

10 years



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Title: Taking the right course of action during a disaster can save lives. Children and women in the slums of Pune in India attend an educational event on disaster risk reduction. The project won the third RISK Award in 2015.

Dear Readers,

2015 was a very special year for Munich Re Foundation; we celebrated our first milestone birthday. You cannot move mountains in ten years, but our concept “From Knowledge to Action” has borne fruits. Or, as the Chairman of the Board of Trustees, Hans-Jürgen Schinzler, summed up in a conversation on our work: “Many people benefit from the work of the foundation” (page 2).

As in the years before, we brought several projects to a successful conclusion in 2015. On 22 March, International Water Day, our fog net project in Morocco was ceremoniously launched and now supplies water to the villagers living at the foot of Mount Boutmezguida in the Anti-Atlas Mountains (page 44). The women benefit most of all from this, as they are spared up to three hours walk to the well every day. For the coming years we have plans to increase the water yields with even better nets.

The CloudFisher, built by WaterFoundation Ebenhausen and funded by Munich Re Foundation, is ideal for this purpose (page 47).

We also concluded another project in South America. A good year after the ONG Inclusiva organisation won the RISK Award in 2014, the town of Peñaflo near Santiago de Chile is better prepared for natural disasters thanks to the “inclusive risk management” programme. In an emergency situation, disabled people can now be brought to safety more quickly (page 15). Disaster risk reduction is also on the agenda in Bangladesh. Our Gibika project, aimed at improving the living conditions of the local people, has shown that an intact early warning system is a key factor for successful risk management (page 16).

The 11th International Microinsurance Conference took place in 2015 in Morocco. One of its goals was to give new stimuli to microinsurance in the Maghreb region (page 28). The growth in Africa is already remarkable: the premium income rose by approximately 30% between 2011 and 2014. Further interesting details are offered by the “World Map of Microinsurance” on page 26. It is now also available online.

You can find a retrospect of ten years of foundation work in the middle section of our anniversary report. My thanks are due to our founder, Munich Re, and, of course, to the entire team, without whose great dedication and commitment these successes would not have been possible. I am already looking forward to the next ten years in which we will devote our efforts to knowledge building, education and the provision of help directly on site where it is needed.



Thomas Loster



Shweta Gupta is Senior Project Coordinator for AILSG in India. She explains in an interview how the RISK Award can improve the lives of women and children in slums. Page 14



Jean Claude Ngbwa is Secretary General of the Inter-African Conference of Insurance Markets, CIMA. The CIMA region encompasses 14 African countries with a population of approximately 150 million people. CIMA supported the Microinsurance Conference in Morocco. Page 28



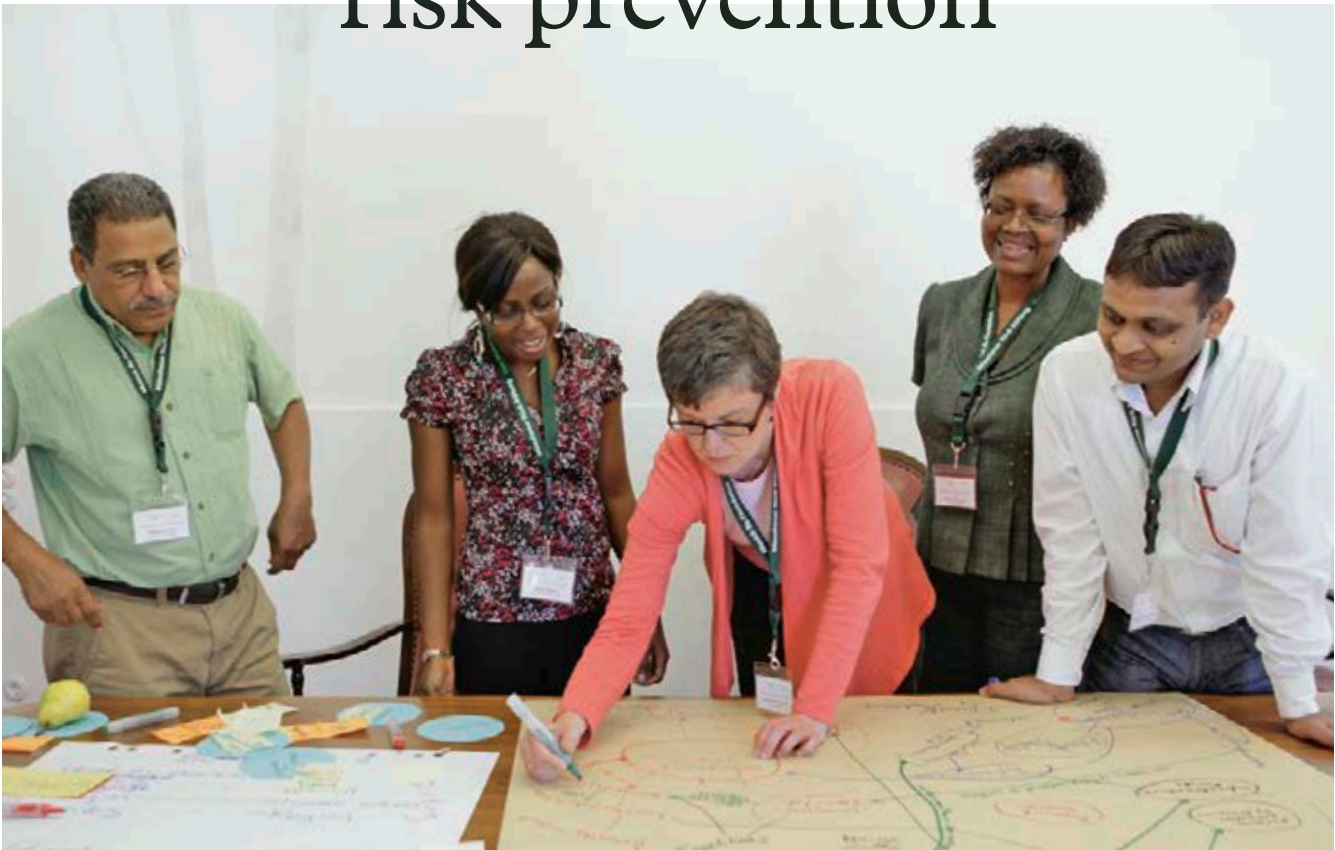
Jamila Bargach manages the fog net project in Morocco. Her organisation, Dar Si-Hmad, wants to do more than just produce drinking water. The fog nets are also indirectly intended to give women and girls access to better education. Page 44



