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Cover page: Farmer Filomena Torrico lives in Alto Veladero in our project region at the foot of the eastern Andes of Bolivia. A new fog collector right beside her house has been providing clean drinking water for her and her family since October 2022.





RENATE BLEICH
Chair of the
Munich Re Foundation

Dear Readers,

The year 2022 witnessed a number of grave crises, such as Russia's attack on Ukraine, energy and food shortages, the impact of the pandemic, galloping inflation, and increasing social inequality. Climate-related hazards have not diminished either. On the contrary: following the results of the latest climate summit, we are going to exceed the 1.5-degree threshold for global warming. This means that we clearly need to do more to combat climate change and reduce exposure to climate risks, particularly for the poorest in the Global South.

The Munich Re Foundation is actively involved in three different areas: disaster risk reduction, providing education and training programmes on climate change and sustainability, and networking climate-relevant players from the fields of science, politics and the UN. The RISK Award is one example of our involvement in disaster prevention. We have been funding the award for ten years now, in the process enabling many successful initiatives. Many people now have more effective protection against the consequences of natural disasters and can better adapt to climate-related changes. In the field of education services, the focus of our Dialogue Forums this year was on smart solutions for climate protection.

A further key goal of the foundation is to combat poverty and social inequality. Low-income groups in emerging and developing countries seldom have access to risk prevention or financial protection. This is where the concept of inclusive insurance comes in, providing specially tailored insurance solutions for this target group. The International Conference on Inclusive Insurance, which was initiated when the foundation was established, is now the world's most important platform in this area, an event where leading players can network, discuss potential obstacles and explore opportunities to close the insurance gap in developing countries.

We will continue to work resolutely on our contribution to achieving the UN Sustainable Development Goals – and thus to creating a more just and peaceful world.

I hope you enjoy reading this year's report.

Kind regards,
Renate Bleich

A handwritten signature in blue ink that reads "Renate Bleich".

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 world-wide, we provide impetus and develop perspectives.



The foundation in figures 2022

1,260

participants at lectures given by foundation employees

2,209

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

253

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

17

foundation events organised

15,000

mangrove seedlings planted on the coast (2021 RISK Award project Vietnam)

14

new fog net collectors set up in Bolivia

67

global partnerships with other organisations

[MORE ABOUT US](#)

[→ Munich Re Foundation](#)



ICII
Learning Sessions



ICII
Learning Sessions



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



Fog nets
ICII
Learning Sessions
RISK Award



Fog nets

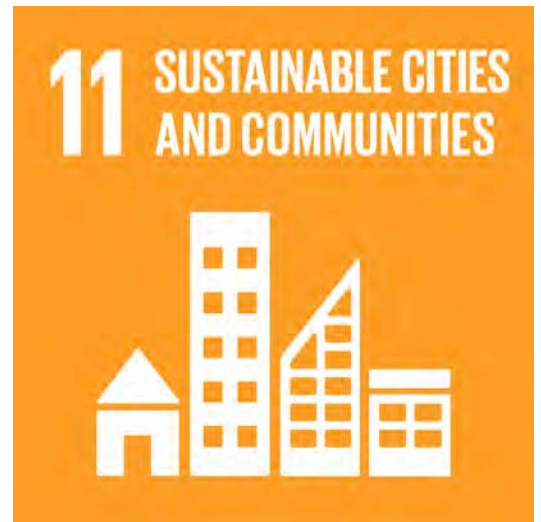


Climate Academy
Energy School Munich

Our project work is guided by the 17 Sustainable Development Goals (SDGs). The size of the pictograms reflects the focus of our work.



ICII
Learning Sessions



RISK Award
Climate Academy
Dialogue Forums
University cooperations



Basis of all
foundation projects



RISK Award
Climate Academy
ICII
Learning Sessions
Fog nets
Dialogue Forums
University cooperations



How should life be after the global crises?

The United Nations member states defined the Sustainable Development Goals (SDGs) as an urgent call for action back in 2015, exposing the intersectionality of risks to humanity and stressing the need for people to work together worldwide.

An essay by PROF. XIAOMENG SHEN,
Vice-Rector of the United Nations University and
Director of the UNU Institute for Environment and
Human Security, Bonn.

Halfway through this mandate, recent UN reports have taken stock and painted a rather bleak image while reflecting on commitments versus achievements towards the 2030 Agenda. The UN Sustainable Development Goals Report reveals the impact of today's cascading, interlinked global crises as enhancing and worsening the already existing threats to humanity. The World Bank's latest report on Poverty and Shared Prosperity indicates that the world's trajectory towards poverty eradication has recorded the biggest setback in the past decades due to the COVID-19 pandemic, as 70 million people were forced into extreme poverty in 2020. This condition is further aggravated by the ongoing military conflicts around the world as well as climate change-driven disasters.

While economic development has brought humanity unprecedented material wealth, health and high living standards, it has also led to the crises of climate change, environmental degradation, socio-economic inequities and has discounted our collective future. More strikingly, even the countries benefiting from some of the highest levels of good health, wealth and education outcomes are reporting even greater anxiety than 10 years ago, and 6 in 7 people worldwide are plagued by feelings of insecurity, reports the UN Development Programme this year. According to the World Health Organization, 1 in every 8 people in the world live with a mental disorder.

It seems obvious that decades of development have not delivered a "good life" for all, leaving no one behind as SDGs ask of the global community, although we already possess sufficient technology and wealth to overcome the major global challenges such as climate change, poverty and inequity. This leads to the question: what would it take us to reach the noble goals the countries of the world agreed to and set out to achieve?

The Intergovernmental Panel on Climate Change (IPCC) stated at the launch event of the 2022 report that we need to fundamentally change our way of life to tackle the climate crisis, as it has become an existential threat. Such a change requires a profound mindset shift from the current thinking towards a radically different thinking and urgent transformation on a global scale. It entails nothing less than moving away from the mainstream economic narratives of "growth is good" which have been dominating societal and political discourses, despite having failed to deliver well-being for all. A re-imagination of the current growth paradigm towards human well-being based on sustainability and equity is needed to enable humanity as

The impact of today's cascading, interlinked global crises are enhancing and worsening the already existing threats to humanity.

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a whole to flourish in an alternative “growth” model beyond the scope of material throughput.

To change a deeply ingrained paradigm is no easy task, however, even a long-standing societal agreement is only an agreement which we bought into and is not naturally given, and hence can be changed and re-agreed on. Throughout human history, we have been telling and retelling ourselves different stories and negotiating our social contracts. It is a consensus, especially through the experiences during the COVID-19 pandemic, that we humans are capable of change, change of our behaviour and change of the stories we tell ourselves.

The Thomas theorem was formulated in 1928 by William Isaac Thomas and Dorothy Swaine Thomas:

*If men define situations as real,
they are real in their consequences.*

The interpretation of a situation is affected by subjective perceptions of situations. The subjective interpretation then causes actions. This means that everything starts in our minds and the future is being created at the present moment. Instead of passively chasing after problem solutions, we can start actively re-imagining this world to be a place of utopia. Many things imagined by science fiction novelists have become reality: computer, cell phone, robot, self-driving cars, and even hydrogen described as the “finest fuel derived from sea water” in the short story “Jon’s World” by Philip K. Dick, which was published in 1954. Futuristic thinking and our power of imagination should be cultivated as much as the discipline of history. Our ability to imagine a radically different future will determine if we will be able to tackle climate change, biodiversity loss and other global challenges. It is a utopia we need to create so urgently and work towards.

Such utopian imagination finds its contemporary evidence within the wisdom of indigenous peoples around the world. Their alternative ways of life, though marginalised through colonisation, confirm that a different social contract is possible and provide alternatives to the mainstream thinking. For example, symbiotically interdependent worldviews such as the African Ubuntu or Latin American Buen Vivir encapsulate the self in society within nature which are lived human values and hold the key to sustainability. It capitalises relational well-

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loss and other
global challenges.*

being which leads to human flourishing within planetary boundaries. Many indigenous peoples think seven generations ahead without knowing the word “sustainability”. Sustainability is not a concept for them, but a lived lifestyle.

The utopian future also entails a move to prioritising what is valuable, not what is expensive. Many things do not have price tags attached to them, but they are immensely valuable, such as time, friendship, interconnectedness with nature and humans. We need to cultivate these values and clearly see the benefit of such connectedness for our own well-being and cultivate a “nature-first” global culture to ensure environmental stewardship.

How should life be after the global crises? Is it a world where an alternative economy enables human well-being and flourishing and honours real contribution to humanity instead of profits? Will our actions be based on human values and will radical altruism be encouraged and cultivated? Can innovation put all people first instead of getting some countries ahead and leaving others behind? Can we overcome competition which puts some ahead of others by design? In an interconnected world, the well-being of people and the planet can only be achieved if we overcome seeing ourselves as separate from others. Global solidarity is not to serve the most vulnerable. Rather, it serves ourselves and humanity as a whole.

The utopian future entails a move to prioritising what is valuable, not what is expensive.

Global solidarity is not to serve the most vulnerable. Rather, it serves ourselves and humanity as a whole.

Since 1 August 2020, PROF. XIAOMENG SHEN has been in charge of coordinating cooperation between the UNU and various interest groups within and outside the United Nations. As Director of the UNU-EHS, she is also the chief academic and administrative officer of the institute, with responsibility for its organisation and programmes.

