



January/February

24 January
Kammerspiele matinee
"Climate change and
justice – We need a
global deal", in cooper-
ation with Munich's
Kammerspiele Theatre,
Allianz Kulturstiftung,
Süddeutsche Zeitung
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25 February
Dialogue forum "Micro-
finance – A way out
of the poverty trap?"
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19 January
Dialogue forum
"The outcome of the
World Climate Summit –
Icy times for climate
protection?"
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March

18 March
Dialogue forum
"Consuming at the
expense of others –
Growth at any cost?"
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5–7 March
Conference "Micro-
finance – Giving people
the opportunity to find
their own way out of
poverty?" in association
with the Tutzing
Evangelical Academy and
the KfW Entwicklungsbank
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April/May

29 April
Dialogue forum
"Development 2.0 –
The crisis as
an opportunity!"
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21 March
Kammerspiele matinee
"Environmentally forced
migration – The water is up
to our necks" in cooper-
ation with Munich's Kammer-
spiele Theatre, Allianz
Kulturstiftung, Süddeut-
sche Zeitung
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June/July

25–30 July
Summer Academy at Hohen-
kammer Castle "Protecting
environmental migrants:
Creating new policy and
institutional frameworks"
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25–30 July
5th International
Conference on fog, fog
collection and dew
in Münster, Germany
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August
Decision to extend
the Mozambique project
until the year 2012
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25–26 October
3rd CEEMA expert
workshop: “Migration,
displacement and
environmental change:
Developing a toolkit
for policymakers”
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6–8 December
World Climate Summit
COP 16 in Cancún –
The Munich Re Foundation
was represented with
two projects (CEEMA and
K&G) in Mexico
Pages 10 and 24



16 September
Presentation of the study
“Global yet equitable –
Combating climate change,
enabling development” in
Berlin, Germany
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9–11 November
6th International
Microinsurance
Conference in Manila,
Philippines
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The earth remains in turmoil. Severe earthquakes in Haiti and Chile, a heat-wave causing massive forest fires in Russia and the hundred-year flood in Pakistan were very clear warnings in 2010 that disaster prevention and management are more urgent than ever. The Munich Re Foundation supported aid projects in Haiti and Pakistan and appealed for donations at home in Germany. However, without sustainable projects for disaster prevention, the aid offered remains incomplete (reports begin on page 26).

The demand for microinsurance is greater than ever. Today, more than 140 million people all over the world are covered by such policies. And the interest in our annual international microinsurance conference, which took place in November last year in Manila, is also constantly growing. Five hundred and twenty attendees from 50 countries came to discuss the latest trends and solutions. The conference location had been chosen with deliberation; the Philippines are a shining example of the successful establishment of microinsurance policies (reports begin on page 6).

The area of microloans has also been crowned with repeated success for many years. However, the strong growth of this financing tool also has its dark sides, as could be seen at our "world in flux" dialogue forums. In many lands, microfinancing organisations fell into difficulties during the global economic crisis. Important insights gained during the dialogue forums on these problems and other subjects revolving around the economic crisis and development have for the first time been summarised in a small brochure titled "Positionen" (see page 14). Munich Re CEO, Nikolaus von Bomhard, shared his thoughts with us on these subjects in an interview (page 18).

Fortunately, negotiations at the COP 16 World Climate Summit held in Cancún at the end of the year did not fail, even though a great deal still remains to be improved. The foundation was able to take the opportunity of the conference to distribute its "Global yet equitable" study. The conclusion of the study gives grounds for hope: the 2°C target can be achieved if it proves possible to establish fair and sustainable processes worldwide (report on page 10). The know-how is there, now it is up to the politicians to take action.

Thomas Loster
Chairman

In August 2010, one-fifth of Pakistan's surface area was covered by flood waters. Clean water is the most important commodity in the days following a disaster. The lower photograph shows flood victims in Thatta in the Sindh province struggling to collect water brought by a water truck. The Munich Re Foundation supported drinking water projects in Pakistan and Haiti in 2010.



Microinsurance

Why science is important

Glenn W. Harrison and
Richard D. Phillips

Two basic questions plague the movement to develop sustainable microinsurance products. One is the “business case” for insurers to provide the product and the other is the “value of the product” to the poor.

It is possible to make money without providing value, just as it is easy to provide value to the consumer without making a profit that would attract capital funds on an open market. The trick is to balance these, or to optimise the value to the consumer and also meet the constraint of business sustainability. Science can help answer these questions. The business case is one area that has been extensively studied by scholars in many settings in developed countries, and much is known about the actuarial, product design, and financing aspects of profitability. This is not to say that the experts, or the scholars, get it right every time, but that they provide systematic guidance for specific instances.

Although microinsurance, like any insurance market, is buffering random shocks, there are challenges. For example, microinsurance has the habit of producing unexpectedly fat tails due to the small sample realisations and the lack of actuarial data. Second, the target market for microinsurance, low income households, are price sensitive. Thus transaction costs due to distribution and underwriting expenses, or to loss adjustment expenses, are often viewed by potential consumers as making the product undesirable even if consumers in other markets would consider these as payment for services provided by the insurer. Even worse, the lack of information available in these markets means insurers often are forced to make compromises in the design or price of the product. The solutions to these problems could come from many sources including technology, the governance and organisational form of the insurer, or in more clever design of the contracts themselves. Fortunately, the academic literature in each of these areas is rich.

With the help of a micro-loan, P. Yasawathi from Sri Lanka was able to set up her own small dress-making business. A micro-insurance policy covers the credit, protecting her against the loss of her livelihood.



Alo Rani from Bangladesh supports herself and her family by weaving reed and bamboo products. A microfinancing institute helps her to increase the productivity of the small family business.





Richard D. Phillips heads the Institute for Risk Management and Insurance at the Georgia State University of Atlanta. His transdisciplinary research work focuses on the area of financing and insurance.

Glenn W. Harrison is Director of the Center for the Economic Analysis of Risk (CEAR) at the Georgia State University, Atlanta. He conducts research in the fields of experimental economics, law and economic systems, international trade policies and environmental policies.



The question of value to the consumer is a tough one. When someone buys any insurance product, they give up a certain premium now in return for the subjective expectation that if some risky, uncertain, and bad thing happens in the future, another entity will honour the contract to make them partially or completely whole. To determine if this product is viewed *ex ante* by the consumer as a good thing, we need to know consumers' attitudes towards risk, the rate at which they discount future payments in relation to immediate premium payments, their subjective beliefs about the occurrence of the bad event, and finally their subjective beliefs as to whether the insurer will indemnify them and, if so, the amount of the payment. In a developing country context, this last point is particularly important as corruption is often a way of life and failure to pay is a very real concern. This is a vexing behavioural mix, which scholars barely know how to define even in the cleanest of environments – a laboratory experiment.

Why do we care about these details? If someone wants to claim that their efforts are doing good, then how can we judge? In other words, we need to know these specifics in order to determine the benchmark that should be used to judge success. For example, one metric often used to judge success is product take-up. But low take-up might be the rational thing for a consumer to do given their preferences and beliefs: we simply cannot say without knowing all of these inputs to their decision.

But now suppose we use science to investigate these inputs and discover the subjective beliefs of the target consumers are systematically wrong. In this case, there are immediate things one can do to design products that will generate more value as science has produced ways to help individuals generate more accurate beliefs. Doing so allows us to revise the product strategy and our expectations of what is possible in the market, and ultimately update the benchmark used to define success.

The problem of establishing reasonable benchmarks to measure success in microinsurance is particularly hard. Unlike microfinance, where loan repayment and productive activity are relatively objective metrics of evaluation, the insurance product itself might generate subjective benefits to consumers even if “nothing happens”. After all, the product is helping to manage risks that might not happen, and indeed are typically lower-probability events. Even if the unfortunate events do occur, and the product works as advertised to the consumer, it might not affect the majority of consumers, so in a certain sense the “average consumer” might not reap any pecuniary return from the product. How does one reliably measure a success in that setting? Simply asking people will not help, since after the fact one is likely to get responses that reflect the net pecuniary cash flows involved, rather than concerns before the fact. The only way to do this is to understand the decision to adopt or reject the product, and to be very clear about the distributional nature of the welfare impacts. Again, science can help address this problem as welfare economics is a standard methodology in the economist toolkit.

In sum, science has already helped to define what we mean by good microinsurance products. If it can be used to realise the goal of designing and implementing those products, and in a way that is demonstrable in different settings, science will not just be important for microinsurance, it will have been essential.

6th International Microinsurance Conference

Making use of growth opportunities



As in the years before, the 6th International Microinsurance Conference was again received with great interest. Five hundred and twenty participants from 50 countries – 30% more than last year – gathered from 9 to 11 November 2010 in Manila to talk about the latest trends and developments.

The conference location Manila had been chosen very prudently, as the Philippines are a shining example of how to establish microinsurance policies successfully. For three days, more than 80 speakers introduced innovative and sustainable microinsurance concepts and presented the latest case studies and research findings. No fewer than 15 countries were represented by the respective supervisory authorities of the insurance industry, underlining an increasing interest and commitment on the part of the official bodies. This can be considered a success for the plan of the International Association of Insurance Supervisors (IAIS) and Access to Insurance Initiative (a2ii) to introduce guidelines for the regulation of microinsurances.

In his opening speech, the Philippine Minister of Finance, Cesar V. Purisima, emphasised the important role of the microfinancing industry and of microinsurance in reaching the poorest of the poor. He reminded the audience that appropriate framework conditions, support mechanisms and education programmes are still required for successful implementation.

Top: Craig Churchill, Chairman of the Microinsurance Network, and Thomas Loster, Chairman of the Munich Re Foundation, presenting the "Protecting the Poor" microinsurance compendium to Philippine Finance Minister, Cesar V. Purisima, who opened the conference.

Bottom: The most diverse aspects of innovative and sustainable solutions were addressed in presentations, work groups and podium discussions. Richard Phillips (2nd f. r) conducts scientific research on the effects of microinsurance.



With over 500 attendees, the 6th International Microinsurance Conference in Manila was the largest ever held in the world on this subject. Eighty speakers from more than 60 organisations reported on the latest findings.

For further information on this issue:

Microinsurance Conference

www.microinsuranceconference.org/2010

Due to the diversity of its players, models and products, the microinsurance market in the Philippines is unique and serves as a role model for other countries. The range of products includes not only the classic insurance segments such as life, health, credit and property, but also numerous special cases (see page 9). So far, some 2.9 million people have made use of the diverse products available. The Philippine government was highly praised for its efforts to reach the potential client base of 35 million customers.

Innovative products and cost-effective distribution channels will be necessary to make maximum use of the economies of scale and to ensure sustainable development. Experts estimate that 140 million people worldwide have so far taken out microinsurance policies, particularly in Africa and Asia. The market potential is estimated to be as much as three billion people. Microinsurance can therefore make a very valuable contribution to the fight against poverty. A recent study on weather index insurances concluded that governments and donor organisations must assume a more active role if the sector is to be promoted. It also suggested that valuable products and insurance services must be created as part of the entire service package.

