agriculture more energy-efficient, adaptive, diverse, regional and loss-free," argued Dr. Christian Hülsebusch, Executive Director of the German Institute for Tropical and Subtropical Agriculture. This would mean, for example, paying greater attention to methane emissions and minimising the use of fertilisers, fuels and synthetic pesticides. In addition, he said, the cultivation of agricultural goods needed to be seen as part of a site-specific ecosystem.

HOW WILL THE WORLD BE FED IN THE FUTURE?

According to forecasts, the population of Africa will double by the year 2050. Catherina Hinz, Executive Director of the Berlin Institute for Population and Development, believes the concept of leapfrogging could help Africa's growing population both now and in the future. "Leapfrogging in this context means using technical and social innovations to bypass inefficient, environmentally harmful and expensive intermediate development stages," she explained. This would help Africa avoid repeating the mistakes made by industrialised nations that brought declining biodiversity, high emissions of greenhouse gases, polluted groundwater and soil erosion.

Christel Weller-Molongua, Divisional Director at the German Society for International Cooperation (GIZ), drew the following conclusions: "There is no single approach to achieving greater sustainability in agriculture. Instead, we need to balance environmental, social and economic targets, while also taking the local situation into account." She added that money and expertise from industrialised countries were just as important as the will for change in industrialised and developing nations.

LOOKING AHEAD TO THE DIALOGUE FORUMS IN 2022

It is generally accepted that agriculture has a crucial role to play in the fight against climate change. But intelligent solutions are also needed in other sectors. So the 2022 Dialogue Forums will feature six individual events focusing on practical and promising proposals under the title "Smart solutions to protect the climate". ●

LINKS

→ Klimaherbst e.V.
→ Berlin Institute for Population and Development
→ Munich Re Foundation

Green spaces and water retention areas must be integrated more strongly into building planning measures in cities. They offer excellent risk management potential – both for heat and for precipitation events.

2021 CLIMATE ACADEMY Nature-based solutions for disaster risk reduction — rethinking urban development

Nature-based solutions (NbS) cannot do everything. If a hundred-year storm surge is imminent, even a sponge city will be unable to make much of a difference. Similarly, a metre-high tsunami will not be stopped by a mangrove forest. But NbS can be incredibly useful for "normal" risks.

DR. ZITA SEBESVARI
Deputy Director UN University Institute for Environment and Human Security (EHS), Head of Section – Environmental Vulnerability & Ecosystem Services

This is the decade of action and we need transformative, not incremental, climate action.

DR. HIMANSHU SHEKAR
Programme Manager "The Climate Academy", UNU-EHS

Since the Munich Re Foundation was established, the Academy has been held once a year in collaboration with the United Nations University and other partners. For different players from science, the media, the private sector, civil society and the United Nations, it acts as a unique platform for exchanging knowledge, finding solutions and engaging in dialogue. The 2021 Climate Academy was held online from 27 September to 1 October 2021. It was jointly organised by the United Nations University Institute for Environment and Human Security (UNU-EHS) and the Munich Re Foundation, in cooperation with the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat, and support from Local Governments for Sustainability (ICLEI). At the end of the Climate Academy, review papers, policy briefs and other results are prepared with a core group selected from the 300 participants.

2021 CLIMATE ACADEMY: NATURE AS A PARTNER IN THE FIGHT TO MANAGE THE CLIMATE CRISIS IN URBAN AREAS

Ecosystems can play an important role in protecting exposed regions from the impact of climate change, while at the same time countering its effects. The potential offered by nature-based solutions, for water retention or to mitigate temperature peaks for example, is widely recognised. But the 2021 Climate Academy also illustrated that there are still a number of obstacles to overcome.

In many regions of the world, climate change is intensifying extreme weather events, such as heatwaves, droughts and floods. This was again only too apparent in 2021. Disaster prevention and adaptation to climate change are more urgent than ever, particularly in cities with their dense urban structures. Nature-based solutions could bridge this gap, since it is often nearly impossible to finance complex protective engineering measures, particularly in the Global South. →

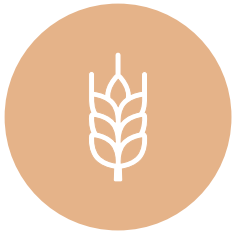
The benefits of NbS are manifold

Climate change adaptation and mitigation

Disaster risk reduction

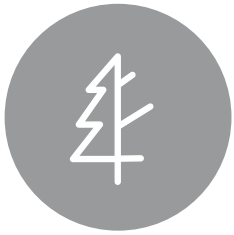
Economic and social development

Health



Food security

Water security



Environmental degradation and biodiversity loss

Source: Own figure (2022), based on the Climate Academy presentation by Zita Sebesvari, Simone Sandholz: Nature-based solutions – Setting the stage & advocating for urban uptake (2021)

HOW CAN NBS HELP?