[LINK](#)

→ Xiaomeng Shen

DISASTER PREVENTION AND RESILIENCE



“We have to demystify
the DRR jargon!”

SHWETA GUPTA
Executive Director of the International
Center of EQUI-T, All India Institute of
Local Self-Government (AIILSG)

2021 RISK AWARD
Strong roots, strong women

Thua Thien Hue province,
Vietnam

The second cycle for
mangrove cultivation starts,
October 2022

Project partners: Centre
for Social Research and
Development (CSR),
UP Transfer GmbH at the
University of Potsdam

RISK AWARD SIDE EVENT
Innovative solutions for DRR and
climate change adaptation

Part of the Global Platform
for Disaster Risk Reduction
(GPDRR)

Hosted by UNDRR
26 May 2022
100 participants (online
and in Bali)

Project partners: UNDRR,
University of Dundee, Resilience
Solution Bangladesh,
ONG Inclusiva, AIILSG, CSR

2023 RISK AWARD
Climate resilience and
early warning

Start of the call for proposals:
28 October 2022

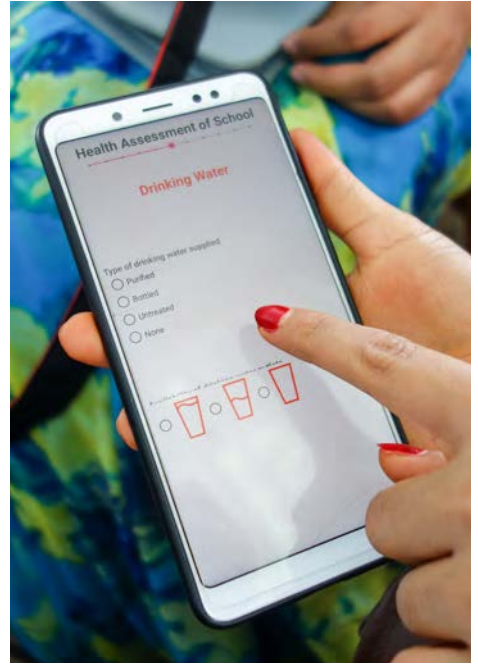
Project partner: UNDRR



Thousands of mangrove seedlings are planted each year in the new tree nursery near Hue, Vietnam.

Innovative ideas for disaster prevention

The world has to adapt to climate change, and risk management plays a key role in this process. Successful risk management starts at the level of local communities. This is where the RISK Award, which we assign together with UNDRR, comes into play. It promotes innovative approaches to risk prevention in emerging and developing countries.



Winning Risk AWARD projects are both diverse and innovative: floating homes (left), risk prevention training with children (centre), and even concepts for modern information and communication technologies.

TEN YEARS OF THE RISK AWARD

Floating homes, EpiNurses and more

Six winning projects from six countries: the winners of the RISK Award, which is endowed with €100,000 and is awarded every two years, pursue very different but consistently innovative approaches in a quest to give people better protection from risk. The broad range of applicants, encompassing governmental and non-governmental organisations, research institutes, universities and think tanks, is testimony to the strong commitment to better risk management.

The RISK Award covers a large span of different activities. Applicant projects range from early warning systems to innovative approaches to schooling for disadvantaged groups and specific infrastructural protection measures. The “floating homes” concept in Bangladesh (winner of the 2019 RISK Award), for example, is aimed at giving people better protection from recurring floods. The idea is to preserve endangered habitats despite rising sea

levels. Mangrove planting in Vietnam (2021 RISK Award, see page 16) helps to counteract coastal erosion and protect people from storm surges. A newly established mangrove nursery gives women an opportunity to generate a sustainable income. The EpiNurse project in Nepal pursues a different approach entirely (2017 RISK Award). It combines epidemiology, nursing and state-of-the-art information technology in a quest to reduce health risks, especially in the aftermath of disasters. EpiNurse equips nurses with digital toolkits so that they can keep infectious diseases in check. Using 2014’s prize-winning project as an example, we want to illustrate what sort of impact the RISK Award can have, one that extends well beyond the core funding of €100,000.



People with disabilities must be integrated into urban risk prevention planning from the outset.

Equal chance of rescue for everyone

ONG Inclusiva from Chile initiated a key project in the battle to ensure equal opportunities in the event of a disaster. The charitable organisation set itself the objective of ensuring that people with disabilities have the same chances of rescue as all others when disaster strikes. Something that might sound obvious is often not guaranteed in practice. An escape route involving only a few steps up or down, for example, can pose an insurmountable obstacle to a wheelchair user. But it is not only their frequently riskier and more difficult living conditions that make marginalised groups unduly vulnerable to disasters. Another reason is that very often disaster warnings simply do not reach them. They also feel disadvantaged when it comes to reconstruction aid.

ONG Inclusiva emerged after the devastating 2010 earthquake in Chile. Founder Carlos Kaiser knows what he is talking about. He was born missing

both lower legs and arms. Together with his wife Loreto Brossard, he came up with a plan back in 2013 to establish inclusive risk management in his home town of Peñaflor. The prize money from the 2014 RISK Award gave his team the funds they needed to turn the project into reality and turn Peñaflor into a model for inclusive risk management. The town, which lies south of Santiago de Chile, has around 100,000 inhabitants, around 10,000 of whom live with some kind of disability. Kaiser is also pursuing a bigger vision: he wants the experience gleaned in Peñaflor to be passed on to other communities in Chile and across Latin America.

DEVELOPMENT OF AN EMERGENCY STRATEGY

ONG Inclusiva identified three critical areas: structural barriers, political barriers and social barriers. Around 650 families were involved in the pilot project. The first step involved analysing structural defects and shortcomings in buildings with the help of an architect. Escape routes had to be revamped, houses converted and access to municipal facilities made easier. When it came to breaking down social barriers, efforts focused on meeting the special needs of what are often marginalised groups in terms of emergency planning. These include not only disabled people, but in many cases also children, older people or pregnant women. Activities focusing on political barriers involved collaborating with the town authorities on developing an emergency strategy, involving residents in the process, so as to ensure that people were prepared for flooding, fires or earthquakes. The town's risk management strategy was redesigned in consultation with first-aiders, the fire brigade and the municipal authorities.

THE RISK AWARD AS A SOURCE OF IMPETUS

Carlos Kaiser and ONG Inclusiva put the funds they received to good use. Over and above their work in the local community, they worked with the university in Santiago de Chile to develop guidelines for inclusive urban planning. Kaiser also used the public interest gained from the RISK Award to campaign for their cause in the international disaster prevention community. Today, he attends key events as a speaker and representative of people with disabilities, for example at the Global UN Platform for Disaster Risk Reduction or at climate change conferences. →

Hand-in-hand with partners (including the United Nations Office for Disaster Risk Reduction (UNDRR), the German Workers' Samaritan Federation and with the support of the Munich Re Foundation), ONG Inclusiva organises a regular international online summit on inclusive disaster prevention for several thousand interested participants. They also offer first-aiders and disaster managers online training on the subject of inclusive disaster protection. The organisation reached another key milestone in 2020: the Metropolitan Regional Government in Chile granted funding of US\$ 500,000 to implement the pilot project from Peñaflor in 50 other communities in Chile and Mexico as part of the UN's "Making Cities Resilient" initiative.

FROM THE BLUEPRINT TO THE ACTUAL PROJECT

Today, ONG Inclusiva reaches thousands of multipliers and first-aiders and its work benefits tens of thousands of people across the globe. At the Munich Re Foundation, we are delighted to have been able to provide this project with start-up financing, laying the foundation for further success – also thanks to our RISK Award partner UNDRR. We will be continuing our cooperation with ONG Inclusiva and the winners of the other RISK Awards, for example to organise further funding or to give the projects an international stage. We did so most recently as part of the 7th UNDRR Global Platform for Disaster Risk Reduction,

held in May 2022 in Bali, an event that brought together several thousand participants. At a digital side event held during the Bali conference, representatives of four winning projects discussed how best to take the step from a blueprint to an actual project, what role financial support plays and how important communication and visibility are.

The RISK Award helps to view risk prevention not only from a technical angle, but rather to establish it firmly in the hearts and minds of society. Our primary objective is to support scalable, innovative best-practice projects that make a key contribution to safe and sustainable development for people at risk. ●

Loreto Brossard and Carlos Kaiser are the joint founders of ONG Inclusiva. Their organisation won the RISK Award in 2014.



The impact of the RISK Award — selected examples

We took 2022 as an opportunity to measure the long-term impact of all previous RISK Award projects in detail. The diagram shows excerpts from the results.



2014
ONG Inclusiva, Chile
Resilience for all

500,000

US\$ in follow-up funding
received

50

further communities added to
the project

20,000

multipliers and first-aiders
reached



2015
All India Institute of
Local Self-Government
(AIILSG), India
*Community Self-
Assessment and Planning*

1,500

young people involved in the
“My DRR Movement”

25,000

people directly involved in the
project

300,000

people living in rural tribal
villages reached



2017
Nursing Association
of Nepal (NAN), Nepal
EpiNurse

200

EpiNurses trained

2,700

people with access to better care
in the aftermath of disasters



EpiNurse incorporated as part of
the nursing curriculum

LINKS

- [RISK Award](#)
- [RISK Award projects](#)
- [2022 Global Platform
for Disaster Risk
Reduction](#)

Mangroves can play a valuable role in risk management. The strong roots of mature trees prevent erosion and massively reduce the impact of storms and floods on coasts.