At the academic level, the analysis of microinsurance markets was the centre of attention. The objective was to examine the economic patterns of the consumers and hence to develop customised solutions. "Many challenges still lie ahead, for example the adaptation of microinsurances to the requirements of climate change," explained Dirk Reinhard at the closing of the conference, which he had organised as Chairman of the Conference Steering Committee and project leader for the Munich Re Foundation in cooperation with the microinsurance network. The conference was also supported by the Association for International Cooperation (GIZ), the Federal Ministry for Economic Cooperation (BMZ), the Philippine Ministry of Finance and the Center for the Economic Analysis of Risk (CEAR) at the Georgia State University. The next conference will take place in November 2011 in Rio de Janeiro.

Field trip on the Philippines Insured in the farthest corners of the earth



Despite the country's enormous economic growth, the Philippines are one of the poorest countries in Asia. However, the island state boasts a well developed micro-finance sector and, in recent years, a unique programme for micro-insurances.

The Philippines are a world full of paradoxes: unspoiled nature and bustling metropolitan areas, bitter poverty and extreme wealth go hand in hand. Despite the economic upswing, every third Filipino qualifies as poor, 44% of the people live on less than two dollars a day. Microfinance banks were founded back in the 1960s. Over the decades, a tight network of providers has been knit that caters to the poor throughout the country. Today, the island state occupies the pole position in the microfinance sector and offers a broad range of products in the area of microinsurances.



Top: Loans are paid back in instalments of approximately €0.40 at weekly meetings in the villages. The repayment rate is 99%.

Bottom: A young woman proudly presents her health insurance card. She is well covered for less than one US dollar a week. In the case of an emergency, she will receive treatment without any additional fees.

“Very speedy claims settlement is important to us. Most of those affected get their claims payment from us after just one day.”

Jaime Aristotle B. Alip,
Managing Director, CARD MRI

Some 20,000 cooperatives are in operation in the country. One of them, the CARD MBA cooperative, started up in 1986. It is one of the largest microfinance service providers in the world with more than 1,000 contact points and reaches people all over the archipelago, even on the far-flung islands. CARD MBA today has over 1.2 million members and covers a total of approximately five million people including their family members. As in all other countries around the globe, it is chiefly the women who are involved in microfinance transactions. They can take out a microloan to secure a livelihood. The average loan provided by CARD is €75. It is often used to set up a small business such as a vegetable stand or food stall. The loan is repaid at weekly meetings taking place in the communities, usually in instalments of €0.40, of which €0.10 goes towards a pension fund. When a person retires, a handsome sum is paid out, approximately 50% of the entire premium paid by a member, making life as a pensioner a lot more pleasant.

The repayment rate of the microloans stands at an incredible 99%; similar rates have also been reported in India and Bangladesh. Microloans for funerals are also widespread. For Filipinos, a dignified funeral is extremely important, but poor people can hardly afford the associated costs, placing a heavy burden on the bereaved.

In the area of microinsurances, the property segment is slowly gaining momentum, whereas the classic segments such as life (credit life) and health insurance dominate the business. A woman, for instance, can obtain health insurance for 1,800 pesos (approximately €30 a year) including medical examinations and hospital stays. Presentation of the insurance card suffices for treatment, no additional fees are charged. The premiums can be staggered to ensure that the weekly rate lies well below one euro. The cooperatives are demand- and customer-oriented, and certainly do not suffer from a lack of imaginative ideas.

Typhoon microinsurance

The Philippines are exposed to the entire range of natural hazards: earthquakes, volcano eruptions, storms, landslides and floods. The country is afflicted by sometimes as many as 20 typhoons every year. CARD MBA takes on these challenges and covers property damage. Buildings are insured up to the equivalent of €190, an amount that can be very helpful in the case of an emergency. In urgent situations such as a catastrophe, members of the cooperative receive “supply packages” containing food and other relief supplies. This makes the country one of the few states in the world in which natural disasters are covered by microinsurance. “Climate change is a great challenge for us,” explains Jaime Alip, CEO of CARD MRI, the mother company of CARD MBA. “Our weather has already become extremely strange; the number of typhoons is increasing in warmer climates.”

Prompt damage regulation

Rapid payment in the case of a claim is a major CARD MBA concern. “Especially in the case of death in the family, the relatives need money quickly,” says Jaime Alip. “We try to regulate claims within 24 hours and to pay out in cash.” Whenever papers are missing, regulation can take up to three days. “Even in the most complex of cases, the insurance holders will receive their insurance payout within five days of submitting a claim. This so-called 1-3-5 regulation is special and increasingly serves as an example for other societies,” said Alip proudly.

CARD MBA and RIMANSI organised field trips ahead of the Microinsurance Conference. The participants experienced how microloans and microinsurance play out in practice.

CARD MBA
www.cardbankph.com/
wp_cardbankph/mba/

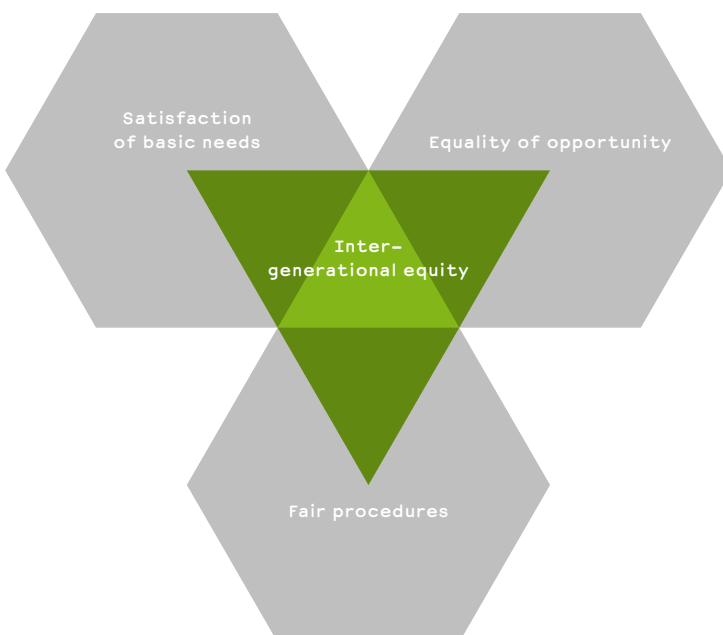
Climate change and justice

A chance for the 2°C target

Triangle of justice

The triangle illustrates the cornerstones of human rights and the aspect of sustainability. Difficult negotiations such the World Climate Summit can only succeed if they are based on the principle of fair processes.

Source: IGP, 2010



Climate protection is in everyone's interests. The "Global yet equitable" study co-funded by the Munich Re Foundation demonstrates that global warming can by all means be curbed.

A sustainable solution is only possible if the right to economic development remains intact in the developing countries. Together with the Potsdam Institute for Climate Impact Research (PIK), the Institute for Social and Development Studies at the Munich School of Philosophy (IGP), and the Catholic relief agency Misereor, the Munich Re Foundation presented a new study in Berlin on 16 September 2010 investigating the link between climate change and global poverty. Praise for the study came from Sigmar Gabriel, SPD Chairman and former German Minister for the Environment, Nature Conservation and Nuclear Safety, and Hans-Werner Sinn (President of the ifo Institute for Economic Research in Munich).

The "Global yet equitable" report has appeared at just the right time, given the slow progress of negotiations at the world climate summits and September's UN conference on achieving the Millennium Development Goals. The study adopts an interdisciplinary approach, addressing the issue from a range of economic, ecological and development policy perspectives. The authors explain how climate change can be curbed in a way that is fair while integrating the interests of the countries primarily concerned.

Sustainable solutions are urgently required as weather extremes are steadily increasing and causing significant damage. The people in poor countries are generally more vulnerable, buildings and infrastructure less resistant to these threats. The Munich Re NatCatSERVICE statistics clearly corroborate this trend. 84% of the deaths caused by global weather catastrophes since 1980 took place in the poorest countries of the world, although statistically speaking more catastrophes occur in the rich countries.

Equal rights to development

The study puts forward a host of recommendations and addresses current challenges. Ethicists at the IGP highlight the different aspects of justice involved. One central requirement, for example, is the preservation of people’s fundamental right to meet their basic needs and of equal opportunities. Moreover, inter-generational equity must be recognised as a basis for action (sustainability).

Current world climate negotiations will only succeed if all countries have an equal say in matters and if some form of compensation can be worked out between the principal causers of climate change and those who bear the brunt of its consequences. This condition could not be fulfilled at the climate summit in Copenhagen in 2009. At that time, a small group of 25 countries had tried to draft a follow-up agreement to the Kyoto Protocol but were not successful. In this connection, Sigmar Gabriel drew comparisons with the successful security policies of recent years and decades. Only negotiations involving all countries had made this possible

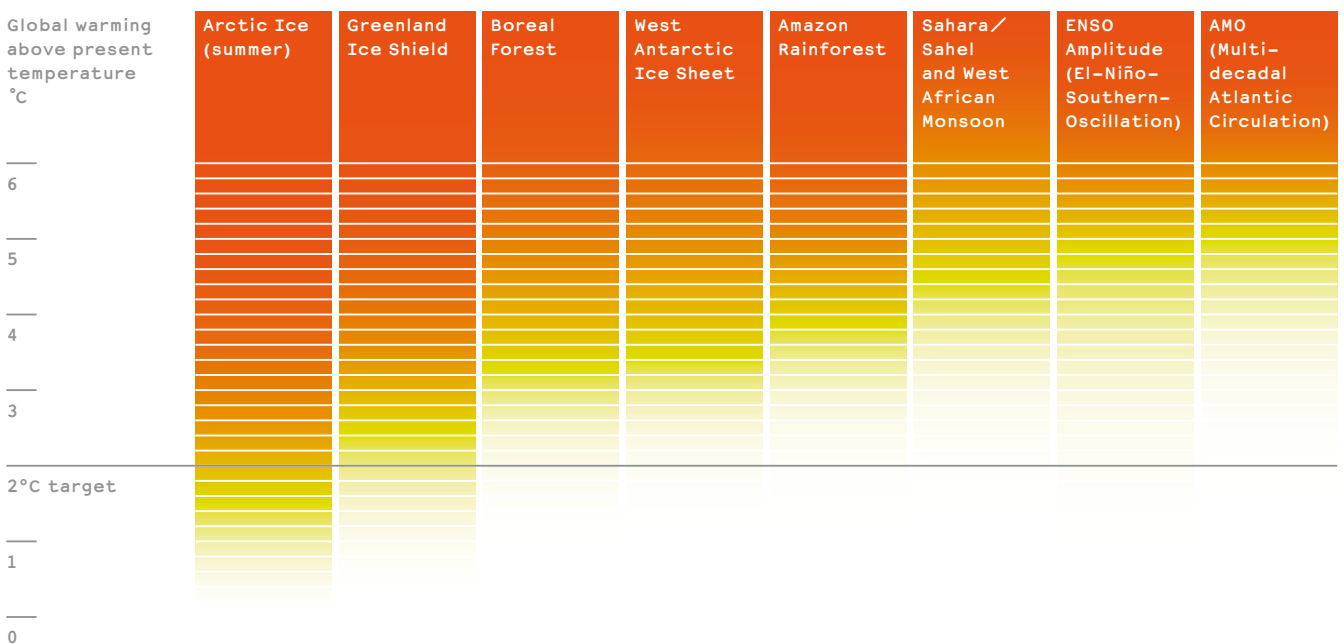
More than one way to achieve the 2°C target

If it does not prove possible to keep global warming below 2°C at the most, our climate system is in danger of reaching the tipping point. Phenomena such as El Niño, the ocean currents and monsoon are all interlinked. If one part of the system gets out of control, this could have dramatic effects. The study shows that there are more ways than one of achieving the 2°C target set by the Intergovernmental Panel on Climate Change (IPCC). The experts in Berlin agreed that solutions must be found for the remaining reserves of fossil resources.