They cover a broad spectrum and make use of the positive qualities of intact ecosystems. They include preserving moors as carbon sinks, renaturing water meadows to aid flood protection, as well as the use of urban green spaces to blunt the impact of heat-waves and torrential rain. However, Eberhard Faust, former Chief Scientist Climate Change at Munich Re, pointed out that NbS can still only cushion extreme events up to a certain severity.

NbS are measures taken to protect, sustainably manage or restore natural or altered ecosystems. They can effectively tackle various social challenges, for example climate change, food and water security, and also offer protection against natural disasters, while at the same time enhancing human well-being and improving biological diversity.

The great advantage is that NbS are often less costly than structural measures, and can be maintained with much less effort and expense. In addition, they generally meet several targets simultaneously: they can help with long-term adaptation to the consequences of climate change, and also improve the level of disaster prevention. At the same time, they ensure a healthier urban climate and, in conjunction with urban gardening, can even create additional livelihood options. Dr. Siddharth Narayan from East Carolina University explained how effectively NbS can work using the example of mangrove forests, which protect coastal regions in India, the USA and Jamaica against flood damage from cyclones, while also preventing erosion. Coral reefs along a coastline can perform a similar role.

WHAT ARE THE CHALLENGES?

Given all the enthusiasm for the potential offered by such solutions, why is it that these approaches are not implemented faster and more extensively? To begin with, NbS need to be developed for specific situations. There are no ready-made solutions. Often, there is a lack of capital to ensure the long-term financing of pilot projects, because periods of five years or more are needed before an NbS project is maturing. A further obstacle is a lack of knowledge. NbS are not yet part of the standard training for urban planners, and even local people are seldom aware of their benefits. With NbS projects, there is also the potential for conflict about land use. Particularly in conurbations, all stakeholders must therefore be brought into the decision-making process. The key here is information and cooperation.

One innovative idea for financing NbS was presented by Fernando Secaira Fajardo of The Nature Conservancy (TNC). This organisation is working

NbS offer good opportunities to drive necessary urban developments in harmony with ecosystems.

LILIAN DAPHINE LUNYOLO
Climate Fellow, UNFCCC

With NbS, we can risk-proof up to 20% of the world's urban coastlines.

DR. SIDDHARTH NARAYAN
Assistant Professor of Coastal Studies
East Carolina University

with insurers on a pilot project in Mexico that determines the value of a reef on the basis of the losses that it prevents on the coast behind it during storm and flood events. This monetary value can then be insured so that the cost to repair damage to a reef following an insured event can be paid from the sum insured. The inhabitants and companies along the coast who benefit from an intact reef pay the insurance premiums. It is a novel idea and further interest has been expressed in Florida, the Philippines and Indonesia.

A RETHINK IS NEEDED TO ENSURE SUCCESS

The approaches presented at the Academy to make cities more sustainable using nature as a partner are extremely promising – notwithstanding the numerous obstacles. For that reason, Dr. Randy Sa'd, Executive Director of the non-profit platform Flourishing Enterprise Institute, made this appeal: "A genuine paradigm shift in urban development will not be achieved by action and performance on the part of a few." Instead, what is needed is a rethink on three different levels: decision-makers, systemic structures, and regional development and planning processes. When these come together with a well-informed society that accepts near-natural solutions as a form of sustainable development, NbS can be implemented on an area-wide basis. ●

LINKS

→ UNU-EHS
→ UNFCCC
→ The 2021 Climate Academy

LINKS

→ Germanwatch e.V.
→ PAREMIA

PAREMIA
Implementing more efficient climate protection and resilience measures!

Studies like PAREMIA are very useful because they allow us to re-adjust our own strategic considerations and substantiate political decision paths. The studies need to be precise and of good quality, and have a clear focus on practicability.

DR. PHILIPP BEHRENS
Head of Section
International Climate Protection Initiative (IKI)
at the BMU

All countries that signed the 2015 Paris Agreement agreed to define their nationally determined contributions (NDCs) by 2020. They also committed to communicate these to the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat. Analysis of the targets shows that we are moving too slowly. The NDCs are not ambitious enough to keep us on track for a temperature increase between 1.5 and 2 degrees. The Germanwatch study PAREMIA, financed by the Munich Re Foundation, takes this as the starting point for an analysis of the efforts made by 13 selected countries. It goes into detail for three countries (Chile, India and South Africa) and, in addition to the analyses, suggests improvements to achieve more ambitious levels of climate protection.