Christoph Bals is the political CEO of Germanwatch. The organisation acts as an important advisor during the UN climate negotiations. Christoph analysed the climate summit in Paris for us. Page 48

10 years Munich Re Foundation

New approaches in risk prevention



Summer Academy in Hohenkammer

In April 2015, Munich Re Foundation celebrated its tenth birthday. An ideal opportunity not only to look back but also forward to further developments. We took the occasion to speak with Dr. Nikolaus von Bomhard, Chairman of Munich Re's Board of Management, Dr. Hans-Jürgen Schinzler, Chairman of the Board of Trustees, and Foundation CEO, Thomas Loster.



Dr. Nikolaus von Bomhard, Thomas Loster and Dr. Hans-Jürgen Schinzler in discussion

Dr. Schinzler, in your capacity as former Chairman of the Board of Munich Re you played a decisive role in ensuring the existence of the foundation today. What were your expectations when it was being set up?

Dr. Schinzler When the Board of Management and the Supervisory Board decided in November 2000 to establish a foundation in 2005 on the occasion of the 125th corporate anniversary of Munich Re, we did not expect to move mountains. We knew, however, that not only climate change, but also – along with many other things – the demographic development, the shortage of the vitally important resource of water, the increase in natural disasters and the struggle to reduce poverty would be the most salient topics of the 21st century. This is actually proving true and, despite our modest means, we have been able to achieve quite a lot.

Dr. von Bomhard, as Dr. Schinzler's successor, you launched Munich Re Foundation in a ceremony on 7 April 2005. Has the strategy of using the collective knowledge of Munich Re for the benefit of mankind and improvement of risk reduction delivered the expected outcomes?

Dr. von Bomhard We wanted to set an example and show that we take our social responsibility seriously. Our goal was and still remains to translate our knowledge into effective social action. Which we have succeeded in doing. Many projects were carried through in this spirit. I can still remember the first project very well: the “Chair for Social Vulnerability” at the United Nations University in Bonn, set up by Prof. Janos Bogardi. We presented the project to the public in Munich in April 2005. The United Nations at that time sent two Under-Secretary-Generals, in other words Board members, to Munich: Prof. Hans van Ginkel, responsible for education, and Dr. Klaus Töpfer, who headed the United Nations' environmental programme.



Microinsurance in the Philippines

Dr. Schinzler The establishment of the chair in Bonn was very important for the foundation. The very first thing we had to do was to understand where people and societies are vulnerable and what they really need. The chair brought valuable knowledge to light in this respect over a period of seven years. One of the findings was that poverty is a major factor for susceptibility to natural disasters, so that we began to intensively address the subject of “microinsurance”.