Red alert for the blue planet

The chart of the Intergovernmental Panel on Climate Change (IPCC) shows the rate of temperature increase (red) at which irreversible damage for certain parts of the world climate system is to be expected. Over recent years, the ice caps at the North Pole and Greenland have already melted dramatically.

Source: Lenton, Schellhuber et al., 2008, 2009, 2010





Top: Pope Benedict XVI studies the “Global yet equitable” book given to him by a bishop in Rome.

Bottom: The findings of the “Climate change and justice” project were presented at numerous events. Scientists Harald Lesch and Saleem Huq (middle) in discussion with the authors of the project report, Johannes Wallacher (left) and Ottmar Edenhofer (right), at the Münchner Kammer-spiele symposium.

Hans-Werner Sinn and Sigmar Gabriel believe that these resources will continue to be used despite the on-going climate debates. However, that will make it difficult not to overburden the “storage space” in the atmosphere (750 Gt of CO₂) for greenhouse gases. Only global emissions trading can ensure that the prescribed emission-reduction targets can be met. Poor countries could even profit from such a system. Given the same emissions rights for all people, they could profitably sell their unused emissions rights to industrialised countries

Ottmar Edenhofer, chief economist at PIK and chairman of the IPCC Working Group III (Mitigation), is in favour of improving research into technological solutions such as carbon capture and sequestration (CCS). Even if the chances of this technology succeeding in central Europe are considered to be fairly low, it will be difficult to achieve the 2°C target without it. In combination with bioenergy, it may even be possible to achieve “negative emissions”: reductions that are urgently needed in this growing global economy.

Although Sinn and Gabriel were sceptical about this point, everyone agreed that the key lies in renewable energies. Calculations show that the costs of avoiding climate change are highest if renewable energies are not sufficiently promoted. However, if this is to succeed, one thing, in particular, is essential: political solutions will only be possible if the process used to find them is fair and equitable and if the fight against climate change is more closely linked with the fight against poverty.



Global yet equitable – Combating Climate Change, Enabling Development

The study has been published in book form by the C. H. Beck publishing house of Munich (ISBN 978-3-406-60656-4). The book is available in bookshops and can be ordered while stocks last from the Munich Re Foundation. An extended English version is planned for 2011.

www.klima-und-gerechtigkeit.de

Talking to Robin Bronen Campaigning for climigrants



Robin Bronen, human rights attorney from Alaska, has been working with the foundation since the Summer Academy of 2008. She is fighting for the Inuit people of North America who are losing their homelands due to climate change.

We met with Robin Bronen during her stopover in Munich. For years now, the US human rights attorney has been campaigning for the Inuit of Alaska, who are being forced to migrate because of climate change.

Robin, you have been working for many years now with the Yup'ik Eskimos in Alaska. Many people there are being forced to leave their homes due to climate warming. Do you have any news from the region?

Robin Bronen: Yes I do; both good and bad news. The weather has been completely freakish this year again. First of all, sleet brought Anchorage to a complete standstill, and then there were record snowfalls. November 2010 had the highest precipitation since meteorological recording began in 1917. The Polar ice cap has shrunk even further; in 2010 it reached its third-lowest level within the last 30 years. North of the Arctic Circle, the carcasses of 100 walrus were discovered on the shore. The indigenous people are certain that climate change is at the bottom of all this. On the other hand, the people of the Newtok community are now being relocated. At last something is happening.

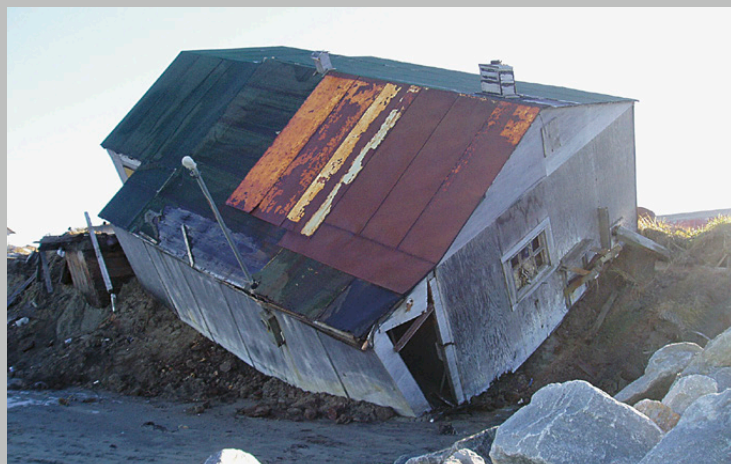
And what is happening exactly?

R. B.: The new infrastructure is just beginning to take shape. This summer the authorities have built a landing stage for boats and they are presently building houses for the climigrants. It took a while, but things are at last starting to move forward.

Does this mean you can now lean back and relax?

R. B.: Far from it. Tomorrow I'm flying to the Carteret Islands in Papua New Guinea. Climate change is forcing the island peoples to migrate as well. The sea level is rising distinctly and flooding has increased. In the coming years, 1,700 people are to be relocated to the neighbouring island of Bougainville. Not only will they lose house and home, but also their native soil. From this point of view, the Arctic and the South Pacific are closely related. They are both the most vulnerable communities threatened by global warming.

The permafrost in Shishmaref in Alaska is gradually melting away. The buildings are losing their foundations and sinking into the ground. Hunting too has been impacted, adding an increasing threat to the existence of the Inuit.



Dialogue forums 2009/2010

World in flux — The forgotten billions

In 2009 and 2010, the worldwide economic crisis dominated politics and the media, overshadowing other central topics of global significance. Reason enough for the Munich Re Foundation to examine how the future prospects of international development policies are faring under these circumstances.

The United Nations Millennium Development Goals had already been ambitious before the outbreak of the economic crisis. Today they seem to have grown even more remote, as the emerging economies have been particularly hard hit by the crisis. Exports and revenues from foreign exchange declined sharply while the costs for credit and food imports rose at the same time. Because the industrial countries were so completely preoccupied with helping the global financial sector back on its feet with multibillion aid packages, development policies were forced onto the sidelines.

As in previous dialogue forums, leading experts once again provided insights into current issues and clarified common misconceptions during this year's round of five evening sessions. Interactive discussions with the audience on the options and opportunities for sustainable solutions were a significant feature of the dialogue forums which are, above all, aimed at concerned members of the public seeking an open dialogue with experts.

The debates cover a large range of issues: How has the global crisis impacted development? How can the growing poverty in developing countries be combated effectively? Can the United Nations succeed as a collective in slowing down climate change? How much economic growth does the world need, and how much can it cope with? The following pages focus on three issues that elicited controversial discussions: climate change and its time constraints, the limitations of the "microfinance" concept, and the power or powerlessness of the G20 states.

Reputed experts welcomed questions from the public during the dialogue forums. The photograph was taken at the evening event on microfinancing filmed by the Bavarian state television channel.



Further important topics addressed by the 2009/10 dialogue forums can be found on our website and in the "Positionen" brochure, which can be obtained from the Munich Re Foundation.

Munich Re Foundation
www.munichre-foundation.org/
 StiftungsWebsite/
 Projects/
 DialogueForums/

World in climate change Time is running out

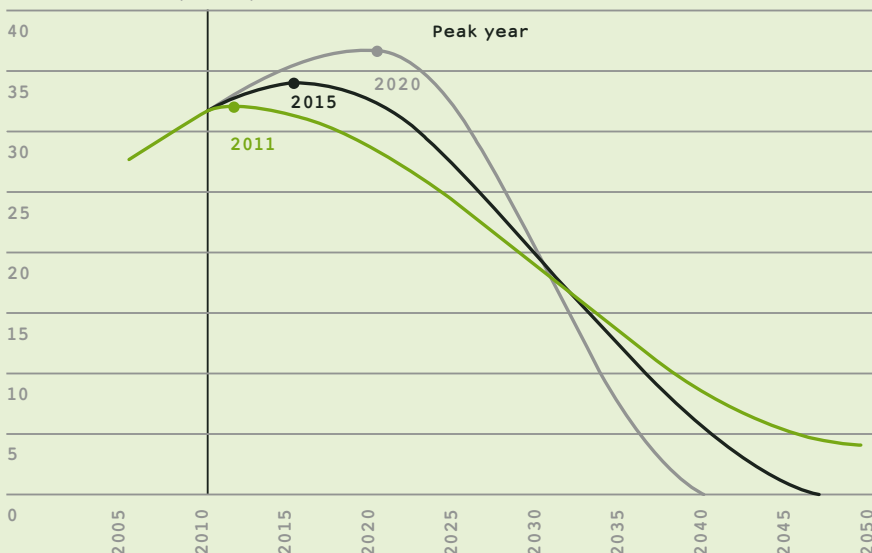
If the climate problem is to be brought under control, global emissions of greenhouse gases must be reduced, where possible before 2015. Any later than this and the global community will have to emit approximately 5% less CO₂ annually. Basing reduction obligations only on the annual threshold defined by the Kyoto Protocol is not enough, says Hans Joachim Schellnhuber, director of the Potsdam Institute for Climate Impact Research (PIK). "By applying the collection basket principle, where everyone only pledges as much as doesn't hurt, we won't make any progress."

Instead, we must look the truth in the eye and face the brutal reality of physics: either we develop a political concept for the reduction of CO₂ emissions or we deal with the consequences. The turnaround measures then required would be urgent and would have to be geared to long-term considerations. If the human race continues as before, the earth's atmosphere could heat up by approximately 4°C. However, the scientists say that an increase of only 2°C at most is manageable.

The failure of the Copenhagen climate summit in December 2009 showed that the UN process is not capable of bringing about a realistic agreement with binding targets.

Yet it is critical that the world community act now to set the upper limits on greenhouse gas emission in the coming years. This requires that a fair and just distribution of reduction obligations be found. As the industrial states have already exceeded their CO₂ budgets for historical reasons, they must purchase carbon credits from the developing countries that have not used yet up their budgets. The income from emissions trading can then be used to finance the promotion of environmentally friendly economic structures and boost development.

Global emissions (Gt CO₂)



Different ways to reach the 2°C target

A CO₂ emission level of 750 Gt would offer a 67% probability that global warming can be kept below 2°C. Different methods of ensuring that CO₂ emissions do not exceed the worldwide upper limit of 750 Gt between 2010 and 2050 are conceivable. The later emissions fall, the more abrupt the annual reductions are required.