There are many different starting points for protecting our climate more effectively and more efficiently. One option is to enter into bilateral partnerships with other countries. By working together, we can discover and exploit as yet untapped potential. Possible approaches include a transfer of knowledge and experience between different countries. Germanwatch, together with the Munich Re Foundation, presented the study in the spring of 2021. As well as the general public, the target audience included staff at the German Federal Ministry of the Environment (BMU) and the Ministry for Economic Cooperation and Development (BMZ). ●

UNIVERSITY PARTNERSHIPS AND LECTURES
Climate change, risk management and sustainability in university education

With knowledge comes responsibility! Since the Munich Re Foundation was established, our mission has been the transfer of knowledge. In keeping with this principle, we involve ourselves in education, accept teaching assignments, support project seminars within the framework of master's programmes, and give lectures at universities. The close networking with the universities – not just at the Munich site – brings benefits for both sides. From us, students gain insights into our topics from relevant players in the fields of politics, development cooperation and the private sector. At the same time, it allows us to keep our finger on the pulse of academic research. In 2021, we supported two master's programmes from Eberswalde and Erlangen in project seminars. Our topics:

LINKS

→ Friedrich-Alexander University Erlangen-Nürnberg, Department of Geography
→ Eberswalde University for Sustainable Development
→ Munich Re Foundation

ENERGY SCHOOL MUNICH
Making the energy transition and climate protection tangible

The task of the Munich Energy School is to sensitise children to climate protection and issues surrounding renewable energies. We have been sponsoring its diverse range of courses since 2011. Specifically, we support the workshop modules "Sun – full of energy" and "Energy with a future". In a fun approach to the topics, the children learn what sustainable action involves. Due to the coronavirus situation, the workshops for 2021 could not be held in the usual way. Instead, the project team found some creative ways to convey the content: the teaching videos produced in 2020 were used once again to reach some 250 pupils. Some of the interactive workshops from the modules were converted to holiday programmes, allowing them to be organised as face-to-face courses outside the lockdown periods. So around 500 children were still able to take part in the Energy School workshops. ●

LINKS

→ Green City e.V.
→ Munich Re Foundation

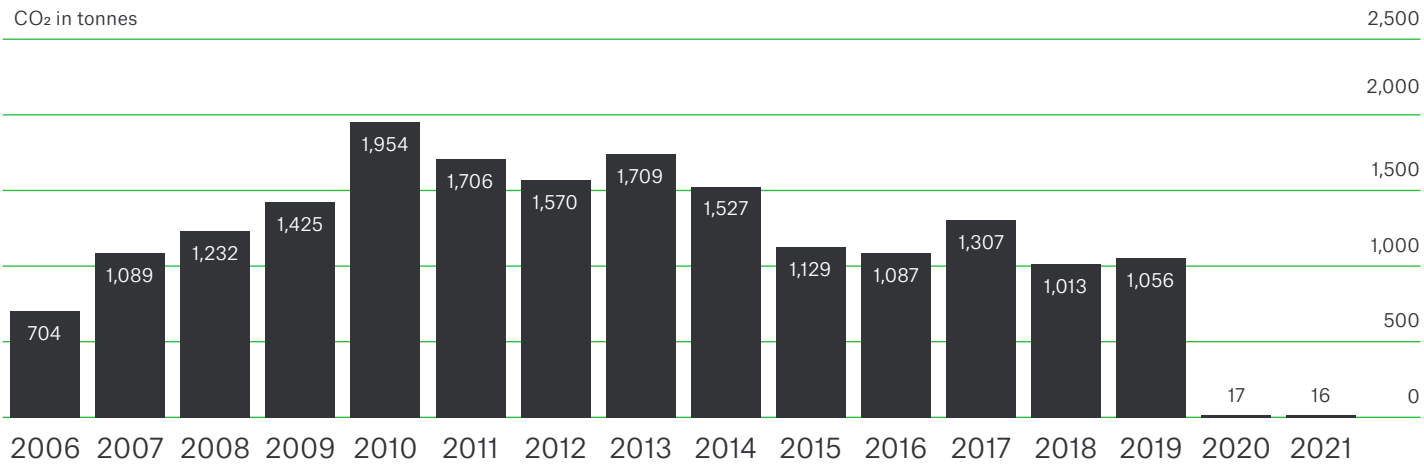
ENVIRONMENTAL PERFORMANCE 2021
The carbon footprint of the Munich Re Foundation

We have been calculating our carbon footprint ever since the foundation was first established. It comprises the following components: emissions from business operations (electricity and heating in the offices), business trips made by our employees, and our projects. Most emissions in the projects category stem from travel by participants to attend conferences and seminars. In comparison with 2020, our carbon footprint was reduced by a further tonne – falling from 17 to just over 16 tonnes of carbon. This was largely due to the impact of the coronavirus pandemic. All events were organised in a digital format and no business trips were undertaken.