Thomas Loster In this and other projects, the founder’s networks stood us in good stead. We moreover benefited from Munich Re’s very broad range of topics and the fact that it develops tailor-made solutions for customers all over the world. And we were also able to fall back on a comprehensive pool of expert knowledge. The colleagues from Geo Risks Research, for example, were always able to optimally provide us with background information, data and trends on natural disasters. Whenever knowledge flows, we can also do justice to our motto “From Knowledge to Action”. Our project portfolio, which is primarily oriented towards developing and emerging nations, is correspondingly diverse.

Was it planned from the very beginning to dedicate such a large proportion of the foundation’s work to the topic of insurance for poor people?

Thomas Loster The promotion of microinsurance for us was obvious. For this reason we were quick to network with the International Labor Organization and the World Bank. The dynamic pace at which the microinsurance segment has grown in the past ten years has surprised us nonetheless.

Dr. Schinzler When we opened the 1st Microinsurance Conference on 18 October 2005 in Hohenkammer, approximately one hundred experts were present. Today, this symposium has developed into a global conference with several hundred delegates from over 50 countries. We want to bring knowledge to the countries. This is also the reason why the conference is alternately held in Africa, Asia and Latin America every three years.

Dr. von Bomhard The development of the microinsurance market is very encouraging. However, microinsurance seen from the general viewpoint is still a young discipline. New products are slow to become established and regulation also needs time. At the same time, however, progress is being made and the foundation has had a share in this.

Thomas Loster Today, over a quarter of a billion people are microinsured. The growth rates in some countries are enormous, for example in Morocco, where we organised the last world conference in November 2015. In Africa, the markets grew by 30% in the past three years. More than 60 million people now have at least one policy, as the latest results of our Landscape Study of Microinsurance show.



Mozambique flood warning project

Risk prevention is another focal point of the foundation's work. According to the guidelines, preference is given to the promotion of projects that take people directly as their starting point. Has this approach proven successful?

Dr. Schinzler Disaster prevention was one of our main concerns from the very first day. The victim statistics of natural disasters, as you know, sadly continue to climb. A good example of our successful work in the area of prevention are the flood warning systems. We first financed a warning system on Tonga in the Pacific, and in 2012 concluded flood warning projects in Mozambique along several rivers in the centre of the country. We were then able to hand over responsibility to the relevant local authorities. It is nice to see that the warning systems in Mozambique have always worked well and are even being expanded and multiplied.

Dr. von Bomhard Disaster prevention and resilience are core competences of Munich Re. We have been doing research into this area for more than forty years. And now, with climate change advancing, it is apparent that the challenges will be even greater than anticipated, the number of weather-related disasters is likely to continue increasing. The recent major floods, extreme weather events and drought disasters in Africa and the US are indicators of this development.

Thomas Loster Water stress is undoubtedly increasing in many regions. This is dangerous for people who today already suffer from a shortage of water. As a humanitarian foundation, we work in arid areas using innovative approaches to improve water supplies. Water is also one of the core topics of our articles of association.

Dr. Schinzler You're referring to our fog net projects, such as those in Morocco? I know this region of Morocco and the barren mountains of the Anti-Atlas Range. It's unbelievable that fog nets there can harvest up to 6,000 litres of drinking water daily – in a region where wells are rare and the people, mostly the women, must walk for hours every day for a little water.



Fog net project in Morocco

Thomas Loster At the moment we are working on further improvements. Together with our partners, we are in the process of raising fog net technology to a new quality level. WaterFoundation Ebenhausen, with our support, has developed new nets which are more resistant and have greater yields than before. We expect the second-generation fog net technology to become a blueprint. Thousands of people in arid areas where fog temporarily occurs can benefit. In Tanzania and Morocco, we see that it is not about huge sums of money. You can also make moderate resources go far if you pursue innovative approaches.



Educational work at schools

Dr. von Bomhard The ability to be innovative is also a key issue for our foundation, it by no means applies to Munich Re alone. New challenges demand new and creative solutions. This is as important in our business operations as it is in the foundation's work.

Dr. Schinzler We certainly need new approaches in disaster prevention and adaptation to climate change. The United Nations have been campaigning rigorously for disaster reduction for more than 25 years. Of course there have been successes, but more needs to be done. Climate change, population growth and increasing poverty force us to. And some of the foundation's projects have actually shown that you can achieve good results with systematic measures and the integration of local partners without costing huge amounts of money.