Maximum reduction rate
 — 3.7% per year
 — 5.3% per year
 — 9.0% per year

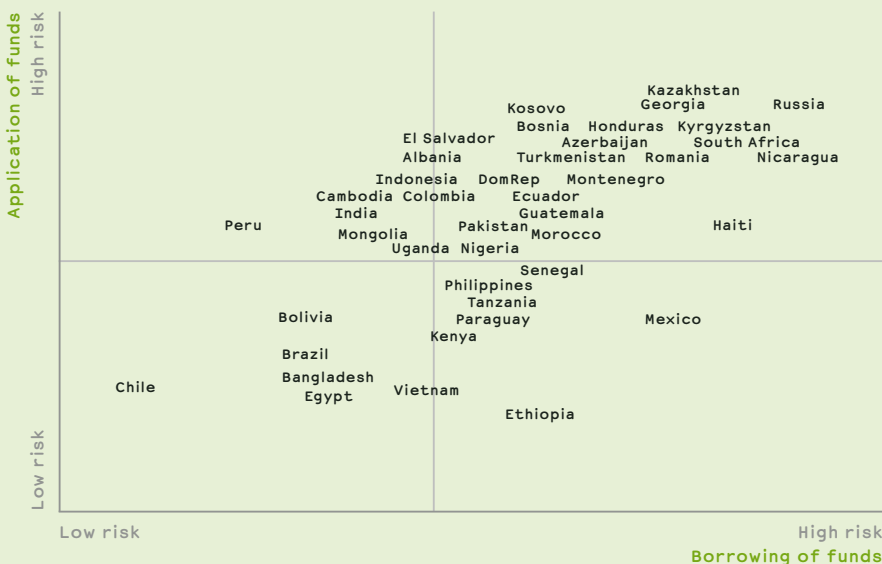
Source: WBGU, 2009

Microfinance A crisis-proof concept?

Sources variously estimate that there are approximately 10,000 microfinance institutions in operation around the world from which more than 100 million people receive microloans. This has certainly far exceeded the expectations of Muhammad Yunus, the founder of the microfinance concept. Despite its many success stories, Bernd Balkenhol, International Labour Organization (ILO), Geneva, believes that microfinancing alone cannot change the balance of power in developing countries. An all-round approach embracing not only loans but also savings deposits and payment transactions would, however, enhance the relevance of microfinancing for development policies.

At the same time, it is important to bear in mind that microloans are not a general substitute for social security systems. Waiting until countries such as Mali or Burkina Faso have enough funds to build up such systems is also not a solution. Until then, microfinancing can fill the gap, for example in the form of loans that would allow people to pay for ambulance transport or a doctor in an emergency.

Despite the many successes reported, it must not be forgotten that the microloan market has its limitations. Not all institutions have developed positively; there have even been bankruptcies in countries such as Morocco, Nicaragua and Pakistan. Excessive growth and the fierce competition resulting from over-capacity are making life difficult for some providers. The financial crisis has also left its mark. Nevertheless, the majority of institutions mastered the turbulences quite well, despite fears to the contrary. One thing became evident as a result, however: sustainable approaches in microfinancing suffered much lower losses than business models based on speculation.



Vulnerability of the microfinance sector during financial and economic crises

Every microfinance institution (MFI) is at risk when economic framework conditions deteriorate. The assets side of the balance sheet, for example, is affected by growing customer debt or increased unemployment. On the liabilities side, difficult refinancing is particularly significant for an MFI. The risks for MFIs vary from country to country, whereby Chile and Russia form the counter-poles.

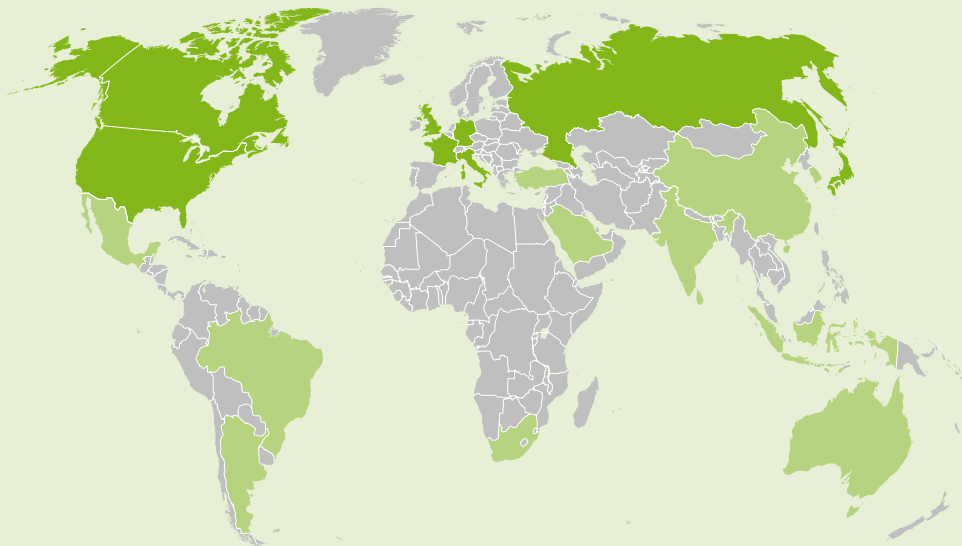
Source: USAid, 2009

From G8 to G20 – North meets South

The Group of Twenty of the major industrial and emerging countries today forms the central forum for international economic coordination. The group addresses the issues of finance market regulation, national debt and global growth strategies. It replaced the G8 as the most powerful economic forum. The fact that the largest developing countries are included in the forum increases the acceptance of the group but also makes it more difficult to come to binding agreements.

- G8 member states
- G20 member states

Source: Strategic Trends 2010
(Center for Security Studies, ETH Zurich)



G20 Model or makeshift concept?

Approaches to development policies have so far not been sustainable. They are sometimes even destructive and can lead to deadlock situations, claims Axel Berg, Chairman of Eurosolar Germany. Only an integrated approach, he says, will help gain control over the problem areas of energy, growth and climate. However, no such approach is in sight. Berg is further concerned that "the UNO conducts debates but rarely follows up with hard deeds, the World Trade Organization (WTO) usually sides with the winners."

And the Group of Twenty (G20) of the world's major industrial and emerging nations has also not yet succeeded in finding the key to a possible distribution of burdens. This is not only because the industrial countries are defending their vested interests but also due to stonewalling by the major emerging countries.

Nevertheless, the G20 should not be vilified as a general rule. The group is an important step towards global democracy, as two-thirds of the human race now sit together at one table whereas at the G8, only one-sixth of the world community was represented. Its greatest weakness is that global governance means relinquishing a certain degree of sovereignty. This is a tedious process from which rapid progress cannot be expected. Against this background, Berg considers the G20 to be a makeshift solution. However, it would be fatal to wait until a perfectly functioning structure is formed. The alternative is to form a coalition of the willing in which countries that are in a similar position forge partnerships and work together towards fair trade conditions. However, this too brings up the question of global acceptance.

“A change of thought has to take place”

Talking to Nikolaus von Bomhard

Nikolaus von Bomhard, CEO at Munich Re since 2004. He has been a member of the foundation's Executive Board since its formation.

The Munich Re Foundation has for the first time compiled the findings of the dialogue forums in a brochure. Under the title “Positionen”, the new publication presents important, and sometimes also controversial, opinions. We talked to Nikolaus von Bomhard, CEO of Munich Re and member of the foundation's Board of Trustees, about these issues.

At the beginning of “Positionen”, globalisation expert Franz Josef Radermacher claims that “we need growth for ten billion people if we want to fight poverty on a sustainable basis.” Can growth really resolve the problem of poverty?

Nikolaus von Bomhard: Economic growth can, in any case, contribute to resolving the problem of poverty. The growth of the Chinese economy has saved approximately 600 million people from poverty over the last three decades. The challenge involved in doing this is to increase peoples' material living standards without damaging their health and the long-term basis of their livelihoods by ruthless exploitation of resources or environmental destruction. A further crucial aspect is the sustainability of economic growth. In Ireland, for example, the strong economic growth of the past years created a substantial increase in prosperity for many people but was unfortunately not permanent, as it was based on a debt bubble.

A more intensive use of renewable energies would help slow down climate change. Climate research scientist Mojib Latif believes that restructuring the economy away from fossil resources has long been possible. Why are politicians reacting so slowly?

N. v. B.: The politicians are faced with a dilemma: in order to create incentives for long-term, efficient restructuring of the energy infrastructure, the climate-damaging effects of fossil fuels would have to be taken into consideration, for example by imposing a CO₂ tax. If this policy were to be implemented in the short term, it would cause a substantial burden for economic growth, depending on the amount of the additional tax payments, and could only be coped with within narrow restraints. The same applies to financial incentives for renewable energies: they are currently being financed by the taxpayer but the benefits will only be felt by future generations.

How can the outbreak of a new financial and economical crisis be prevented? Have companies and financial service providers learned the right lessons?

N. v. B.: Crises will never be completely unavoidable. However, such grave upheavals as experienced during the recent crisis could jeopardise the stability of our economic and social system in the long term. For this reason, it is everyone's duty to draw the right consequences from the crisis. It will not suffice to trust in an amendment of the regulatory framework conditions. They can only reduce the probability of another financial crisis to a certain extent. Regulation will always lag behind the dynamics and innovative power of the financial markets. It is more important that a change of thought takes place among all the economic players. Not every business transaction that is legal and profitable in the short term is morally acceptable and advisable for the company or the national economy on a long-term basis. Some of the players in the financial industry must make a bigger contribution to this change in attitudes.

At the end of "Positionen", the former MP for the German Social Democrats and energy expert, Axel Berg, protested that the G20 was not nearly enough to cope with the global challenges of our times. Do we need new organisations?

N. v. B.: During the financial crisis it became evident that international cooperation can indeed succeed in the face of global challenges: internationally coordinated reactions from governments and central banks have helped contain the economic impact of the crisis. And within the framework of the G20, progress on the regulation of the financing system has already been made. What is more important than new, global organisations is that the politicians resolutely address the problems of our times in the interests of the human race. This does not always require global solutions. Leadership by providing an example is an important contribution in an often disoriented environment.