Calculating the carbon footprint for digital events is a complex process. For our events, the total amounts were in the hundreds of kilogram range. For the carbon offsetting calculation, we therefore decided to round up to a full tonne in the projects category. These emissions and those from our offices and business trips are offset by our founder, Munich Re, through the purchase of carbon credits.

LINK

→ Munich Re Foundation
Environmental performance



EMISSIONS SINCE 2006
We have been offsetting our CO_2 emissions every year since the foundation was established. Our goal is to further reduce CO_2 emissions.

Source: Munich Re Foundation, own depiction (2022)

Internal foundation issues

INCLUSIVE INSURANCE

Access to Finance Rwanda

Access to Insurance Initiative (A2ii)

Association of Insurers of Mozambique (AMS)

Axa Emerging Consumers

Center for the Economic Analysis of Risk (CEAR)

Centre for Financial Regulation and Inclusion (Cenfri)

Denis Garand and Assoc.

German Society for International Cooperation (GIZ)

Feed the Future Innovation Lab at UC Davis

FIDES

Financial Sector Deepening Mozambique (FSDMoc)

Financial Sector Deepening Zambia (FSD Zambia)

FinProbity Solutions

ICMIF

ILO's Social Finance Programme

Instituto de Supervisão de Seguros de Moçambique (ISSM)

Insurance Association of Jamaica (IAJ)

Insurance Supervisory Agency of Slovenia (AZN)

InsuResilience

Inter-American Development Bank (IDB)

International Association of Insurance Supervisors (IAIS)

Micro Insurance Company

MicroInsurance Centre at Milliman

Microinsurance Master

Microinsurance Network (MiN)

PharmAccess Foundation

Pioneer Insurance

Sagicor

TAG Microinsurance Association of Zambia

University of St. Kliment Ohridski – N. Macedonia

World Bank / IFC

World Food Programme (WFP)

FOG NETS

WaterFoundation

Zabalketa

Instituto de Capacitación del Oriente (ICO)

Oswald Foundation

FogNet Alliance

DISASTER RISK PREVENTION

UN Office for Disaster Risk Reduction (UNDRR)

University of Dundee

Resilience Solution Bangladesh

Centre for Social Research and Development (CSRD)

UP Transfer GmbH at the University of Potsdam

ONG Inclusiva

CLIMATE CHANGE AND SUSTAINABILITY

United Nations University, Institute for Environment and Human Security (UNU-EHS)

United Nations Framework Convention on Climate Change (UNFCCC)

Green City e.V.

Germanwatch e.V.

Eberswalde University for Sustainable Development (HNEE)

Friedrich-Alexander University Erlangen-Nürnberg (FAU)

M:UniverCity

Strascheg Center for Entrepreneurship (SCE)

Social Entrepeneurship Academy

Network Klimaherbst Munich e.V.

GLOBAL PARTNERS

PUBLICATIONS 2021

Own Publications

2020 REPORT
Annual report of the
Munich Re Foundation
German and English

→ 2020 REPORT

REPORT
International Conference
on Inclusive Insurance 2020
Digital Edition

→ REPORT
International Conference on
Inclusive Insurance 2020

2021 DIALOGUE FORUMS
Positionen
German

→ 2021 DIALOGUE FORUMS
Positionen

RISK AWARD — Best project
proposals 2021
Eco- and nature-based solutions
for disaster risk reduction

→ RISK AWARD —
Best project proposals 2021

Publications from projects

CLIMATE ACADEMY
M. Garschagen, D. Doshi,
M. Moure, H. James, H. Shekhar
The consideration of future risk trends in national adaptation planning: Conceptual gaps and empirical lessons
in Climate Risk Management,
Volume 34, 2021

→ DOWNLOAD

GIBIKA
Sonya Ayeb-Karlsson
Mental health distress in the wake of Bangladesh cyclone shows the devastation of climate-related loss and damage
in The Conversation (2021)

→ DOWNLOAD

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(1 May — 31 October 2021)

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InsuResilience
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Member

Microinsurance Network
Best Practice Group Landscape Study
Member

Munich Climate Insurance Initiative (MCII), Bonn
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Urban Resilience Intensive Training Programme
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“Our goal is to find long-term solutions, prepare people for risks and improve their living conditions. In dialogue with partners worldwide, we provide impetus and develop perspectives.”

MUNICH RE FOUNDATION

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