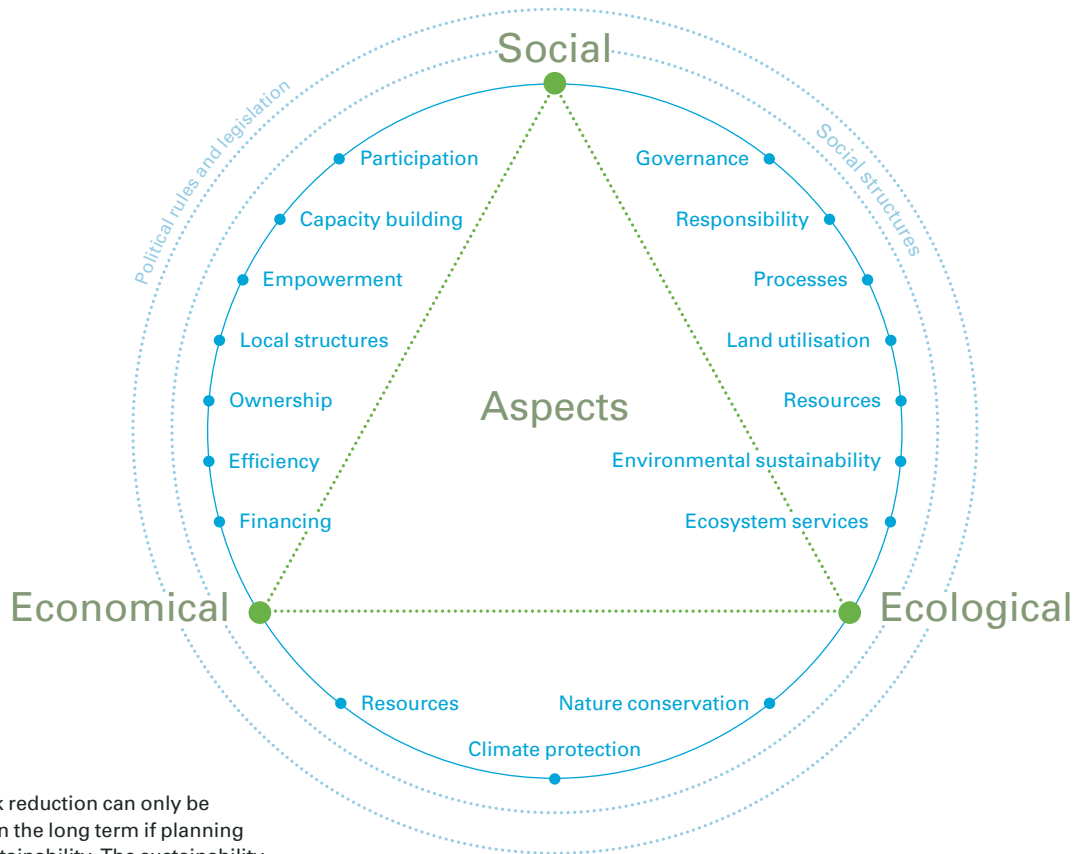
Dr. von Bomhard And that is especially important given such difficult conditions on the capital market as those at present. Foundations largely finance their work with the revenue earned on their assets. In times such as these, with exceptionally low interest rates, the earnings drop significantly and there is a danger of foundations not being able to continue their work to the same extent as before. The capital of Munich Re Foundation is invested in a special fund managed by the colleagues of our MEAG investment company. Back then, this fund was the first sustainability fund in the German world of foundations. Its performance average of over 4% in returns annually is quite presentable. However, the long period of low interest rates no doubt constitutes a growing challenge.

Dr. Schinzler We hope that we are not forced to cut back projects for this reason. The foundation work has been really successful in the first ten years, we have set a lot of things into motion and achieved a great deal. During the opening ceremony in 2005, Mr. von Bomhard, you said: "Those with broad-ranging knowledge bear a certain responsibility. Munich Re donates not only money but also knowledge." I'm pleased that our concept "From Knowledge to Action" has proven successful and that so many people have benefited from the foundation's work.

The spokesperson of Singpur's mayor in Bangladesh videoed flood damage on his mobile phone. He demonstrates during a council meeting that more and more houses are endangered. This boosts risk awareness.



Sustainable disaster risk reduction



Disaster risk reduction can only be successful in the long term if planning ensures sustainability. The sustainability triangle provides guidance. Terms, definitions and aspects along the pillars illustrate important project components that are essential to successful project planning.

Source: Munich Re Foundation 2016, own blueprint

If the impacts of natural disasters are to be contained, good preventative measures will be an absolute necessity. In the past year, important groundwork has been laid across the world in the areas of risk prevention and funding. Now the targets set in 2015 must be effectively implemented.