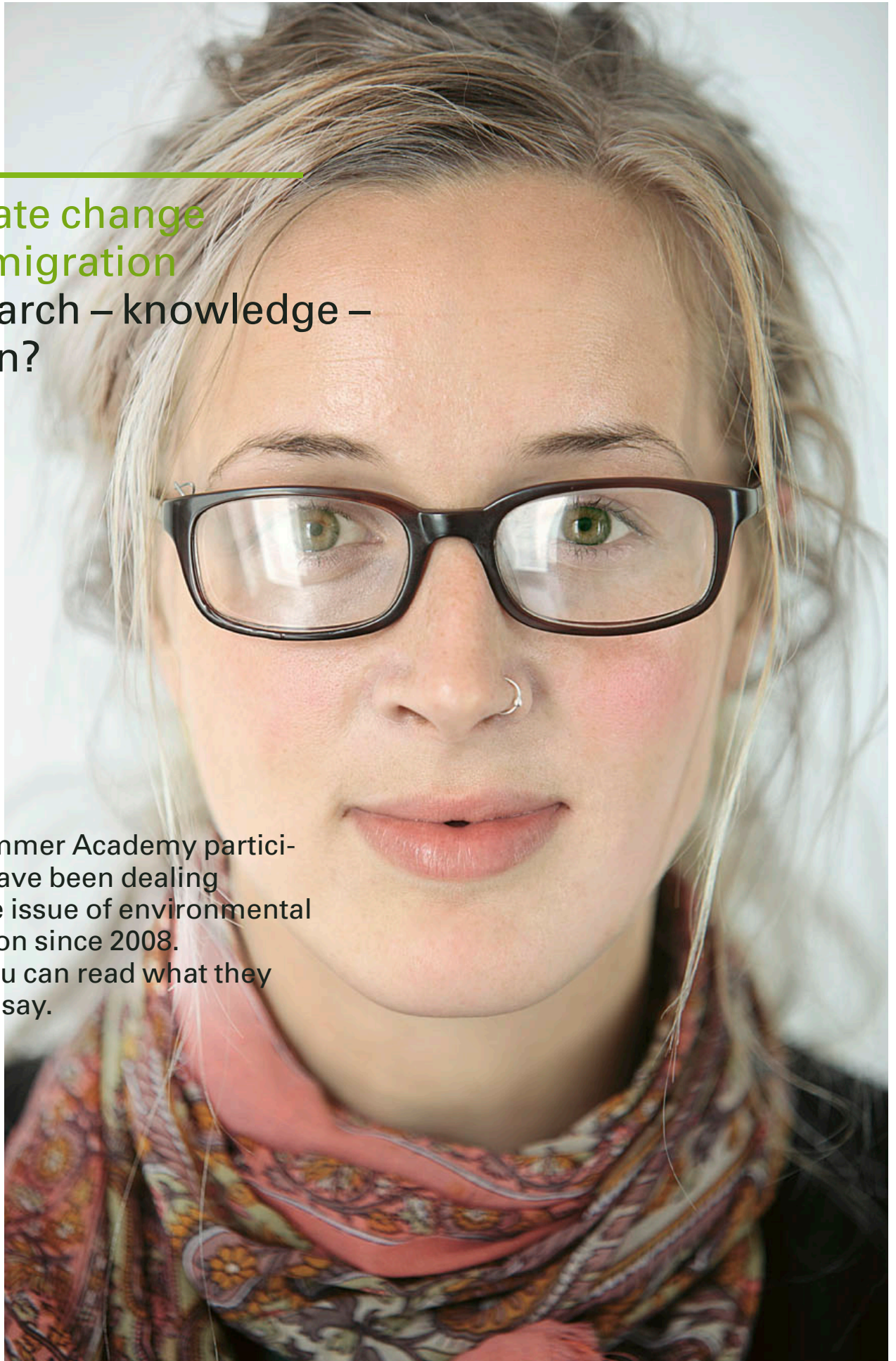
The complete interview can be found on the website of the Munich Re Foundation: www.munichre-foundation.org

"The challenge involved in doing this is to increase peoples' material living standards without damaging their health and the long-term basis of their livelihoods by ruthless exploitation of resources or environmental destruction."

Climate change and migration

Research – knowledge – action?

The Summer Academy participants have been dealing with the issue of environmental migration since 2008. Here you can read what they have to say.



“For solid climate vulnerability assessments we need to combine physical and socio-economic data at the national level.”

Hannah Smith,
United Kingdom



“Politicians need to realise that climate-induced migration is a real challenge to a country's economic growth. They should work towards making policies at national level.”

Architesh Panda,
India

Weather-related risks are increasing all over the globe as a result of climate change. In some regions people are being forced to leave their homes; the changing environment has led to the loss of their means of subsistence. At the same time, there are significant gaps in the current mechanisms aimed at protecting populations impacted by environmentally induced migration.

By 2050, the number of people dependent on agriculture and fishery along river systems will have increased by three to five times the current amount. As early as 2020, 75 to 250 million people in Africa will live in areas with increased exposure to environmental change. Agricultural production could plunge by as much as 60%; people will be forced into migration.

Therefore, it is important to develop legally binding frameworks for migrants at national and international level. Current guidelines, such as the United Nations Convention Relating to the Status of Refugees (Geneva Convention) of 1951, can be used for this purpose and adapted accordingly. It is essential that such frameworks address the plight of the weakest of those afflicted; the people who are not able to migrate due to poverty or other circumstances.

Even if they are actually being forced by environmental factors to migrate, women and children in developing countries often do not have the choice of staying or leaving. Another point to bear in mind is that migration is not to be generally considered a temporary solution. It can serve as a sensible adaptation strategy in the face of unavoidable change.

What is the connection between climate change and migration?

The Inter-Agency Standing Committee (IASC) of the United Nations cites four major factors directly linking up climate change and migration: first of all, sudden floods can make whole regions uninhabitable. Secondly, the gradual degradation of environmental conditions, such as prolonged dry spells and drought, or the salination of agricultural lands due to rising sea levels. The third scenario is the significant and permanent loss of national territories. In addition to coastal regions, this applies particularly to small, low-lying island states, for example in the Pacific. The IASC typology lists shrinking natural resources as a fourth factor. Particularly in politically instable regions, this will probably also lead to armed conflict, forcing even more people to migrate.

These four scenarios show that climate change does not stop at national borders. The impact will not only be perceptible within national boundaries but also across international borders. The IASC emphasises the particularly high risk hazard of the Small Island Developing States: the Polar region, the developing countries of Africa and the Asian coastal states. The poorest countries will generally be most heavily hit, as the adaptation possibilities in these regions are at their lowest.

Our project:
UNU-EHS chair

For further information and publications on this issue:

www.ehs.unu.edu/

www.munichre-foundation.org

Summer Academy 2010 Protecting environmental migrants: creating new policy and institutional frameworks

The Summer Academy is traditionally dedicated to vulnerability research. It aims at identifying gaps in science, politics and practice and at developing remedial solutions. In 2010, a group of 20 young scientists and ten senior experts from 17 nations gathered to develop solutions and political recommendations for environmentally induced migration. This is no mean task, as leveraging academic knowledge into options for political action is a complex process. Politicians working with the subject at different levels require different types of information and must, therefore, be individually and specifically addressed. As a result, participants came up with a number of recommendations with regard to international cross-border migration. Three of the aspects addressed are examined in the following.

The consequences of climate change depend strongly on social, cultural and economic interdependencies. For this reason, regional adaptation strategies should not only be developed and financed at national but also at international level. One example for this type of policy is the implementation of the water projects along the Nile, for which Sudan, Ethiopia and Egypt have differing ideas. If it proves possible to reconcile regional interests, the worst effects of climate change can be mitigated and people can be offered the perspective of remaining in their homes.



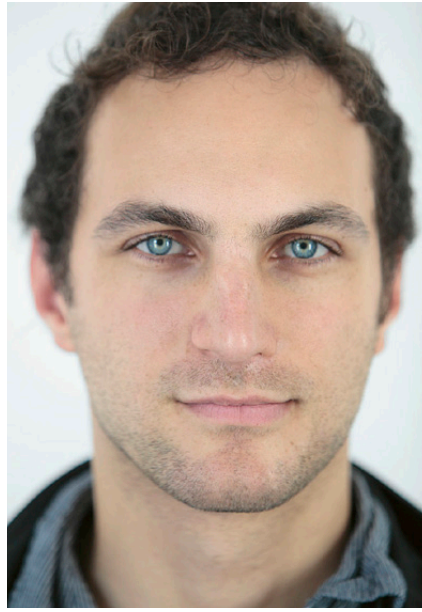
“Climate-change adaptation mechanisms are important.”

Rahmawati Husein,
Indonesia



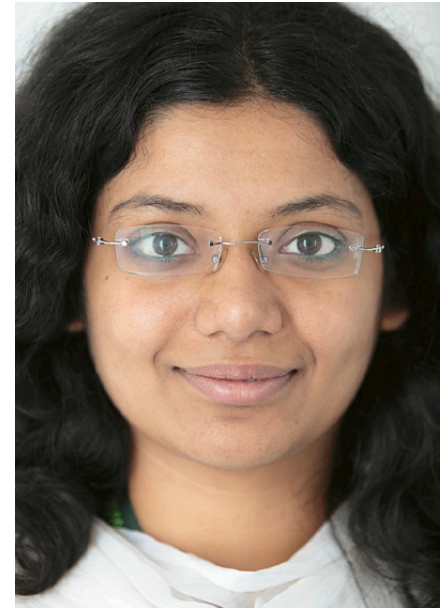
“At the Summer Academy I learnt that you have to think bigger, beyond communities and national borders, in order to address the issue of environmental migration.”

Aschale Siyoum, Ethiopia



“It's never too late to do something.”

Ian Verhaeghe, USA



“What we need is realisation that migration is not always a national security threat.”

Ritumbra Manuvie, India

Work migrants

People in endangered areas should be allowed the opportunity of working temporarily in another country. Such cooperative agreements work best when modelled on existing work migration models – such as the “Temporary and Circular Labor Migration Scheme” (TCLM). The advantages are obvious: the country of origin profits from the money sent by its migrant workers who in turn can improve their know-how and skills by further training, and the host country can bridge a labour shortage. TCLM also offers migrants an incentive for returning to their homes. People who cannot or do not want to emigrate from their countries also receive financial and social support.

Temporary relocation

In the case of climate-induced humanitarian catastrophes resulting, for example, from extreme drought, legal foundations must be created for temporary relocation. A special status must be created for people affected that grants them specific rights. This status can be approved either on an individual basis or – where whole communities are affected – subject to nationally defined criteria. Such criteria would include environmental stress factors, the income situation and living conditions of the people involved. Countries prepared to accept migrants would define quotas so that migration as a coping strategy would receive a legal framework.

The solutions recommended by the Summer Academy 2010 fell on open ears: José Jiera, Senior Advisor of the United Nations Refugee Agency (UNHCR), and Simon Tonelli, head of the Migration Division of the Council of Europe, judged the recommendations of the academy participants as politically significant.

Selected participants Summer Academy 2010:

Michelle Lueck
Colorado State University
Ritumbra Manuvie
National Law School of India University
Architesh Panda
Institute for Social and Economic Change, Bangalore
Aschale Siyoum
Norwegian University of Science and Technology
Hannah Smith
Vrije Universiteit

Selected participants Summer Academy 2009:

Rahmawati Husein
Texas A&M University
Kuan-Hui Lin
National Taiwan University
Johnson Nkem
CGIAR Group
Ian Verhaeghe
Oxford Brookes University

CCEMA Bridging science and politics

The COP 16 World Climate Summit in Cancún once again confirmed: what science shows to be necessary is far from being politically enforceable. The Climate Change, Environment and Migration Alliance (CCEMA) was founded in 2008 to turn scientific findings into practical recommendations that can be used politically. The founding organisations were the International Organization for Migration (IOM), The United Nations University (UNU), the environmental programme of the United Nations (UNEP), and the Munich Re Foundation.

This platform is open to all experts and institutions working on the interface between climate change and migration. It builds a bridge between scientists and field experts whose presentation of their findings is often somewhat complicated, and politicians who must make decisions based on concise, condensed information. For this reason, CCEMA has compiled a catalogue of the most urgent questions and answers.

For further information
on this issue:

Climate Change,
Environment and Migration
Alliance (CCEMA)
www.ccema-portal.org

Work on a comprehensive information package has also begun. The organisation's objective is to develop support tools and recommendations for politically required decisions.