2021 RISK AWARD

Mangroves for coastal protection

In the second year of the project, the RISK Award team in Vietnam made considerable progress. The planned mangrove nursery is now operational and the first reforestations were successful. Flooding caused by Typhoon Noru in early October, however, hit the nursery hard.

LINKS

- [Centre for Social Research and Development](#)
- [UP Transfer GmbH at the University of Potsdam](#)
- [2021 RISK Award](#)

“Strong roots, strong women” is the name of the project that won the 2021 RISK Award, and one that already provides an ideal description of the project’s ambitions. The aim is to strengthen the resilience of local people to climate-related risks by working together with women’s groups. Mangrove trees, with their strong roots, play a central role in this endeavour. They will form a natural barrier on Southeast Asia’s largest lagoon to protect the coast in central Vietnam’s Thua Thien Hue province against storm surges and erosion.

MANY THOUSANDS OF SEEDLINGS GROWN

In future, the trees required for this project will be supplied by a community nursery that has already started operating. Around 18,000 seedlings were planted there in 2021 and have since sprouted into decent-sized plants. The large-scale flooding that hit the region due to Typhoon Noru in early October 2022, however, left its mark: based on an assessment conducted by our local project partner, the Centre for Social Research and Development (CSR), the nursery’s 12,000 seedlings from 2022 suffered considerable damage because they were unable to develop sufficient roots in the short period available.

The reforestation work north of Hue, on the other hand, was successful with 15,000 fully grown, more mature mangrove seedlings. The small trees were planted along the coast in the course of 2022. The idea is that they will help make five hectares of coastal landscape more resilient to climate-related risks. →

Disaster prevention and resilience

STRENGTHENING THE ROLE OF WOMEN

The project also made progress with its second objective, namely strengthening vulnerable groups and giving women a more active role to play in disaster prevention. Groups of local volunteers were set up in five communities bordering the lagoon in collaboration with the regional Women's Union. Their task is to promote ideas on nature-based disaster risk reduction and resilience. They rehearsed suitable plays on the topic in October and November 2022. Theatrical education projects like these are an innovative way of reaching out to people and helping them to become more confident, active and self-assured.

The communities and the Women's Union are also collecting ideas on how to broaden income opportunities for local women. Alternative income streams help people to survive the most difficult phase immediately following disasters when "normal"

occupations, such as fishing and fish processing, cannot be carried out. The best ideas are being collected in a manual that will then be distributed to households near the lagoon. This will give families guidance on how to earn a living even in the immediate aftermath of a disaster.

Despite the weather-related setbacks, the "Strong roots, strong women" project is well on track to achieve its objectives. The floods have shown how important risk prevention is for people in the region and beyond. Along the coastlines, mangroves can make a key contribution as a nature-based solution – as we intend to demonstrate with our RISK Award project. The project is receiving scientific support from the University of Potsdam, which is evaluating the project outcomes. ●

In autumn 2022, many parts of central Vietnam, such as here in Hue, experienced widespread flooding after days of rainfall from Typhoon Noru.





The very first RISK Award in 2012 addressed the subject of early warning. Back then, the winning project came from Mozambique. Ten years later, the focus was again on early warning systems.

2023 RISK AWARD

Early warning for everyone

According to the United Nations and the World Meteorological Organization (WMO), half of all countries in the world do not have adequate multi-hazard early warning systems. There are huge gaps, in particular in the developing countries that are being hit hardest by climate change. This is even more of a disadvantage because the mortality rate associated with disasters in countries with inadequate early warning systems is eight times higher than in countries with extensive coverage. This is why the United Nations Office for Disaster Risk Reduction (UNDRR) and the WMO are aiming to ensure that in five years' time, everyone in the world will be protected by a disaster early warning system.

The Munich Re Foundation is supporting this project and dedicating the 2023 RISK Award to the topic of "Climate resilience and early warning". The call for applications was launched in October 2022 and we had received 202 applications by the end of December. These will now be analysed and evaluated by an international jury. We will be unveiling the next winner in the summer of 2023 and look forward to reaching another milestone in the field of disaster prevention. ●

[LINK](#)

→ [2023 RISK Award](#)

WATER AS A RESOURCE



With the help of local volunteers, Peter Trautwein installed fog collectors at four different sites. Women benefit most of all: having clean water in their houses makes day-to-day work so much easier.



“The friendliness and openness of the Bolivians towards me made the cooperation much easier. In my view, the human component is a decisive factor for the success of a fog net project.”

PETER TRAUTWEIN
Industrial designer and
head of the construction team in Bolivia

FOG NET PROJECT
CLOUDFISHER
in the Bolivian highlands

Alto Veladero, Bolivia

Project start in September 2019
and continuing until March 2023

Project resumed after COVID-19-
related interruption in July 2022

Construction of 14 new
CloudFisher Midi collectors with
a net surface area of around
350 square metres, completed
at four different sites

Project partners:
WaterFoundation, Zabalketa,
Instituto de Capacitación
del Oriente (ICO), Oswald
Foundation

FOGNET ALLIANCE

Since August 2017

Global partnership and network
of researchers, water experts
and international organisations
on fog net technology

Project initiators
and founding members:
WaterFoundation,
Munich Re Foundation



Clean drinking water is flowing at last! The patience of local people in the Alto Veladero region was frequently tested to the limit. After an interruption of more than two years because of the coronavirus pandemic, work on installing 14 fog collectors could finally begin in July 2022.

Alleviating water shortages

The sixth UN Sustainable Development Goal (SDG) is “Clean water and sanitation”. But we are a long way from achieving this goal, with millions of people still suffering from water shortages. Climate change is likely to exacerbate water shortages in the future, as conventional resources such as rain or groundwater are becoming increasingly scarce in some areas. Unconventional methods of water extraction – for example with the aid of the fog nets supported by the foundation – can alleviate this shortage. In arid regions where fog forms naturally, a large number of people across the globe could benefit from this technology.

In the rough terrain, construction work on the fog collectors was far from easy. Once the concreting work had finished, the steel structures could finally be erected and nets hung on them.



FOG NETS BOLIVIA

The collectors are in place

In the Alto Veladero region at the foot of the eastern Andes of Bolivia, there is virtually no rain at all from April to November. Springs and streams dry out, drinking water has to be rationed. After a long interruption due to the COVID-19 pandemic, our fog net project, funded jointly with the WaterFoundation and the Oswald Foundation, was able to resume its work in July 2022.

The principle of harvesting fog is simple, but extremely effective in regions with regular fog: wind pushes the humid air through the nets of the installed collectors. The air condenses, and small drops of water flow from the netting into narrow gutters that are directly connected to cisterns and the water supply system. The extracted water is of drinking water quality.

A good fog harvest requires many days of fog, with high humidity and strong winds. The Alto Veladero region meets these requirements. So far, the rural population has suffered from water shortages and polluted drinking water. The 14 new fog nets now provide relief. After all the material for the CloudFisher Midi collectors had already been stored in nearby Vallegrande since March 2020, construction could finally begin in July 2022. In close cooperation with the Spanish aid organisation Zabalketa and many committed employees of the Bolivian project partner Instituto de Capacitación del Oriente (ICO), the German industrial designer Peter Trautwein coordinated the construction work at the four different locations: Veladero School, Veladero Central, Saguintito and Sivingalito.

The work was not always easy in the rough terrain of the Andes at around 3,000 metres above sea level. Heavy equipment and all materials had to be brought in and the terrain cleared and levelled. Excavating the foundations in the rocky soil was also hard work. After extensive concreting work,

the steel constructions were erected, and the nets and gutters were put in place. Newly laid water pipes provided the connection to cisterns and the water supply system of the villages.

It was important to the project organisers that the villagers, local water committees as well as the teachers and students of Veladero School were closely involved in the project from the beginning. In future, they will look after the maintenance of the fog nets together with ICO. The new fog collectors directly supply around 370 people with drinking water, which is also used for agriculture and for watering the school garden.

The project is not yet finished: training for local organisations, a video production and a small water summit in Vallegrande are planned. But all project participants are already very proud that the people in Veladero can finally enjoy the benefits of clean drinking water from the fog collectors. ●

LINKS

- [WaterFoundation](#)
- [Zabalketa](#)
- [ICO](#)
- [Munich Re Foundation](#)

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



Orville Johnson (left), Executive Director of the Insurance Association of Jamaica, officially opened the ICII 2022.

INTERNATIONAL CONFERENCE ON INCLUSIVE INSURANCE – Jamaica

24 – 28 October 2022
250 participants from over 50 countries

Project partners: Insurance Association of Jamaica (IAJ), Microinsurance Network

LEARNING SESSIONS “Insurance for Development” – ILO online training

Online course (English and Spanish)
9 September – 21 October 2022
94 participants

Project partner: ILO Social Finance Programme

LEARNING SESSIONS “The need for growing resilient economies” – Zambia

7th Eastern and Southern Africa Regional Conference on Inclusive Insurance
13 – 15 July 2022, Livingstone
110 participants

Project partners: Zambian Microinsurance Technical Advisory Group (TAG), Financial Sector Deepening Zambia (FSD Zambia), FinProbity Solutions, Microinsurance Network, Pensions and Insurance Authority (PIA), Insurers Association of Zambia (IAZ)

MICROINSURANCE WITHIN THE FINANCIAL INCLUSION AND SUSTAINABILITY FRAMEWORK – Egypt

1st Microinsurance Conference Egypt
21 – 23 March 2022, Luxor
300 participants from 19 countries and 49 insurance companies

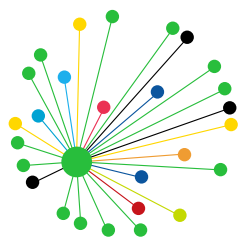
Project partners: Insurance Federation of Egypt (IFE), Financial Regulatory Authority (FRA)

The long road to greater protection

Low-income countries around the world continue to suffer from a yawning gap in insurance cover. This is despite the fact that it has long been shown that insurance makes a substantial contribution to the fight against poverty. The basis for successfully establishing insurance programmes for lower income levels lies in ensuring close cooperation between the various interest groups – governments and supervisory authorities, insurance providers, sales partners and tech companies. The International Conference on Inclusive Insurance and the supplementary Learning Sessions, which the foundation has been organising for many years, were once again the world's leading platform in 2022 for exchanging knowledge and networking on the part of the leading players.