Thomas Loster



Thomas Loster
is Chairman of the Munich Re Foundation and an expert on
climate change and disaster prevention. He has been working in the field of
disaster analysis and trends for more than 25 years.

Mission accomplished. In March 2015, the United Nations adopted the global Framework for Disaster Risk Reduction in Sendai, Japan. More than 190 countries pledged to implement effective measures to minimise the impacts of natural disasters by 2030. In view of the rising numbers of victims caused by major disasters, this is urgently required. Hundreds, if not thousands, of astute minds applied their thoughts to finding ways of reducing the victim tolls as well as the financial burdens of major disasters. Years ago, the Green Climate Fund (GCF) was already set up to finance important climate projects in developing nations. From 2020 onwards, an annual sum of US\$ 100 billion will be made available to support adaptation to climate change and help cope with the impacts. The first payments to the GCF have been made, at present approximately US\$ 10 million are available. In view of the challenges involved, this is not exactly a handsome sum, but it is at least a first important step in the right direction.

At the beginning of November 2015, the fund approved the first eight projects and funding to the amount of US\$ 168 million. The projects are located in Africa, the Asian-Pacific region and in Latin America. Further approvals will follow in 2016. It is time now for the responsible authorities and project organisations to apply for the funds available so that they can take prompt and sustainable action. Even if failures, such as wells in arid areas sanding up as soon as the aid workers leave the country, are today luckily very rare: Aid organisations such as the German Society of International Cooperation (GIZ), the British Department for International Development (DFID) and the Swiss Agency for Development and Cooperation (DEZA) take stringent measures to ensure that the projects are properly evaluated and are, as far as possible, sustainable.

Resilience – the magic word

The term resilience has become a key word in the world of politics, in development cooperation and in project work. It is about preparing people and societies for the unavoidable. They must quickly cope with stress, shock or chronic strain caused by environmental changes or extreme weather events and regain their livelihoods. In doing this, it is important not to lose sight of the medium and long-term life perspectives. This can succeed if options for action are created for those affected, and adaptation and transformation capacities developed. The resilience discussion has just begun and it is important to develop a joint understanding of what it means.

Participation and coordination

Munich Re Foundation is also involved in disaster risk reduction projects, whereby we strictly lend our support to participatory approaches. It is only when people at risk are integrated, when they are provided with instructions and instruments and the accompanying explanations and information, that they can take action. However, this is just the first step. Many aspects must be taken into account to ensure that projects can succeed in the long term. This includes a correct assessment of the exact conditions on the ground: an estimation of the resources and capacities available, gender aspects and knowledge of land utilisation and the environmental compatibility of measures. Great care must also be taken to ensure good governance, reliable financing on a long-term basis, efficient processes and the assignment of the respective responsibilities. Attention to the respective prevailing political, social and regulatory environment must also not be neglected. A disturbance in just one of these project components could jeopardise or even cancel out the efforts of many years of work. Last but not least, long-term success also depends on so-called ownership. Only when the authorities on site accept their responsibility and sponsor a project with their own funds will it succeed in the long term.

There is still room for improvement in coordination between donors and players. Projects in regions should, or even must, be aligned with each other. Dialogue is important. Only within the framework of a major master plan, can measures be effectively combined so that they work in the long term. Then it may also prove possible to combine the targets and specifications of the United Nations and the countries affected from above (top-down) with the efforts at communal level (bottom-up). In this way, the numbers of victims and the financial burdens will be reduced and development secured.



Disaster risk reduction must begin with the people at risk. Citizens in Singpur, Bangladesh, raise their hands to participate in the discussion at a meeting in the mayor's office. They want to stay in the village that is threatened by flooding and are prepared to do something for disaster risk reduction.



Disaster prevention

2015 RISK Award — Focus on women

We received 145 applications for the 2015 RISK Award, twice as many as last year. This proves that the prize is receiving increased attention. The award was presented in March 2015 at the World Conference on Disaster Risk Reduction (WCDRR) in Sendai, Japan.

The 2015 RISK Award supports a project that is in keeping with the outcome of the Sendai conference. The winner, the All India Institute of Local Self-Government (AIILSG), aims to reduce vulnerability against disasters in the slums of Pune, a metropolis in India. The core of the project, “Community self-assessment and planning with women’s participation for disaster risk”, is to reinforce the role of women and children and integrate them more strongly in disaster risk reduction measures.

Woman in responsible roles

There is no shortage of risks in the slums of Mahatma Gandhi Vasti and Janata Vasahat on Parvati Hill in Pune. Narrow streets make escape difficult when fires break out, the frail housing offers no shelter in the event of landslides and earthquakes. The inadequate infrastructure, such as for water supplies, along with the ubiquitous

pollution and the lack of hygiene facilities, adds to the difficulties.