As international events offer a good possibility of showcasing their work, the CCEMA has presented its recommendations at several political conferences. This includes the Global Forum for Migration and Development (GFMD), which took place in November 2010 in Puerto Vallarta in Mexico, as well as the COP 16 World Climate Summit held in December 2010 in Yucatán, Mexico. The results of the Summer Academy 2010 were also presented at these conferences.

"The risks surrounding climate change could easily cause a humanitarian crisis."

Johnson Nkem, Cameroon



"We have to learn to change and reorganise our lifestyle."

Kuan-Hui Lin, Taiwan

Sunday
discussions in
Munich's
Kammerspiele
Theatre
A world turned
upside down

The number of environmental migrants is growing. Many areas are acutely affected all over the world while the developing countries are particularly hard hit. The Intergovernmental Panel on Climate Change (IPCC) estimates that by 2080 several million coastal inhabitants will be threatened by floods. A panel of international experts discussed how climate change is jeopardising the subsistence of many thousands of people at the Sunday discussion, "Environmental migration – Up to our necks in water", held on 21 March 2010.

An audience of over 300 attended the Kammerspiele Theatre in Munich to follow the discussion led by Koko Warner, migration scientist at the United Nations University, by human rights attorney Robin Bronen, and by the policy expert of the International Organization for Migration (IOM) Philippe Boncour. The International Organization for Migration (IOM) estimates that today there are some 170 million migrants. "In recent years, environmental migration has overtaken conflict-induced migration significantly. In some years, it has even been three times as much," explained Philippe Boncour.

If all the migrants of the world constituted a single nation, it would be the sixth-largest country on earth. And its population would soar, as climate change is increasingly destroying the fundamental requirements for life in many countries.

In Alaska, for instance: Robin Bronen has worked with the Inuit people of this region for many years. "The winters are far too warm, the Polar cap is melting fast, the permafrost is thawing", she warned. The Inuit are being forced to abandon their homeland as the soil is eroding and their houses are sinking into the thawing sub-soil. "These people haven't got time for step-by-step policies. They must relocate immediately."

Migration often occurs within national borders, according to Boncour. "That doesn't make it any easier to formulate strategy rules and draft international policies." Governments, particularly those of the industrial nations, must demonstrate a greater political resolve to come to binding agreements on climate protection. "Ultimately, we need to ensure that people have a secure, dignified existence," argued Robin Bronen.

"Government willingness has to be there. It is important for researchers and practitioners to keep the issue at the forefront of policymakers' attention."

Michelle Lueck, USA



The Sunday event was part of the series of discussions examining the topic of "The world upside down – For a new world risk community," organised by the Munich Re Foundation in cooperation with the Kammerspiele Theatre in Munich, the Allianz Kulturstiftung and the Süddeutsche Zeitung newspaper.

www.muenchner-kammerspiele.de

www.allianz-kulturstiftung.de

www.sueddeutsche.de

Financial aid and sustainability

Donations alone are not the solution

Thomas Loster

There is no way around the necessity of providing immediate aid for the victims of natural disasters to alleviate the suffering of thousands, if not millions of people. However, without sustainable projects for disaster risk management, this type of aid remains incomplete.

The hundred-year flood in Pakistan and the record heatwave that caused forest fires in Russia in the summer of 2010 have demonstrated how Mother Nature is increasingly reacting with weather extremes. Catastrophes of these dimensions keep us on tenterhooks for weeks on end, engulf the people afflicted in misery and can set the development of entire states back by years. However, the further away the country and the more "foreign" it seems, the lower the willingness to respond with aid and funding. The people of Pakistan felt the effects of this type of reaction in August 2010: the governments of other states were slow to react in sending funds, and even private donations were very hesitant at the beginning.

Widespread willingness to donate

Only when the people in this country became aware of the extent of the catastrophe did the readiness to provide help distinctly increase. By September 2010, donations amounting to €160m were received in Germany for Pakistan, a sum comparable with the donations (€195m) made for the Haiti earthquake in January 2010. German donors generally are very generous, contributing a sum of approximately €2.5bn annually, with many people donating on a regular basis. Taxation aspects, among other things, play a role in donation response and, furthermore, during Advent the poorer people of society also receive more attention. Very large sums of money can be raised in the event of major disasters. The German people, for example, gave some €670m after the tsunami in 2004 and donated a total of €350m during the flooding caused by the River Elbe in their own country in 2002.

The floods in Pakistan in the summer of 2010 took on Biblical dimensions; one-fifth of the country was covered by flood water. A family in Pannu Aqil in the Sindh province seeks refuge from the waters on a tiny hill.

The massive earthquake in Haiti traumatised many of the survivors. The people hit by this catastrophe cannot rebuild their country without help. Donations and international aid will be required to help young Haitians work towards a new future.





Thomas Loster
The Chairman of the Munich Re Foundation is an expert on climate change and catastrophe prevention. He has been working on catastrophe analysis and trends for more than 20 years.

Victim statistics high despite improved risk management

The willingness to support people in need is praiseworthy in itself but, taken on the scale of things, it is not enough to tackle the problems at their roots. Help must commence at a much earlier stage. Natural catastrophes rarely occur out of the blue. Back in the 1980s, alarming signs of the coming extreme weather trends were already evident and gave rise to the foundation of the International Decade for the Natural Disaster Reduction (UN-IDNDR). Later, numerous national and international initiatives such as the German Committee for Disaster Reduction (DKKV, Bonn) and the International Strategy for Disaster Reduction (UN-ISDR, Geneva) were set up. These organisations still focus on optimising catastrophe prevention.

Many countries have since considerably improved their disaster risk management. Bangladesh, for example, where hundreds of thousands of people were hit by heavy cyclones and devastating storm floods in 1970 and 1991, has succeeded in setting up a protection programme. However, there is no reason to sound the all clear, whether in Bangladesh or in other regions at risk, as long as so many people remain exposed to natural disasters. Not only the Haiti disaster and the tsunami in Asia, each resulting in far more than 200,000 deaths, are a sad confirmation of this fact, but also the seismic shocks in China (2008) and Pakistan (2005), with a death toll of 80,000. And yet, these fatality rates are not necessarily inevitable; the risk zones of the earth and the probability of natural catastrophes are widely known.

Climate change exacerbating the situation

Even though the United Nations and numerous national institutions have met with some success, the global efforts are still far from sufficient. The world conferences, such as Yokohama 1995 or Kobe 2005, do not address the topic of disaster risk management often enough, and funding for effective preventative measures is too meagre.

In the long term, therefore, disaster management must shift the focus to the people at risk, even though political and cultural obstacles may stand in the way. Enduring and sustainable solutions will otherwise not be possible. This is particularly necessary against the background of the environmental and climate changes. As global warming becomes increasingly evident, weather extremes such as heatwaves, droughts, heavy rainfall and floods must be reckoned with more frequently in the future. This means that a recurrence of natural disasters like those experienced in the summer of 2010 is merely a matter of time.

Three questions put to Manuela Roßbach Transparency pays

Aktion Deutschland Hilft (ADH) is a federation of German aid organisations that work together to provide fast, effective help when disasters and other emergencies strike. In this interview, president Manuela Roßbach talks about the federation's work.

How many disasters did you collect donations for in 2010, and how do you make sure the money actually goes to the victims?

Manuela Roßbach: In 2010, ADH launched appeals for the earthquake victims in Haiti and Chile and to provide aid to the people hit by flooding in Pakistan. Many of our member organisations have been active in those countries for years. Knowing the situation and having staff in the field meant they were able to act swiftly. Aktion Deutschland Hilft guarantees that aid supplies go directly to the people affected and that they receive what they need.

Does the willingness to donate depend on the severity of the disaster?

M. R.: What makes the difference is media coverage. For instance, in the case of Haiti, a lot of donations came in after just a few days, whereas with Pakistan, donations in Germany were a bit slow to start with. What sparked the increased willingness to give was when photos were published showing the human suffering. By November, ADH had received over €18m for Pakistan, and €17m for Haiti.

According to a McKinsey survey, what largely stops Germans donating is not knowing exactly what the funds will be used for. What can be done to improve transparency?

M. R.: ADH publishes regular reports on our project work and how the money is spent – on our website and in our “Notruf” magazine. Detailed accounts are published in our annual report, which is accessible to the public. And our donation hotline will always deal with callers’ enquiries. It’s worth the effort. We received transparency awards in 2008 and 2009, and since 2007 we have been allowed to display the seal of approval awarded to charities by the German central institute for social concerns (DZI).

Manuela Roßbach, CEO at Aktion Deutschland Hilft, talking to aid workers on the ground. The alliance of relief organisations for catastrophe and emergency situations has been working together for over ten years to bring fast and effective aid to disaster victims.



For further information
on this issue:

www.Aktion-Deutschland-Hilft.de

www.arche-nova.org

www.hfhd.de

Haiti earthquake Help for a country in ruins

On 12 January 2010, the Caribbean state of Haiti was struck by a catastrophic magnitude seven earthquake. The Munich Re Foundation, Munich Re, and its employees were resolutely determined to provide help.

The earthquake destroyed 80% of the buildings in the capital city, Port-au-Prince, and the area to its west. Over 250,000 people died below the rubble, more than three million Haitians were affected by the quake.

The collected donations of approximately €60,000 support two long-term aid projects managed under the umbrella of the Aktion Deutschland Hilft alliance (ADH) in Haiti.

The first project, organised by the arche noVa aid organisation, a partner of the ADH network, installed two drinking water systems. One system supplies a field hospital in the town of Leogane while the second system pipes water to the people of Carrefour, Haiti's second-largest city. A new well and pipelines also ensure that the water supply can be maintained over time.

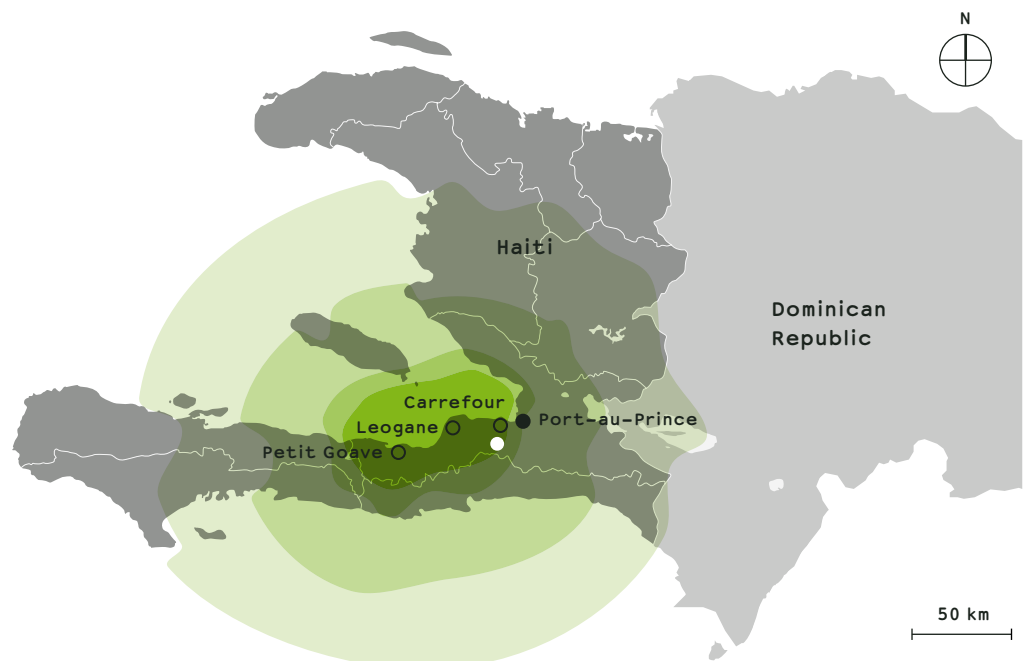
A second project run by our project partner Habitat for Humanity is constructing buildings on the island that will offer protection against earthquakes and tropical storms. A total of 440 buildings will be erected in the town of Cabaret. The cholera epidemic that broke out at the end of 2010 is proof that long-term projects are essential for the safe future of Haiti.