Participants discussed how to reach more people using digital tools. An exchange of views and information between stakeholders from every inhabited continent was a key feature of the ICII.





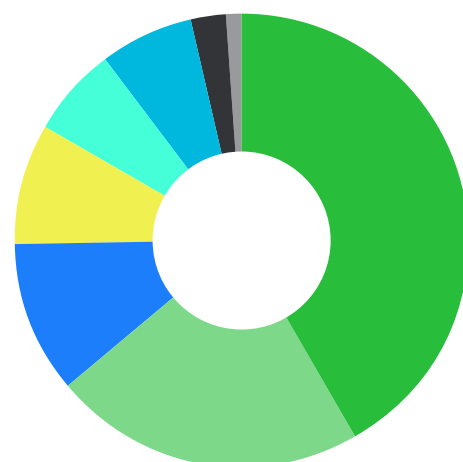
INTERNATIONAL CONFERENCE ON INCLUSIVE INSURANCE 2022

Expanded reach through partnerships

The sustainable development of inclusive insurance calls for considerable staying power on the part of all participants. It takes time before a market can reach critical size and products become available at an affordable price. A key to achieving greater reach lies in intensified collaboration and greater involvement on the part of governments and supervisory authorities.

Breakdown of participants at ICII 2022
by work sector

Insurance and finance industry	41.7 %
Donor agencies, development and international organisations	22.3 %
Consultants	10.8 %
Government and regulatory bodies	8.6 %
Microfinance and microinsurance providers	6.5 %
Academics	6.5 %
Media	2.5 %
Other	1.1 %



Source: Munich Re Foundation (2022)

Jamaica, the first Caribbean state to host the International Conference on Inclusive Insurance (ICII), was a very conscious choice for the event in 2022. It is a perfect example of the challenges that make it so difficult for smaller low-income countries to develop an insurance sector for their populations. Market size is a crucial obstacle, since Jamaica and other countries in the region have relatively small populations.

STANDARDISED LEGAL FRAMEWORK REQUIRED

The essential problem is that developing products for inclusive insurance is complex and expensive. In particular, no economies of scale can be achieved if the market is small and each country has its own legal framework. Also the eight islands of the East Caribbean Currency Union (ECCU) have recognised this fact and are striving to create a harmonised legal framework for insurance. The ECCU framework would offer significant cost benefits for cross-border business. However, it remains to be seen how a single regulatory authority would operate in practice.

A further difficulty is that many countries have still not implemented any regulations covering inclusive insurance. This list has also included Jamaica. However, Minister of Finance, Nigel Clarke, has announced that 2023 will see it become the first country in CARICOM (Caribbean Community and Common Market) to pass a law on the subject. “We have a vested interest in making insurance more widely accessible and available in Jamaica,” the Minister stated at the ICII. Let us hope that Jamaica’s initiative will be copied by many other CARICOM member states and associate members.

DEVELOPMENT PARTNERSHIPS BETWEEN GOVERNMENT AND COMPANIES

Along with harmonised standards, public-private partnerships (PPPs) represent another key way to promote inclusive insurance. Examples at the ICII 2022 illustrated that greater range can be achieved through cooperation between national governments and insurance providers, who can bring to the table their expertise on the subject. It is the task of the authorities to create an appropriate regulatory and consumer protection framework, along with the requisite infrastructure and, if necessary, to provide initial subsidies.

Public-private partnerships have demonstrated their benefit to society for many years now, as for example with insurance covers against natural disasters. The Caribbean Catastrophe Risk Insurance Facility (CCRIF), established in 2007, provides



“In 2023, we will table legislation on inclusive insurance. If we can’t have insurance available for the Jamaican citizen, there is a cost that society bears – either directly or indirectly.”

DR. NIGEL CLARKE
Jamaica’s Minister of Finance

countries in the region with protection against earthquakes, torrential rain and hurricanes. The German Society for International Cooperation (GIZ), also presented a Global Shield against climate risks at the ICII, one that is aimed at providing greater protection to vulnerable developing countries against increasing climate-related losses. This was officially announced by the seven major industrialised countries (G7) and the „Vulnerable Twenty“ (V20), an association of countries that are particularly threatened by climate change, at COP27 in Egypt. The objective is to strengthen the structures for Climate and Disaster Risk Finance and Insurance by making additional funds available for relief efforts. In addition, contingency plans for disaster events are intended to ensure that aid reaches those affected more quickly.

But the challenges are still enormous. Everyone involved is called on to intensify their involvement and to offer appropriate solutions for the billions of people around the world who are still without protection. International experts will meet again next year to discuss possible solutions at the ICII 2023, which will be held in Accra, the capital of Ghana. ●

LINKS

- [Microinsurance Network](#)
- [Munich Re Foundation](#)



The GAP drone spreads pesticides and water on the fields.
In future it will be used to detect pests at an early stage.

INCLUSIVE INSURANCE IN PRACTICE

A farm visit in Saint Elizabeth

Some 50 participants at the ICII 2022 were invited to join a field trip to the community of Saint Elizabeth in the southwest of Jamaica. Small farmers there are already seeing the benefits of insurance against crop losses.

GraceKennedy is one of the largest food manufacturers in the Caribbean and also an important provider of financial services. Its subsidiary, GraceKennedy Agro Processors (GAP), operates a 110-hectare farm in the parish of Saint Elizabeth. Together with the mining sector, agriculture is the most important employer in the region. The farm is leased to twelve farmers. About 150 more growers – most of them contract farmers – form a larger network that supplies products like root crops, vegetables and fruit to GAP. In return, GAP assists the farmers with soil analysis, and advice on the use of pesticides, irrigation and technology.

MANUAL LABOUR AND TECHNOLOGY

A tour of the sites underlined how much manual labour is still needed to grow Scotch Bonnet chilli peppers and callaloo – a type of spinach. Drones are also used, though, for example to spray pesticide more efficiently. This means that only around one third of the previous amount of chemicals now needs to be applied. There are plans to use drones with high-resolution cameras in future to detect pests at an early stage, something that would help reduce the use of chemicals even further.

The farmers also receive support from another source, namely GK Insurance, the GraceKennedy insurance arm. In 2021, the company launched the product “GK Weather Protect” in collaboration with the Jamaican Ministry of Agriculture. This is a

parametric insurance cover, where payout is triggered by fixed indicators, such as the amount of rainfall, duration of dry periods, or wind speeds. Payments are automatically triggered as soon as a defined event occurs. With a sum insured of US\$ 3,000, premiums of between US\$ 10 and 12 apply for hurricane risks, with US\$ 30 for extreme rainfall or drought. “The biggest concern of our farmers is to restart quickly after a disaster,” explained Jordan Tait, Assistant General Manager Commercial Lines at GK Insurance.

However, protection for small farmers in Jamaica is still in the early stages. Although premiums were paid in full by the government to support uptake in the beginning, only around 1,000 of a total of 200,000 GK contract farmers have opted for the insurance so far. The reasons for this include a lack of understanding of finance and insurance products, and a lack of trust in solutions of this kind on the part of the farmers.

With Weather Protect, GK Insurance has assumed a pioneering role in the field of inclusive insurance, launching the product despite there being no specific regulation for microinsurance in Jamaica. At the ICII, the country announced plans for an improved legal framework for microinsurance, which is to be enacted in 2023. This will make it easier in future to protect a greater number of small farmers against the consequences of extreme weather. ●



The first microinsurance conference, organised in Luxor by the Egyptian Insurance Association, welcomed around 300 participants.



Dr. Situmbeko Musokotwane, Minister of Finance and National Planning of Zambia, opened the 7th Eastern and Southern Africa Regional Conference on Inclusive Insurance.

LEARNING SESSIONS 2022

More innovation, greater consumer protection

Learning Sessions supplement the International Conference on Inclusive Insurance by examining regional or specific national topics, and involving local experts in the discussion. Face-to-face events were held in 2022 in Zambia and Egypt.

LINKS

- [Learning Sessions Zambia](#)
- [Learning Sessions Egypt](#)



Dirk Reinhard, Vice-Chair of the Munich Re Foundation, in conversation with Dr. Situmbeko Musokotwane, the Zambian Minister of Finance and National Planning.



At the conference, the Financial Regulatory Authority of Egypt (FRA) and the Tunisian Insurance General Committee (CGA) signed a cooperation protocol with the aim of increasing efforts to develop microinsurance.