Women and children are often left to their own devices because the society is organised on a patriarchal basis. The men work outside the home during the daytime and hire themselves out in the city as labourers. Information about the risks and life-saving measures in the case of disaster often does not reach the women and children. In an emergency, they must help themselves, but often do not know how to do this. AIILSG wants to address this issue and raise awareness. Each community has already developed its own adaptation measures to the specific risks in the course of the years. Some work well, others are rather inefficient.

Together with the women, AIILSG analyses where there is leverage for optimisation. For this purpose, the institute has developed

Left: Spellbound children watch a street play in one of Pune's slums. This teaches them in a playful approach about the dangers of earthquakes and landslides and how to protect themselves.

the "Self-Assessment and Planning Tool" (SAP tool). Using a language of simple signs and symbols such as emoticons, the residents in these quarters can themselves assess their own situation. This enables women to take on more responsibility and begin to organise in self-help groups. It also strengthens their role in society.

"The All India Institute of Local Self-Government is a worthy winner of the prize and is addressing one of the most pressing issues of our times: rapid urbanisation and the consequences for poor people living in slums," explained UNISDR Chairwoman, Margareta Wahlström. "I'm glad about the narrow focus on women and children, whose needs are often not taken into account in disaster preparedness measures," she added.

About the RISK Award

The RISK Award was founded by Munich Re Foundation in cooperation with the Global Risk Forum Davos (GRF Davos) and the United Nations International Strategy for Disaster Risk Reduction (UNISDR). Funding of up to € 100,000 is made available by the foundation every two years.

Sendai World Conference on Disaster Risk Reduction (WCDRR)

The WCDRR organised by the United Nations takes place every ten years. More than 5,000 delegates share their experiences in risk management, explore trends and work on policy recommendations. The outcome of the 2015 conference was the adoption of the "Sendai Framework for Disaster Risk Reduction 2015–2030" which replaces the expired "Hyogo Framework for Action (HFA)." It sets down a road map for how the world can prepare more effectively for natural disasters in the next 15 years. The concept is based on four pillars:

- Understanding disaster risks,
- Strengthening disaster risk governance to manage disaster risks,
- Increasing investments in risk reduction and resilience,
- Enhancing disaster risk reduction and coupling it with reconstruction measures.



For further information on this issue:

www.riskaward.org



Below: Puppet shows are especially exciting for children. They learn in different performances about risks and how to behave in an emergency situation.

Right: Trained educators demonstrate in role-playing games what is important in a crisis.



Personal responsibility is an important step — Interview with Shweta Gupta



Shweta Gupta, Senior Project Coordinator of the All India Institute of Local Self-Government, explains the significance of the RISK Award and the next steps that her organisation will be taking.

Shweta, you won the 2015 RISK Award. What does this mean for you and the project?

The RISK Award is a great motivation for us as a team and for the people for whom we work. We can now continue our project and ensure that the slums really get help. I believe that we can already reach 20,000 people in Pune in the first stage of the project.

What are the next steps to be taken?

We will incorporate the people affected right from the start. We will teach them how to analyse their risk situation themselves and seek solutions. The focus is on women and children because they in particular need support.

And what about the men?

Indian men are on the move a lot. Women spend a lot of time at home. They are therefore often not involved in making decisions, planning and projects. It is precisely for this reason that we are concentrating on women, not on men.

What role do children play?

Children are our future. Small children may not yet be able to read, but they are already very curious and eager to learn. We organise educational games to arouse their attention. We work a lot with pictographs. The children may not yet understand letters, but they do understand pictures very well. And we practice how to behave in the case of an emergency with them.

What sort of emergencies do you mean?

We observe the different risks, especially during the monsoon season. Many slums are located along rivers or in the hills. Heavy rains trigger landslides and can devastate entire streets. The rivers swell within minutes and sweep away the houses. The people in these areas need to be prepared.

What are the main pillars of your project work?

There are two major elements. Firstly, people need to consciously learn to assess their situation so that they know the risks. Then they can begin to look for solutions. We educate trainers in the communities who later continue the project independently and set up teams called Slum Disaster Management Committees. Often it is women who work in these teams as volunteers. Personal responsibility is an important step towards long-term success.

Does this approach only work in Pune?

No, on the contrary, our project plan and the concept can be adapted individually and applied worldwide. Theoretically, we can help 65 million Indians in slums and more than 800 million people worldwide with our programme. Although we are actually too small for this, with the RISK Award we can take a first major step in the right direction.