Widespread areas of heavy damage

The magnitude 7 earthquake struck shortly before 5 a.m. local Haitian time and lasted over 60 seconds. The epicentre of the quake was not far from the country's capital of Port-au-Prince. The map shows the areas hit according to the Mercalli scale (MM) quantifying visible impacts.

- Rather strong (V)
- Strong (VI)
- Very strong (VII)
- Destructive, Cataclysmic (VIII-X)
- Epicentre (0)

Source: Created by editorial department based on the US Geologic Survey (USGS)



Pakistan

Millions affected by hundred-year flood

In July and August 2010, exceptionally heavy monsoon rains, the worst in over 80 years, led to catastrophic flooding in north-west Pakistan. According to UN emergency relief coordinators, more than 14 million people were affected, at least six million require immediate humanitarian aid.

Picture licence expired



People in the flooded areas reach desperately for relief supplies. Some attempt to escape the devastation by hanging on to the helicopter.

Drinking water is scarce for those marooned in the murky floods. The Pakistan Army brings air relief to refugees near Ghospur in the south-east of the country.

Picture licence expired



It was a disaster of incredible proportions. Many people lost everything except for what they could carry in their hands. The situation was exacerbated by the fact that people in the flood areas were exposed and helplessly vulnerable to water-borne disease. The infrastructure has been destroyed, there is a lack of medical supplies, and the hygiene conditions are poor. An outbreak of infectious illnesses such as cholera or dengue can hurl the region into the next crisis.

Emergency aid only the first step

In the immediate wake of the disaster, water and food in particular were in short supply. The Munich Re Foundation provided emergency aid, supporting a project by the Adventist Development and Relief Agency (ADRA Deutschland), a member of the German Aktion Deutschland Hilft alliance (ADH). A mobile treatment plant generating 30,000 litres of drinking water daily was erected in the town of Shah Jamal in Muzaffargarh, a district in the south-west of the Punjab province. This measure allowed a hospital and more than 6,000 people in private households to be supplied with water. However, emergency aid is only the first step. The effects of the natural disaster will be felt for a long time to come. After all, a surface area the size of Italy had been submerged in water for days. Apart from homes and infrastructure, vast areas of farmland were also destroyed by the floods. It will take years or even decades – and international aid – to fully rebuild the country. The next step, therefore, requires the introduction of projects giving people the perspective of a long-term future in their own communities.

In the long run, there is also no way around reconstructing the water infrastructure. Thanks to generous donations from Munich Re employees and friends of the Munich Re Foundation, support for the ADRA project can continue. The next step will be to build manually pumped wells for dozens of households to ensure sustainable water supplies in Shah Jamal. This will make the living conditions of the population even better in comparison to the situation before the great deluge. Although the threat of attacks on the relief workers of western aid organisations has made work more difficult in some cases, the international community cannot lose sight of its objectives: to save life and reduce suffering. This must carry on, independently of political, religious or ethnic ties.

For further information
on this issue:

[www.Aktion-
Deutschland-Hilft.de](http://www.Aktion-Deutschland-Hilft.de)

www.adra.de

5th International Conference on Fog and Dew Collecting drinking water from the air

Fog not only plays an important role in conserving particular ecosystems but also in generating drinking water in regions with low rainfall. The Munich Re Foundation would like to help launch a new fog net project.

The 5th International Conference on Fog and Dew – co-sponsored by the Munich Re Foundation – offered international experts an ideal forum to exchange views on the latest scientific findings and to put forward recommendations for successful “fog milking”.

For many people, fog is an annoyance or even a danger, for instance on the roads. Some people even attribute mystical powers to it. However, fog droplets can also be used to produce drinking water. Yet only a few experts around the world conduct scientific research on this subject.

“For this reason, the conference offered a unique opportunity to exchange information on the latest technologies, scientific findings and ideas,” emphasised Otto Klemm, head of the climatology work group at the Institute for Landscape Ecology of the University of Münster and organiser of this year’s conference. The conference took place from 25 to 30 July 2010 in Münster and hence for the first time in Europe.

Multifaceted area of research

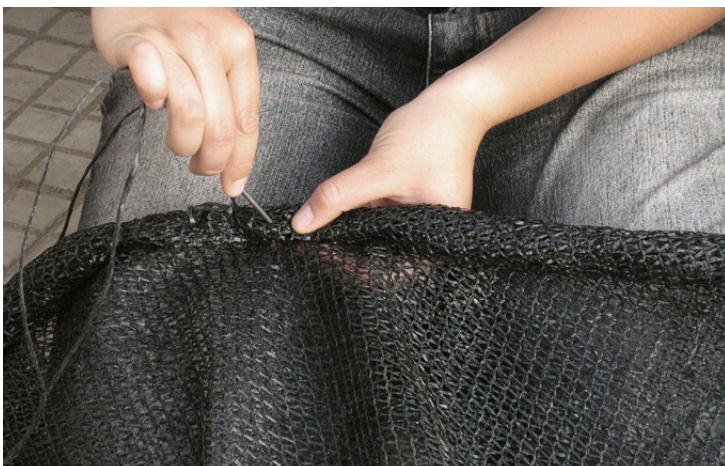
The 140 fog experts – among them chemists, geographers and meteorologists – discussed various aspects, such as factors that encourage the production of fog or the interaction between gas and water droplets. Another topic of interest was the question as to how fog can contribute to supplying ecosystems with nutrients. The possibility of detecting fog with the help of satellites for more efficient weather forecasts regarding air and road traffic was also investigated. However, the focal point of the conference was on collecting drinking water.

Large fog collectors in fog-intensive regions harness more than 200 litres of drinking water daily. This picture was taken at Arberube in Eritrea where the Munich Re Foundation sponsored a fog net project up until 2008.



Fog milking in practice

In certain areas of South America, Africa and Asia where rainfall is low but fog a frequent occurrence, fog milking is already being successfully practised. Under favourable conditions, a daily average of more than five litres of drinking water per square metre of net is presently being collected. The use of several large nets with a surface area of 40 square metres has the potential to supply small villages and agricultural operations with water. The Munich Re Foundation supported a fog net project organised from 2005 to 2008 by WasserStiftung Ebenhausen in Eritrea and gained its first experience in this field. Day after day, more than 200 litres of drinking water from fog were flowing into the water tanks.



Top: The potential for generating water supplies in fog-intensive regions is high. However, to this day it remains practically unexploited.

Bottom: A special synthetic net with a mesh of triangular holes forms the basis of the fog nets. The last stitches are pulled before the net is hung into its frame.

Experience and know-how required

“It is important to get the local population on board and to be familiar with the local conditions,” explained Robert Schemenauer, a founding father of the Fogquest organisation and a pioneer in the field of fog collection. The nets sometimes are the only source of water for people in these regions and they act as a bridging technology until water pipes or wells can be installed. One of the greatest advantages of the fog collectors is the low purchasing cost. However, sustainable results can only be guaranteed if the local people regularly maintain the nets.

The factors determining the success or failure of such projects were analysed by the participants of the conference workshops. They put forward 20 recommendations for the successful implementation of such projects so that even more people can avail themselves of these valuable water resources in the future.

New fog net project in planning

Fog-milking technology remains interesting for the Munich Re Foundation, even though political circumstances – such as encountered in Eritrea – can often cause problems. For this reason, we would like to commence a new project when the current one ends. One thing should be clear, however: fog milking alone cannot resolve the problem of drinking water shortages in many regions. Nevertheless, it remains a small step in the right direction and for many people the only access to clean water.

For further information on this issue:

Conference on Fog and Dew
www.fogconference.org

Twenty factors for the success of fog milking
www.munichre-foundation.org

Flood warning system in Mozambique

Sustainable aid

The warning systems built up by the Munich Re Foundation together with the German Association for International Cooperation (GIZ) in Central Mozambique have repeatedly proven their efficiency.

The early-warning systems on the Búzi and Save rivers proved their efficiency during rampant storms (Cyclone Favio in 2007) and in the wake of massive rainfalls (flooding in 2008). In the follow-up period, the systems were consolidated and connected up to more remote river areas. Now, responsibility for systems is to be handed over to the authorities. The project is only sustainable if it is independently managed by the people of Mozambique themselves.

At present, work is underway to integrate the River Revue on the upper reaches of the Búzi, as well as the River Gorongosa, a tributary of the Save. The Technical University of Cologne is to help examine whether the hydrological measurement methods implemented along the rivers can be improved. The continuous training and further education programmes for the people living along the rivers are proving successful.

Widespread interest

There is a great deal of interest in this type of people-centred warning system. For this reason, we have outlined the most important aspects for the establishment of such a system in a manual ("Ten steps for implementation of a people-centred warning system"). It has already been put to use: the Mozambique authorities intend to set up flood-warning committees on the River Licungo in cooperation with the Development Programme of the United Nations (UNDP).

The German Federal Ministry for Economic Cooperation (BMZ) allocated €300,000 from climate change adaption funds (so-called "Fast Start Financing", in line with the Climate Summit agreement of COP15 in Copenhagen). These new resources will help extend the project to the River Chire in the North of Mozambique. This evidences the model character of our project, and it is an important goal for us to establish the Mozambique model in other countries as well.

Sustainable aid

In the long term, the local people and the Mozambique authorities must bear responsibility for the warning systems themselves. This can only succeed if a sense of responsibility (ownership) for catastrophe management is accepted completely by the population. Implementation sounds easier than it is, as not only the people in the village communities must be persuaded but also the politicians. To ensure successful acceptance in both directions (bottom-up and top-down), not only must the individual committees be won over but also the Council of Ministers. However, the first obstacle has already been surmounted: the representatives of the National Disaster Management Institute (INGC) in Maputo have come on board. Nevertheless, we still anticipate that the entire process will take three years – a long time certainly, but one that will bear fruit. The risk of disaster and the vulnerability of the population to the extremes of nature will be reduced as a result. The undertaking, therefore, is a direct contribution to development stability and poverty reduction.

Villagers in Central Mozambique receive disaster preparation training. The course "trainees" learn where they can find shelter in an emergency. High-resolution satellite pictures show buildings and possible escape routes.



The children are thrilled: armed with power consumption meters, solar cookers and lamps, they readily take on their roles as energy scientists and detectives.



Energy School Munich Light off – Sun on!