Despite the fact that inclusive insurance has become more important in both African countries, many people have still been left out. As is so often the case, the main reasons are a lack of familiarity with products, inadequate knowledge about how insurance works, and not knowing where inclusive insurance can be obtained.

DISTRIBUTION USING DIGITAL CHANNELS

The Insurance Federation of Egypt has committed to accelerating economic development by working on a greater number of insurance solutions for small and medium-sized enterprises – which form the backbone of the Egyptian economy. It is also in favour of promoting sales using digital channels, which will also extend to administering the collection of premiums and claims settlement.

Digital solutions are one approach to developing inexpensive products and increasing the range. Sales partnerships between tech service providers, such as mobile phone companies, and insurance providers are a further promising method. Speakers from the Egyptian insurance industry and the supervisory authority emphasised that improving access to financial services, including insurance, is seen as a key component in Egypt's efforts to meet the UN Sustainable Development Goals (SDGs) by 2030. The government is currently preparing comprehensive legislation to regulate the sale of microinsurance products.

At the 7th Eastern und Southern Africa Regional Conference on Inclusive Insurance in Zambia, the experts called for ways to meet the needs of customers more effectively, for example by bundling life and health insurance. They said it was also important to create a positive customer experience, for example by designing products that delivered insurance benefits more frequently. Detailed regulations are currently in the pipeline in Zambia following enactment of the new Insurance Act in 2021. These are intended to facilitate innovation, yet without making any compromises in the area of consumer protection. The objective is to double the number of insured persons over the next five years to ten million. Development organisations will continue to play a key role, and the formation of an insurance culture will take time. But the Learning Sessions in Zambia and Egypt have shown that both countries are on the right track to grow the importance of inclusive insurance, thereby allowing it to have a positive effect in combating poverty.

The sticking point remains how to develop insurance products that are both profitable for the provider and offer added value for the insured. This is where the online training programme, Insurance for Development (part of the International Labour Organization's Social Finance Programme), comes in. A total of 94 insurance experts from more than 40 countries received training on business models and strategies in the field of inclusive insurance. ●

Inclusive insurance

DIGITAL CONFERENCES

International Conference
on Inclusive Insurance 2020

International Conference
on Inclusive Insurance 2021

DIGITAL LEARNING SESSIONS

ILO Online Training 2020

ILO Online Training 2021

Inclusive Insurance Business Models
for Africa 2021 – Mozambique

Inclusive Insurance in the
CEET region 2021

Digital Inclusive Insurance Solutions
Seminar 2021 – Zambia

Inclusive Agriculture 2021

ILO Online Training 2022

Learning Sessions 2011
London, United Kingdom

Learning Sessions 2012
Accra, Ghana
Mannheim, Germany

Learning Sessions 2013
Guadalajara, Mexico
Abuja, Nigeria

Learning Sessions 2014
Munich, Germany
Manila, Philippines
Douala, Cameroon
Dar es Salaam, Tanzania

Learning Sessions 2015
Lima, Peru
Livingstone, Zambia

Learning Sessions 2016
Cairo, Egypt
Mombasa, Kenya

Learning Sessions 2017
Kigali, Rwanda
Hanoi, Vietnam
Douala, Cameroon

Learning Sessions 2018
Bogotá, Colombia
Colombo, Sri Lanka

Learning Sessions 2019
Ulaanbaatar, Mongolia
Zanzibar, Tanzania

Learning Sessions 2020
Maroua, Cameroon

Learning Sessions 2022
Luxor, Egypt
Livingstone, Zambia

A LOOK BACK

How the foundation has promoted inclusive insurance

Each year since it was set up in 2005, the Munich Re Foundation has organised an International Conference on Inclusive Insurance (ICII). Over the years, it has become established as the world's leading international platform for launching insurance solutions for low-income groups in emerging and developing countries.



From its beginnings with some 100 experts from 25 countries discussing ways to provide insurance protection for vulnerable people in lower-income groups, the conference has expanded significantly and now has an enormous reach. Each year, it attracts up to 600 interested parties from around the world, with representatives from between 40 and 60 different countries. A high proportion of participants come from the Global South.

The ICII sees itself as a platform that brings together interest groups with a wide range of professional backgrounds. A key factor for market development is that the insurance sector and regulatory authorities figure prominently at the event. The accompanying regional Learning Sessions, which are held two or three times a year, supplement the conference and focus on national or specific regional challenges.

Interest in inclusive insurance received a further boost following the adoption of the UN Sustainable Development Goals (SDGs) in 2015. And the success of the segment is clear to see. According to the latest figures from the Microinsurance Network, around 377 million people in 30 countries took out microinsurance in 2021 (2020: around 253 million). This represents around 14% of the target population. But the figures also show that, despite all these efforts, far too many people remain both poor and unprotected. This is a great incentive for the foundation to continue providing active support for inclusive insurance. ●

A LOOK BACK

What experts think of the International Conference on Inclusive Insurance

In stakeholder interviews, we asked ICII participants of recent years to give us their feedback and opinion on the impact the conferences have had in their own countries.

[LINK](#)

→ [Inclusive Insurance](#)

The supervisory authority perspective



“Participation at the ICII enabled our authority to identify opportunities for improvement on each and every disposition of our regulation by comparing it against the standards implemented by other jurisdictions that had microinsurance or inclusive insurance regulation in force.”

CARLOS IZAGUIRRE,
Insurance Deputy
Superintendent of the
Superintendency of Banking,
Insurance and Private Pension
Funds Administrator, Peru

ICII 2017, Lima, Peru

The insurance perspective



"A few years ago, we had only a few thousand clients, but right now we have over a million. This development is a clear reflection of how connected we were with the ICII in terms of executing knowledge regarding market barriers, products, solutions and regulations."

FARZANAH CHOWDHURY
Managing Director & CEO,
Green Delta Insurance
Company Limited, Bangladesh

ICII 2019, Dhaka, Bangladesh

The perspective of an international organisation



"I think the ICII's biggest influence is seen on the hosting country. Jamaica in 2022 is a good example of this. They have been working on an inclusive insurance regulation for many years and as a result of the spotlight provided by the conference, the Finance and Public Service Minister has now committed to tabling the legislation for approval in 2023."

HANNAH GRANT
Head of the Secretariat at
Access to Insurance Initiative,
Switzerland

ICII 2022, Kingston, Jamaica

The perspective of a non-governmental organisation



"The ICII demonstrated to global stakeholders the opportunity and need for insurance in Bangladesh. I saw more discussion on collaboration, and resource opportunities started taking place for the microinsurance market development to tackle climate change and adaptation, as it was also the primary discussion at the conference."

MONIRUL HOQUE
Senior Manager Microinsurance,
BRAC Microfinance,
Bangladesh

ICII 2019 Dhaka, Bangladesh

CLIMATE CHANGE AND EDUCATION



“Without social justice, the transformation towards more climate protection will not succeed.”

PROF. REMO KLINGER
Eberswalde University
for Sustainable Development

UNIVERSITY COOPERATION
Eberswalde University
for Sustainable Development

Online Project Seminar for
the Master's Programme
“Global Change Management”

28 March — 1 April 2022
28 students

2022 DIALOGUE FORUMS	DIALOGUE FORUM SPECIAL Klimaherbst München	DIALOGUE FORUM SPECIAL M:UniverCity
<p>“Smart solutions for climate protection”</p> <p>3 online events, 3 hybrid events January — June 2022 560 participants in total</p> <p>Project partners: Catholic Academy in Bavaria, Klimahaus Bremerhaven</p>	<p>“Green city of the future — Increasing climate resilience and quality of life with nature-based solutions”</p> <p>Hybrid event, 19 October 2022 120 participants</p> <p>Project partner: Netzwerk Klimaherbst München e.V.</p>	<p>“Munich on its way to becoming a circular city”</p> <p>In-person event, 17 November 2022 80 participants</p> <p>Project partners: M:UniverCity and Strasczeg Center for Entrepreneurship at the University of Applied Sciences Munich</p>
ENERGY SCHOOL MUNICH	2022 CLIMATE ACADEMY	LECTURES ON FOUNDATION TOPICS
<p>October — November 2022</p> <p>Workshops “Energy with a future” at four Munich secondary schools</p> <p>Around 160 participating students</p> <p>Project partner: Green City e.V.</p>	<p>“Digitalization, energy transition and climate action”</p> <p>Stage I, online, 12 — 16 September 2022 170 participants</p> <p>Stage II, Kigali, Rwanda, 26 — 29 September 2022 30 participants</p> <p>Project partners: UNU-EHS, UNFCCC, ICLEI</p>	<p>30 lectures and speeches by Munich Re Foundation employees at universities and schools, at conferences and on other occasions with an audience of around 1,260 people</p>



At the Dialogue Forum in April 2022, held on site for the first time since the pandemic, presenter Andreas Unger debated with panel guests (from left) Heike Holdingshausen (taz Berlin), Julian Bischof (Institute for Housing and Environment – IWU) and Kai Horn (mobility platform highQ).

Smart solutions for climate protection

There is no shortage of concepts for ways to keep global warming in check. The problem is simply that practical implementation is difficult. At the 2022 Dialogue Forums, experts discussed the problems and challenges on the road to better climate protection. They also made suggestions on how to achieve greater climate protection on both a global level and on a small scale. The series of public events saw lively participation by the audience, who first took part online and then, from April 2022, were again able to attend on site in Munich.