2014 RISK Award – Peñaflor surmounts barriers

● Santiago de Chile
● Peñaflor,
Chile

One year after winning the 2014 RISK Award, ONG Inclusiva can pride itself on having achieved many successes during the implementation of its project in Chile. People with disabilities are today integrated in political decisions to a much greater extent than before. Emergency plans for disasters have been adapted, maps indicate not only emergency paths that are suitable for the disabled but also changes in the built-up environment, and thus increase safety.

The main goal of ONG is to reduce barriers and design risk management in such a way that integration does not remain a hackneyed expression, but is put into living practice. People with disabilities are more vulnerable during disasters; their resilience, in particular, must be reinforced. ONG has been working in close cooperation with the people in the city of Peñaflor. An action plan was drawn up and all households – whose agreement was a prerequisite – were marked into a risk map. With the help of the plan and the risk-map, people can quickly see where the hotspots are in an emergency and the places where specially trained responders are required.

Together with the city council, they identified the most vulnerable people. Architects and physiotherapists were part of the team that analysed the situation on the ground. The architects checked which structural changes are required in buildings to design a more disabled-friendly environment. The physiotherapists had the job of identifying the individual degree of disablements to be able to provide custom-fit assistance. Emergency and mobility kits were put together according to the results of this vulnerability analysis.

The project depends on the dedication of its many volunteer helpers. They are the foundation upon which it stands. ONG offers support such as sign language courses so that the deaf can be assisted more effectively. Sometimes it is quite simple things that are unbelievably valuable: walking aids and wheelchairs offer many people who had previously been confined to their home or even to their bed new possibilities of mobility.

“Without these aids, the people do not have sufficient mobility,” stresses Carlos Kaiser, ONG Director. “This increases their vulnerability when, for example, an earthquake occurs and people must leave buildings.”

ONG organised a seminar with representatives from the city council, volunteer helpers and Munich Re Foundation for the close of the project at the end of 2015. The “Lessons learned” were identified and possibilities for bringing the project to scale were investigated. The first step was being able to enlist the support of the Metropolitan Technological University Chile as an important partner. It will classify the practical findings of the research work and create risk maps for additional communities.

Christian Barthelt from Munich Re Foundation (left) and Carlos Kaiser (2nd from left) visit some of the families that have been helped by the RISK Award. Kathalina (middle) explains how she and her sister get along with three disabled children in Peñaflor.



For further information on this issue:

[www.risk-award.org/
risk-award/Projects-and-
Reports/RISK-Award-2014](http://www.risk-award.org/risk-award/Projects-and-Reports/RISK-Award-2014)

The Gibika project – A warning system for Dalbanga

The foundation's Gibika project for improving living conditions in Bangladesh communities has now entered into a critical phase. To prepare the country for coping with environmental changes in the long term, numerous adaptation measures are required. However, the foremost concern at present is to save people's lives. The village of Dalbanga South is paving the way.

Following the conclusion of the field research, the Gibika project team presented a review of the situation and defined the target areas and the main risks associated with them. The results show that similar challenges must be faced everywhere: cyclones, droughts, and floods, as well as massive river erosion that year after year washes away more and more land in the communities. Before large-scale measures can be taken, the major concern is to save people's lives as quickly as possible. As in Dalbanga South. The existing flood and cyclone warning system can still be optimised in this community.

Robust shelter offers safety

The village lies in the south of the country near Barisal. Cyclone Sidr, which cost approximately 3,500 lives in Bangladesh in 2007, hit Dalbanga South with particular severity. More than 70 people lost their lives, even though there was a warning system

and a shelter, the Dalbanga School. But it was only in 2010 that a sturdy protective building, a cyclone shelter, was built on stone columns, so that people can escape there to safety when a flood warning is sounded. So much for the theory; in practice there are more hurdles to clear.

Social restraints

In an emergency situation, people must take several very difficult decisions. And take them very quickly. Should they flee from a cyclone, even though the whole family is not present? What has top priority and what must be saved? Can they just abandon their house and livestock? What will happen to the goats and the hens? Many of the residents have built up a small existence for themselves. A heavy storm can rob them of everything in one blow. For this reason, they are reluctant to abandon their homes and animals – and decide not to go to the shelters.





Above: The Bishkali River eats its way further and further into the village of Dalbanga. It is only a question of time until this house on the outskirts of the village is torn away by one of the next floods.

Right: The cyclone shelter was built in 2010. It offers a place of safety for approximately 300 people in emergency situations. In quiet times it is used as a classroom for primary school pupils in Dalbanga.