How much muscle power does it take to bring a cup of water to the boil? How can you barbecue sausages on a solar cooker? How much energy does a normal light bulb use up? The workshops of the Energy School Munich run by the Green City e.V. organisation familiarise pupils with the subjects of climate protection and energy conservation at an early age. The Munich Re Foundation supports this project financially.

The young energy researchers at the Energy School Munich get to discover a whole lot of new facts about electricity generation, energy conservation and climate protection. The aim is to show the youngest generation of our society from the very start how every one of us can contribute to climate protection by conserving energy. The "Sun-full of Energy" project is especially designed for school children attending Grades 1 to 7. For several days, the children take on the roles of energy scientists and investigate where our energy comes from and how much electricity we use.

Teacher support for project

Equipped with electricity consumption meters, the children set out in search of power hogs. The results astonish not only the pupils but also their teachers and parents. On the bike power generator, the children experience at first hand how much effort it takes to generate the electricity required to run lights or an electric kettle. A workout on this bike makes Watt values easier to grasp and the relationship between power generation and consumption more understandable for the children.

A solar cooker allows the sun's energy not only to be felt but also to be tasted – when the popcorn begins to jump on the hotplate and everyone samples the results. Other renewable energies are presented in films and stories. Parallel to the workshops, the newly acquired knowledge is revised with the children in class. For this purpose, Green City provides material such as work sheets or solar panels and offers ideas for experiments.

Two new teaching modules during pilot phase

In view of the extremely positive response of the schools, the organisers have added two further modules to the programme aimed at pupils in higher grades. The "Energy for the Future" project has been available to Grades 8 and 9 at secondary schools since Autumn 2010. The students examine their school building with the help of an infrared camera, visit a solar energy plant and gather information on career perspectives in the field of renewable energy. A further module titled "Joulz" also offers teaching material for secondary and comprehensive schools. Teachers can use "Joulz" for stand-in classes to sharpen up the energy awareness of their pupils. During the school year of 2010/2011, the module will be tested at a pilot school in Munich and will subsequently be evaluated.

Green City e.V. has been active in Munich since 1990. The environmental organisation focuses on mobility, climate protection and urban design. Having helped sponsor the "Energy School Upper Bavaria" in 2007 and 2008, the Munich Re Foundation is happy to be able to support the organisation once again.

For further information
on this issue:

www.greencity.de

Further activities

Project splitters

For further information
on this issue:

www.savethechildren.de

Conference on "Microfinance – A growth market"

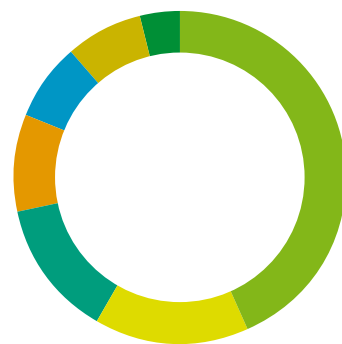
Together with the Protestant Academy in Tutzing and with the support of the KfW Entwicklungsbank (KfW Development Bank), the Munich Re Foundation hosted the "Microfinance – A growth market" conference from 5 to 7 March 2010. The conference demonstrated that successful microfinance initiatives require favourable environments and above all powerful institutions to be able to make full use of the growth potential. Microfinance is not transacted in a vacuum but is part of a broader understanding of what social entrepreneurship means, although even today economic and social interests are all too often thought of as working against each other.

"Riskland" board game

The German version of the "Riskland" game developed by the Munich Re Foundation in cooperation with Save the Children, UN-ISDR and the Austrian company katmakon, is now available as a board game. It aims at developing an awareness of disaster risk among children, combining learning and entertainment. The game, which was originally conceived by the UN-ISDR organisation for children in Latin America, comes with a booklet offering learning material, pictures and puzzles. A glossary of the most important terms rounds off the package for school pupils and teachers.

Academic theses

The foundation's "Flood-warning system in Mozambique" project served as the research basis for two master's dissertations and a doctoral thesis in 2010. Konstanze Kampfer from the Rheinische Friedrich Wilhelm University in Bonn and Verena Tiefenthäler from the Ludwig Maximilian University in Munich examined the subjects of perception, disaster risk management and adaptation strategies in their dissertations. In his doctoral thesis entitled "Spatial vulnerability assessment", Stefan Kienberger developed a method for determining the extent of social vulnerability. In July 2010, he was awarded his doctorate at the Paris-Lodron University of Salzburg.



Topic	Number of presentations
Climate change	23
Sustainability	8
Microinsurance	7
Disaster prevention/Water	5
Munich Re Foundation	4
Others	4
Social vulnerability	2
Total	53

Source: Munich Re Foundation, 2010

Lectures

Munich Re Foundation staff held over 50 presentations at conferences, public authorities, schools and universities in 2010. The subjects were as diverse as the topics covered by the foundation: climate change, microinsurance and disaster prevention were the main focal points, with aspects of sustainability as an underlying topic.

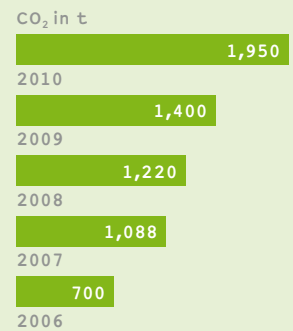
2010 environmental review

In the financial year 2010, the Munich Re Foundation's emissions totalled approx. 1,950 t CO₂, an increase of 37% over the previous year. Only 5% of this total was due to business trips by foundation employees and office operations, most (1,865 t) being attributable to the major international events, forums and conferences organised by the foundation. Substantial quantities are involved because the emissions we offset include those resulting from travel undertaken by attendees at our conferences. One driving factor behind the emissions was the greater number of participants (520) attending our 2010 (6th) International Microinsurance Conference in the Philippines, and the considerable distances many of them travelled.

The COP 16 World Climate Summit, held in Cancún in December, brought renewed optimism to efforts to combat climate change, official recognition of the 2°C target for the very first time being one of the key factors to emerge from this event. Activities at other levels are just as important as political decisions on climate protection, institutions, companies and private individuals all having a part to play in reducing CO₂ emissions.

To compensate for our 2010 emissions, we are purchasing carbon credits for a geothermal power plant at Gunung Salak, Java, Indonesia (1,950 t CO₂, VCS – Voluntary Carbon Standard). The plant achieves a saving of 115,000 t in CO₂ emissions per year. As well as making further emissions' savings possible in the long term, the proceeds from the certificates have other positive effects. The project creates employment in the region and plays a role in transferring technology to a developing country. Our support of the project renders our entire work carbon neutral.

Munich Re Foundation emissions increased significantly in 2010, mainly due to international events, forums and conferences.



Source: Munich Re Foundation, 2010



A geothermal power plant at Gunung Salak in Indonesia generates emissions certificates. The power plant saves 115,000 t in CO₂ emissions per year.

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Climate Change, Environment and
Migration Alliance (CCEMA),
Geneva (Steering Committee)

Global Risk-Identification
Programme (GRIP),
Geneva (Steering Committee)

MEAG's Klimastrategie-Fonds
(Climate-Strategy Fund),
(Advisory Board)

Microinsurance Network,
Geneva (Executive Committee)

Munich Climate Insurance
Initiative (MCII),
Bonn (Executive Board)

German Council for Sustainable
Development,
Berlin (Council) until June 2010

UN Decade of Education for
Sustainable Development,
Bonn (National Committee)

UNEP Finance Initiative,
Climate Change Working Group,
Geneva (Adviser)

UN-ISDR, PPP Advisory Board,
Geneva (Adviser)

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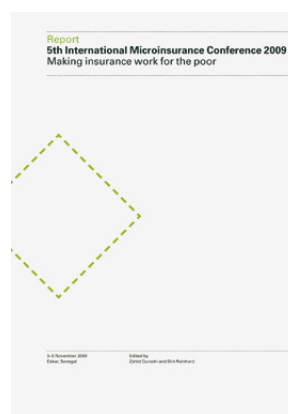
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Publications

Annual report	2005 report Date of publication 04/2006 Order numbers German: 302-05000 English: 302-05001	2006 report Date of publication 03/2007 Order numbers German: 302-05348 English: 302-05349	2007 report Date of publication 03/2008 Order numbers German: 302-05641 English: 302-05642	
	2008 report Date of publication 03/2009 Order numbers German: 302-06042 English: 302-06043	2009 report Date of publication 03/2010 Order numbers German: 302-06299 English: 302-06300		
Conference report	Microinsurance Conference 2005 Making insurance work for the poor: Current practices and lessons learnt Date of publication 06/2006 Order number English: 302-05046	Microinsurance Conference 2006 Making insurance work for Africa Date of publication 06/2007 Order number English: 302-05381	Microinsurance Conference 2007 Making insurance work for the poor Date of publication 04/2008 Order number English: 302-05491	
	4th International Micro- insurance Conference 2008 Making insurance work for the poor Date of publication 04/2009 Order number English: 302-06092	5th International Micro- insurance Conference 2009 Making insurance work for the poor Date of publication 04/2010 Order number English: 302-06352		
IntoAction	IntoAction 1 Microinsurance Making insurance work for the poor Date of publication 01/2006 Order numbers English: 302-05002 French: 302-05003 Spanish: 302-05004	IntoAction 2 Flood-warning system in Mozambique, completion of the Búzi project Date of publication 06/2007 Order numbers German: 302-05421 English: 302-05422	IntoAction 3 Early-warning communication system for the Kingdom of Tonga Date of publication 12/2009 Order number English: 302-06251	

New publications 2010



Postitionen	<p>Dialogforen 2009/2010 Welt im Wandel – die vergessenen Milliarden Date of publication 10/2010 Order number German: 302-06593</p>	
Scientific studies	<p>Global aber gerecht Date of publication 09/2010 German 240 pages ISBN 978-3-409-60656-4</p>	<p>Global yet equitable Summary Date of publication 11/2010 German, English, French and Spanish</p>
welt-sichten	<p>“welt-sichten” magazine Climate change and poverty A challenge for a fair world policy Dossier of the climate change and justice project Date of publication 05/2008 German and English</p>	
Books	<p>Protecting the poor A microinsurance compendium Date of publication 11/2006 Order number 302-05140 Text in English 654 pages ISBN 978-92-2-119254-1</p>	<p>Protegiendo a los pobres – Un compendio sobre microseguros Date of publication 05/2009 Text in Spanish 692 pages ISBN 978-84-96780-72-9</p>
	<p>Protéger les plus démunis – Guide de la micro-assurance Date of publication 10/2009 Text in French 747 pages ISBN 978-92-2-219254-0 (OIT)</p>	<p>Protegerendo a população de baixa renda – Um compêndio de microsseguro Date of publication 11/2009 Text in Portuguese 639 pages ISBN 978-85-7052-513-0</p>

11 January

Dialogue forum
 “Demography today: A world in upheaval?”

17 February

Dialogue forum “Country – City – Megacity: Who wins, who loses?”

22 March

Dialogue forum “Causes of migration: Why does the world migrate?”

14 April

Dialogue forum “When know-how migrates – Brain drain or brain gain?”

12 May

Dialogue forum
 “Migration, integration – Fear of strangers?”

18–22 July

6th Summer Academy discussing “Climate change and fragile states: Rethinking adaptation” at Hohenkammer Castle

8–10 November

7th International Microinsurance conference in Rio de Janeiro, Brazil

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to Action