2022 DIALOGUE FORUMS

Ten thought-provoking impulses for greater climate protection

We need to take a more ambitious approach and should see climate protection as an opportunity rather than a threat. Ten thought-provoking impulses from the expert discussions at the Dialogue Forums that could point the way towards climate neutrality.

LINKS

- [2022 Dialogue Forums](#)
- [Munich Re Foundation 2022 Münchner Klimaherbst](#)
- [Catholic Academy in Bavaria](#)
- [Klimahaus Bremerhaven](#)
- [Münchner Klimaherbst 2022](#)
- [M:UniverCity](#)
- [Strascheg Center for Entrepreneurship](#)





PROF. OTTMAR EDENHOFER
 Director and Chief Economist of the Potsdam Institute for
 Climate Impact Research and Director of the Mercator Research
 Institute on Global Commons and Climate Change, Berlin

1

We must expand emissions trading

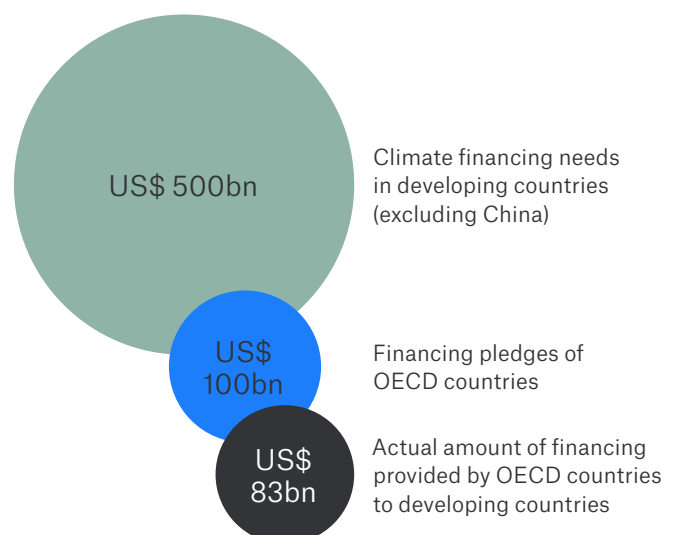
Carbon emission rights allow a state or company to emit a certain quantity of gases that damage the climate. Since 2005, emissions trading has been the key instrument used by the EU to reduce greenhouse gases from the energy industry and energy-intensive sectors. Climate scientists like Ottmar Edenhofer, Director of the Potsdam Institute for Climate Impact Research, argued that mandatory emissions trading should be extended to include the transport and building sectors. In Germany, these two sectors were responsible for roughly one third of all carbon emissions in 2021. Since this would increase the cost for transport and housing, any potential economic or social upheaval could be neutralised in the form of compensation payments.

2

We need a cross-border system for financial equalisation

"Phase out coal, otherwise we will be slamming the door shut on the 1.5-degree target," was one of the warnings from the Dialogue Forums. We should therefore assist countries that burn coal to make the transition by arriving at bilateral cooperation arrangements with them. "International partnerships are enormously important, but there is nothing even remotely to be found in the German Climate Change Act," was a complaint from Remo Klinger from the Eberswalde University for Sustainable Development. One possible arrangement would be if industrialised countries paid into an investment fund, which, in turn, covered a portion of the transformation costs for developing countries. The UN Green Climate Fund, whose aims include a reduction in greenhouse gases and adaptation to the consequences of climate change in emerging and developing countries, is moving in this direction. However, with financial commitments of just US\$ 11.4bn, it has nowhere near enough funds.

Annual climate financing gap in the Global South (status 2020)



Data basis: Climate Policy Initiative (2022) and LSE (2022)



“Even if hydrogen is obtained from ‘green’ production, it should only be seen as one building block in the overall energy transition.”

PROF. CLAUDIA KEMFERT
Head of the Energy, Transportation and
Environment Department of the German Institute
for Economic Research, Berlin

3

No climate neutrality without green hydrogen

“We need green hydrogen if we are to achieve climate neutrality,” argued Sopna Sury, a member of the Executive Board at energy provider RWE. Green hydrogen, which is obtained from renewable energy, is used as a storage medium and has a broad range of applications in industry and in the transport sector. Germany plans to double its electrolysis production for hydrogen to ten gigawatts by 2030. This seems a relatively small amount when compared with the target capacity of 200 gigawatts for solar energy. Claudia Kemfert therefore emphasised that, even if hydrogen is obtained from “green” production, it should only be seen as one building block in the overall energy transition. “The triad of renewable energies, energy saving and hydrogen is the right way to go,” agreed Andreas Kuhlmann, Chief Executive of the German Energy Agency, dena.

4

The green economy requires a societal transformation

For a long time, companies considered climate protection primarily as a cost factor. But they have been rethinking their attitudes for a number of years, as Wolfram Günther, Saxony’s Minister for Energy, Climate Protection, Environment and Agriculture, confirmed: “The economy has taken the lead in the expansion of renewable energies and is often already much further ahead than politics.” But he reminded the audience that the path to the green economy needed to involve all of society. Alongside the consumption of resources and reducing emissions, he said this change included issues relating to living and working conditions, consumption patterns and product life cycles. Many start-ups have developed ideas on this. It is now the responsibility of politicians to promote macrosocial change by creating the right framework conditions.

WOLFRAM GÜNTHER
Saxony’s Minister for Energy, Climate Protection, Environment
and Agriculture, Dresden





United Nations Sustainable Development Goal (SDG) 13 calls for immediate action worldwide to combat climate change and its impacts.

5

Don't forget the SDGs during the green transformation

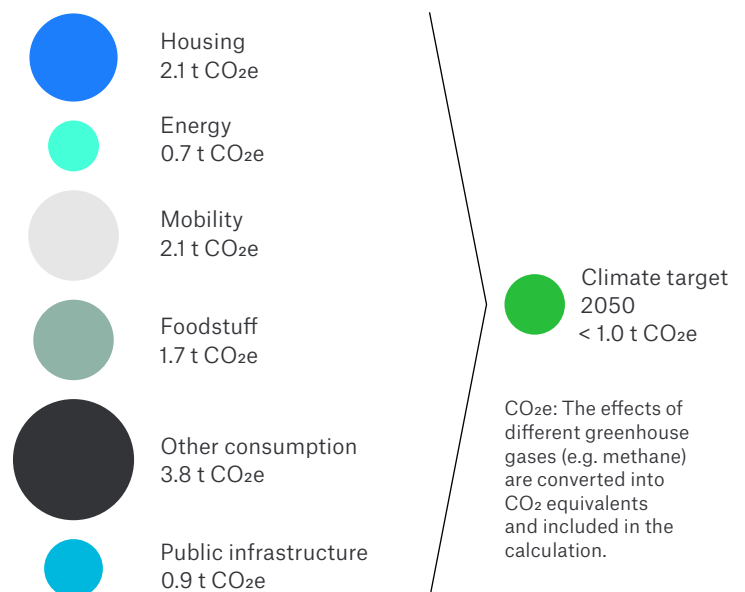
Andreas Kuhlmann, Chief Executive of the German Energy Agency, warned that, if we want to achieve a sustainable world, we need to consider more aspects than just climate change on the road to greater sustainability. He recommended placing greater emphasis on the UN Sustainable Development Goals (SDGs). The required transformation of the economy and society needs to be assessed in terms of its economic, ecological and social aspects, he added. One goal should be to empower the poorest and most vulnerable to protect themselves against climate-related disasters. For example, in the form of measures to adapt to climate change, or through climate risk insurance covers.

6

We need to rethink our consumer behaviour

A major obstacle on the road to greater climate protection is our own apathy. We basically know that it will not work without us making some sacrifices. "When it comes to private consumption, each person could ask themselves what they really need, and if there is a more sustainable alternative," was one recommendation from Julian Bischof, a researcher at the Institute for Housing and Environment (IWU) in Darmstadt. The same applies to nutrition, he said. The impact of a meat-heavy diet is roughly equivalent to an additional tonne of carbon per person per year. A first step here would be to change taxation on foodstuffs, whereby animal foods would be taxed at the standard VAT rate of 19%, while plant-based products would be zero-rated. Vegetarian options would then be more attractive. In this way, we could reduce meat consumption, and by extension carbon emissions, by putting pressure on consumers' wallets.

Average annual per-capita carbon footprint in Germany



Source: Konsum und Umwelt: Zentrale Handlungsfelder, Umweltbundesamt (2020)

7

We need negative emissions

The current global climate protection goals are not adequate to limit the Earth's warming to 1.5 degrees. We are a long way away from net-zero emissions. A further problem is that, in agriculture and in certain industrial sectors, it will be virtually impossible to eliminate all emissions by technical means. "Based on everything we know today, there is no scenario to keep global warming below two degrees without negative emissions," explained Dirk Messner, President of the German Environment Agency (UBA). There is a wide range of possible measures to reduce carbon, as Andreas Oschlies from the GEOMAR Helmholtz Centre for Ocean Research in Kiel outlined. Firstly, on a physical level, by removing carbon at source, compressing it and pumping it into safe storage sites (carbon capture and storage). There is also the chemical approach, whereby carbon dissolved in the oceans binds with finely ground basalt rock. And finally biologically, through reforestation, since biomass is nothing more than carbon that has become solid. However, up to now, there has been no broad political will in this context. In fact, there is strong opposition – to CCS for example – in certain sections of the population and in the scientific community.

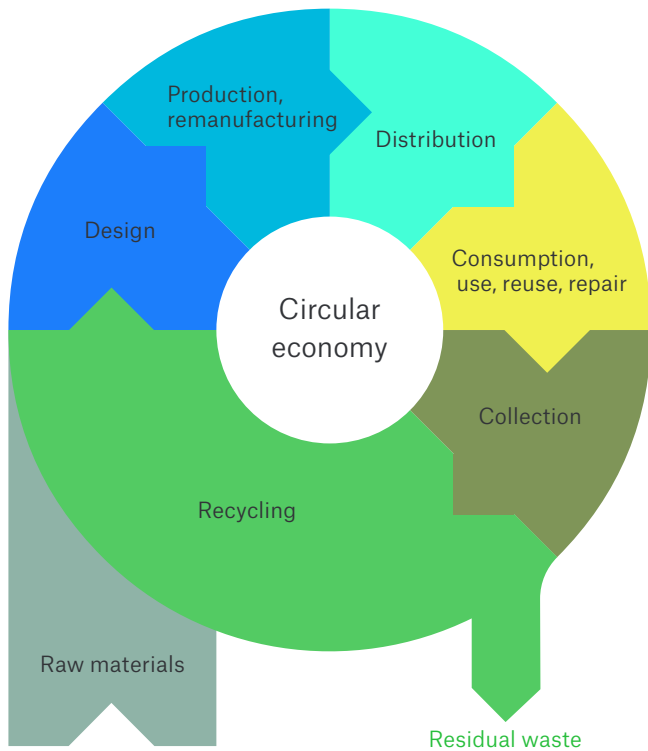
8

The battle for our planet will be won in the cities

Conurbations are responsible for roughly three quarters of global carbon emissions. At the same time, local authorities, as the providers of local self-government, are taking on many roles in the area of climate protection. They are pushing ahead with climate protection projects, guiding planning for climate-friendly construction areas and applying for subsidies. And, as service providers and motivators, they are in a position to influence carbon emissions both directly and indirectly, said Nadine Derber, Divisional Manager for Municipal Climate Protection at the Climate Protection and Energy Agency Baden-Württemberg. Obstacles have proved to be bureaucratic barriers and conflicts of interest, for example when deciding between greener policies and individual traffic requirements. Local authorities also have to comply with relevant regulations, such as building law requirements, and they have no power to amend these themselves. Munich city planner, Elisabeth Merk, underlined that greater control was needed at the higher legislative level.

Panel guests in May 2022 (from left to right): Prof. Andreas Oschlies (GEOMAR Helmholtz Centre for Ocean Research), Prof. Anita Engels (University of Hamburg), presenter Dr. Marlene Weiß (SZ Munich) and Prof. Dirk Messner (German Environment Agency – UBA).





Source: Own diagram
Data basis: European Union

9

We must aspire to create a circular economy

A circular economy is one where economic growth is decoupled from the consumption of resources by using valuable raw materials in a permanent cycle. Elements of the concept include not allowing waste to occur in the first place and reusing resources. Günther Langer, circular economy expert from the City of Munich's Department for Climate and Environmental Protection, is convinced that we will not achieve climate neutrality without a circular economy. He believes that, particularly in the construction sector, which is responsible for around 38% of all carbon emissions worldwide, the reuse of construction materials would make a huge difference. However, this approach is currently 30–40% more expensive than traditional construction methods. For that reason, a government subsidy would be needed, he said, along the lines of the measures introduced to promote greater energy efficiency.



PROF. MEIKE JIPP
Director of the Institute of
Transport Research at the German
Aerospace Center (DLR), Berlin

10

We need to look beyond the valley of tears

In Europe we are facing the greatest structural change in industrial history and will need to impose shortages on ourselves if we are to achieve the climate goals. Meike Jipp, Director of the Institute of Transport Research at the German Aerospace Center (DLR), recommended placing more emphasis on the benefits to be had from this sacrifice. Realising, for example, that increasing carbon prices will spur technical advances, and that we will experience more reasonable electricity prices in the future with entirely renewable energies. There are many obstacles on the road to climate neutrality, she admitted, but if we are to master the difficulties we face on our way through the valley of tears, we must also offer people some positive prospects for the future.

2022 CLIMATE ACADEMY

Energy transition and digitalisation – obstacles and opportunities regarding sustainable development

In 2022, our annual Climate Academy was held in two parts: in mid-September as a series of online webinars, and at the end of September with 20 selected participants attending in the Rwandan capital, Kigali. The key discussion points were how a fair energy transition could be organised in the Global South, and the role that digitalisation could play.

In Kigali, two participants discussed ways in which a fair energy transition could be organised in the Global South.



The Academy has been designed as a platform for exchanging knowledge and promoting dialogue between representatives from science, the media, the private sector, civil society, and the United Nations. The objective is to develop political memoranda with scientifically based participatory approaches.

It is beyond doubt that the energy demand around the world is set to increase. The simple fact that the Earth is home to an increasing number of people, who all require energy to live, is explanation enough for this. Current research expects that the global population of 8 billion will increase to around 11 billion by the end of this century. Most of this population growth is likely to occur in Africa. If additional energy requirements were to be met using fossil fuels alone, any discussion on climate protection would be futile. We would then be heading for an increase in global warming of more than 4°C.

CLIMATE PROTECTION FORCES US TO SEEK NEW WAYS FORWARD

But following new energy paths is easier said than done. By way of example, standard electricity networks have only a limited capacity to integrate a large number of small, decentralised input sources of renewable energy. The networks are designed to take electricity from a manageable number of power stations and then distribute this energy across a wider area.

A further obstacle is the investment cost for solar energy, which remains unaffordable for many population groups in emerging and developing countries. That is why around 600 million people in rural sub-Saharan Africa still depend on diesel generators to meet their electricity needs. In such a situation, governments, NGOs and other players need to offer financial incentives to drive forward an energy switch. Otherwise, it will be well-nigh impossible to meet the target adopted at the 2021 UN High-Level Dialogue on Energy of connecting a further 730 million people to electricity grids by 2030, and of providing 2 billion people with clean cooking options, i.e. ways to cook without using wood or charcoal. There is also the problem that some countries in the Global South possess significant fossil resources. They would need to be compensated for sacrificing this source of rapid and profitable economic development. →



“The understanding of what ‘just’ means has to be there for all actors. Starting with the government, electricity providers, local political entities, grid operators and ending with the consumer. This is an immense task!”

STELLAH DORCAS TSITSI
SHUMBA
University of Cape Town

LINKS

- [UNU-EHS](#)
- [UNFCCC](#)
- [The Climate Academy 2022 Stage I](#)
- [The Climate Academy 2022 Stage II](#)
- [ICLEI](#)



“The potential of digitalisation for sustainable urban planning is immense. If we exploit this better, we will make much faster progress both in climate protection, but also in achieving the SDGs.”

HRISHIKESH BALLAL
Geodesignhub, Ireland

Any justifiable hopes that the energy transition will succeed are based on digitalisation. It is opening up new possibilities that were unimaginable just a few years ago. Particularly in the context of urbanisation and energy supply, digital technology is the means of choice for achieving greater efficiency. For example, it allows electricity demand, production and storage capacity to be precisely coordinated. In addition, many areas that remain unexplored today in terms of energy technology – especially rural areas – could leapfrog the fossil phase and begin using a sustainable and climate-friendly system straight away.

COORDINATING VARIOUS PLAYERS

Smart grids will fundamentally change electricity generation and supply. At the same time, the number and range of stakeholders involved will increase if the large, centrally controlled grids are replaced with smaller solutions. There will then be no clear distinction between producers and consumers. Especially in rural, unexplored regions, smart grids can help turn passive consumers into what are termed “prosumers” – parties who generate energy themselves and can feed surplus amounts into the grid.

For this to work efficiently, there needs to be close cooperation between everyone involved, including mobile phone providers, local authorities, representatives from the field of development cooperation, IT and digitalisation experts, and, of course, the electricity producers themselves. Interdisciplinary and multilateral partnerships was a phrase that was repeatedly heard at the Climate Academy. To pave the way for such partnerships, institutions like the SDG Center for Africa, the African Institute for Mathematical Sciences (AIMS) and the Africa Center of Excellence in Energy for Sustainable Development (ACE-ESD) were represented.

As the outcome from the Academy, the participants formulated two political memoranda, with detailed technical documentation highlighting the relevant case studies. The target groups for these policy briefs are city and local authorities on the one hand, and the international UN Climate Dialogue on the other. Thanks to our cooperation partner ICLEI, a global network of local and regional governments for environmental protection and sustainable development, and the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat, the outcomes from the Academy are sure to reach the right people. Further activities are planned to strengthen the networks launched through the Academy and to initiate new projects. ●



The role of digitalisation in the energy transition was also examined in some lively discussions with local representatives, including Enok Nyorekwa Twinoburyo (Senior Economist at the SDG Center for Africa – on left in right-hand picture).



30 participants from around the world were invited to attend the 2022 Academy in Kigali.

The Climate Academy is a three-year project that we organise with UNU-EHS in collaboration with the UNFCCC. More partners can join each year, as ICLEI did in 2022. Webinars provide information on our topics and are open to the public. In separate closed workshops and during a week of seminars on site, we discuss issues and work out solutions with a previously selected group of participants from the Academy.



ENERGY SCHOOL MUNICH

Workshops on improving climate protection

The climate crisis has long since arrived in Germany. Through the workshop modules of the Munich Energy School, the non-profit organisation Green City e.V. seeks to sensitise young people to the consequences of climate change and promote sustainable development.

Munich Re Foundation has been supporting the Munich Energy School for many years. In 2022, we focused on supporting the three-day workshop module, “Energy with a future”, which is specifically directed at secondary school students. Some 160 youngsters from four Munich secondary schools attended the workshops.

Before leaving school, students need to find out about their career prospects. The various workshop modules take this into consideration by combining career information with the topic of climate change. The sessions are intended to raise awareness of the consequences of climate change and sustainable energy use and, at the same time, promote environmentally conscious behaviour. A focus is placed on the future of both the young people themselves and that of our planet by making the students think about their own choice of career and about educational opportunities in the field of sustainability. The programme also includes a visit from an energy consultant and excursions to sustainable enterprises.

After three days filled with career options and discussions, the young students agreed that the workshops had opened up new perspectives for them. For example, the fact that you do not have to work in a typical profession related to ecology or the environment to make a contribution to environmental protection: every profession can become greener! ●

UNIVERSITY PARTNERSHIPS AND LECTURES

Climate change, risk management and sustainability in tertiary education

In 2022, we held a week of intensive seminars as part of the master's programme in Global Change Management at the Eberswalde University for Sustainable Development. In addition, employees of the Munich Re Foundation presented information on our topics in the form of lectures and presentations and by contributing to discussion at schools, universities, associations and conferences. ●

[LINK](#)

→ [University projects
and lectures](#)



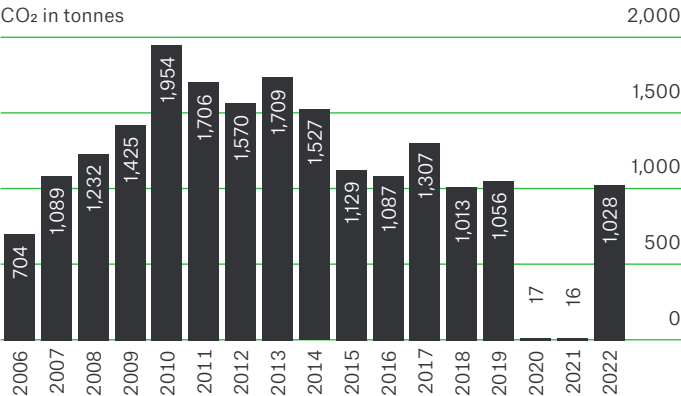
With knowledge comes responsibility! In keeping with this motto, we are involved in events, presentations and workshops in the tertiary education sector.



ENVIRONMENTAL
PERFORMANCE 2022

The carbon footprint
of the Munich Re Foundation

In 2022, gross carbon emissions generated by the Munich Re Foundation came to 1,028 tonnes. Foundation events accounted for approximately 995 tonnes (97%) of this figure. In contrast, relatively little of the total came from business operations (office electricity, heating) and business trips – 14 tonnes (1%) and 19 tonnes (2%) respectively.



EMISSIONS SINCE 2006
We have been offsetting our CO2 emissions every year since the foundation was established. Our goal is to further reduce CO2 emissions.
Source: Munich Re Foundation, own diagram (2023)

Coronavirus restrictions were relaxed during 2022, which meant that many in-person events could be held on site. This resulted in an increase in carbon emissions of 1,012 tonnes compared to the previous year. The foundation purchases emission certificates to offset the emissions produced by the events it holds. Carbon emissions from business trips made by foundation staff and those generated by its office activities are offset by Munich Re.*

* For the calculation of office emissions, 2.8 tonnes of CO2 per employee (FTE) were calculated. This is the result of the Munich Re Corporate Responsibility Report 2016.

[LINK](#)
→ [Munich Re Foundation Environmental performance](#)

CARBON OFFSETTING IN 2022

More efficient cooking stoves reduce wood consumption and improve the quality of life in India

During 2022, we supported the ClimatePartner project “Cleaner cooking stoves in India” by purchasing carbon certificates. In many of the world’s low-income regions, families still generally cook on an open fire in enclosed rooms – and this is also the case in the project region. The level of efficiency is low, with large amounts of energy being lost.

The project region is the state of Maharashtra in Western India. As many as 85% of households here still use traditional stoves. This method of cooking consumes a lot of wood and results in high exposure to smoke inside the houses, something that has a particularly negative impact on the health of women and children. The portable stoves, which are distributed as part of the project, are made from cast iron, require less firewood, and reduce both indoor air pollution and carbon emissions. The project is supplying several thousand households with efficient stoves. This will achieve an annual reduction in carbon emissions of approximately 50,000 tonnes. The smaller amount of firewood required will also help reduce deforestation in the region. That, too, will have a positive effect on the protection of forests and wildlife.

The portable and more efficient cooking stoves require less firewood, and reduce both indoor air pollution and carbon emissions.



INCLUSIVE INSURANCE

Access to Insurance Initiative (A2ii)

AM Best

Bank of Jamaica

C&W Business

Caribbean Catastrophe Risk
Insurance Facility Segregated
Portfolio Company (CCRIF SPC)Center for the Economic Analysis of
Risk (CEAR), Georgia State UniversityCentre for Financial Regulation and
Inclusion (Cenfri)

Denis Garand and Associates, Canada

German Society for International
Cooperation (GIZ)Feed the Future Innovation Lab
at UC Davis

FIDES

Financial Sector Deepening Zambia
(FSD Zambia)

Financial Services Commission

FinProbit Solutions

GK Insurance

GK Weather Protect

Guardian Group

ICMIF

IDB

ILO

Inclusive Development Forum (IDF)

Insurance Association of Jamaica (IAJ)

Insurance Federation of Egypt

Insurers Association of Zambia (IAZ)

International Actuarial Association
(IAA)International Finance Cooperation
(IFC)International Fund for Agricultural
Development (IFAD)

Jamaica National Group

Katie School of Insurance and
Risk Management
at Illinois State University

MicroInsurance Centre at Milliman

Microinsurance Network (MiN)

Microinsurance Technical Advisory
Group (TAG)Munich Climate Insurance Initiative
(MCII)Pensions and Insurance Authority
(PIA) Zambia

Phase 3 Productions

Pioneer Insurance

Sagcor

UNDP Insurance and Risk Finance
FacilityUnited Nations Capital Development
Fund (UNCDF)

University of Lausanne

University of Liverpool

World Food Programme (WFP)

York University

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 (CSR D)UP Transfer GmbH at the University
of Potsdam

ONG Inclusiva

Global Resilience Partnership

All India Institute of Local Self-
Government (AIIISG)CLIMATE CHANGE AND
SUSTAINABILITYUnited Nations University, Institute
for Environment and Human Security
(UNU-EHS)United Nations Framework Convention
on Climate Change (UNFCCC)

ICLEI

Green City e.V.

Eberswalde University for Sustainable
Development (HNEE)

M:UniverCity

Strascheg Center for
Entrepreneurship (SCE)

Network Klimaherbst Munich e.V.

Catholic Academy in Bavaria

Klimahaus Bremerhaven



Own Publications

2021 REPORT
Annual report of the
Munich Re Foundation
German and English



→ 2021 REPORT

REPORT
International Conference
on Inclusive Insurance 2021
Digital Edition



→ REPORT
International Conference on
Inclusive Insurance 2021

Own journal articles

INSURANCE
Renate Bleich, Dirk Reinhard,
Christian Barthelt
*Managing climate risk with
private insurance*
in Development and Cooperation
(D&C) — Disasters and
humanitarian relief, 2022

→ ARTICLE

INSURANCE
Dirk Reinhard
Inclusive insurance for everyone
in Development and Cooperation
(D&C) — Sustainable business
and sustainable environment,
p. 26, 2022

→ ARTICLE

INSURANCE
Dirk Reinhard
*Ensuring resilient economies
through insurance*
in Asia Insurance Review, 2022

→ ARTICLE

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P. Budryte, O. Habeeb Okunola,
T. Abdul-Kareem, I. Abubakar,
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Insights*, Chapter 15, 2022

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M. Moure, S. Sandholz,
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Journal of Integrative
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Journal of Integrative
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*The influence of
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Abdul-Lateef Balogun,
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Journal of Integrative
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17–37, 2022

→ ARTICLE

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Parveen Kumar
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A case study of the Indian Lesser
Himalayan region, Darjeeling*
Journal of Integrative
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39–64, 2022

→ ARTICLE

Internal foundation issues

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Christian Barthelt
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Project Management

Renate Kramer
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Julia Martinez
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Munich Re Foundation
Königinstrasse 107
80802 München, Germany
Telephone +49 (89) 38 91-88 88
info@munichre-foundation.org
www.munichre-foundation.org
Letters: 80791 München,
Germany

Editorial team
Munich Re Foundation:
Christina Mayerhofer
Christian Barthelt
Renate Bleich
Dirk Reinhard
Natalie Horstmann

Andreas Schuck, Munich

Editorial support
Prof. Dr. Peter Höppe

Design
Keller Maurer Design,
Munich

PICTURE CREDITS

Peter Trautwein, Aqualonis GmbH
Cover, pages 20, 22

Oliver Jung
Pages 1, 37, 42

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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

Munich Re Foundation
Königinstrasse 107
80802 München, Germany
Telephone +49 (89) 38 91-88 88
info@munichre-foundation.org
www.munichre-foundation.org
Letters: 80791 München, Germany