Left: The first house behind the new dike belongs to Moshasen's family. It is home to the family of five. If the whole village is relocated, valuable agricultural land will be lost. In addition to this, the space behind the dike is far from large enough to accommodate all the residents.

Organisational gaps

The local warning system has been in place for several decades. However, it is not always reliable: the warning flags that are hoisted do not always correspond to the actual warning level. Such mistakes can lead to too many alarms and create confusion: which warning flag is right, which one is wrong? A lot of village residents, in particular the older people, consequently prefer to stay in their houses. In addition to this, there is a lack of human resources: apart from the person who is officially responsible, the task force for the entire community of Dalbanga South consists of two further volunteers. These three helpers must coordinate over 1,500 people – without constant training, this is a Herculean task.

Infrastructure challenges

The cyclone shelter has only room for approximately up to three hundred people. In contingency situations, however, as many as 1,500 persons must be brought to safety. The old school is then again used as a shelter. Then there is also the aspect of gender segregation to consider, as it has high

cultural priority. However, the shelter only has one room. Such social aspects must, therefore, also be integrated into the infrastructure planning.

The Gibika project is trying to develop medium- to long-term solutions for the village residents and open up new scopes for action. Resettlement could be one option. Dalbanga South is not threatened by cyclones and floods alone. As in numerous other communities, many people here too are struggling with the river erosion that is robbing them of their means of subsistence. Before this goal can be tackled, however, the struggle for bare survival is top priority. To achieve this, the warning system requires a reliable basis.

One key to sustainable success is the school children. If it proves possible to integrate an awareness for risks and automatic procedures during emergencies into school education, a first important step will have been taken.



Disaster prevention

2015 Resilience Academy – “Loss and Damage”

What happens if adaptation and mitigation do not have the desired effect in the battle against climate change? This for many people vitally important question was the focal point of the 2015 Resilience Academy. The basis for the discussions was the “Loss and Damage” programme of the UN Climate Secretariat (UNFCCC).

Adaptation to environmental risks and the avoidance of climate-related greenhouse gases (mitigation) are areas that have been relatively well researched. Both strategies aim at minimising the impacts of climate change as far as possible. The question is: what happens if adaptation and mitigation do not have the desired effect? What if protective mechanisms, such as warning systems against droughts, floods and storms, prove inadequate?

“Loss and Damage” in the context of climate

Environmental changes can take place so quickly that a society cannot adapt in time. This applies in particular to poor people in developing countries. Damage occurs and, in the worst case, the complete loss of property, land or a whole system, such as an ecosystem, is even at risk.

The central question is how the resilience of people whose subsistence is under threat can be strengthened. At the Resilience Academy, held from 6 to 12 September 2015 in Savar, Bangladesh, the delegates searched for solutions to the most urgent issues. Thirty young researchers from fifteen countries were invited to attend, along with practitioners such as members of the United States Agency for International Development, the German Society of International Cooperation (GIZ) and the Caritas charity organisation.

“Adaptation and mitigation projects serve to prevent ‘Loss and Damage’”, said Saleem Huq, director of the International Centre for Climate Change and Development (ICCCAD) and host of the Academy. As the success of such projects is not guaranteed, the international community needs a plan. It must regulate how

Left: Gibika project managers inspect the new dike in Dalbanga South accompanied by children from the village. A new protective wall is to be constructed with government funding. At least part of the community can then be protected.

Below: In 2013, the primary school in Singpur was still located on safe ground. The solid foundation was intended to offer protection against the floodwaters. In 2014, the river erosion was too strong and tore part of the building away.



damage and loss is to be handled. Who bears responsibility, who pays the costs? How can the losses be defined and when are they considered unavoidable? "Damage to social structures or ecosystems is practically unquantifiable," was one conclusion reached by the Academy participants. "I'm extremely satisfied with the Academy," explained Huq. "We will now draw up the drafts for approximately ten politically relevant publications and recommendations for the policy makers." Huq submitted the most important findings to the UN COP 21 Climate Change Conference in December.

Singpur village – "Loss and Damage" at first hand

Singpur is a community in Bangladesh located roughly 100 km to the north of the capital city of Dhaka. During the monsoon season, the plains around the village are flooded across areas of many kilometres for months at a time. Singpur then becomes an island. The residents must completely reorganise their lives (see also "The river and the school fees are devouring my land" on page 20).

Most of the population works in agriculture outside the monsoon period. During the monsoon season, fishing is the main source of income. Livelihoods therefore depend strongly on the weather. Too much or too little rain can quickly lead to income losses. One fisherman told us: "From time to time we cannot make a living here in Singpur. Then the families go to Dhaka or other towns to look for work there." 10 to 15% of the residents leave their home village for ever.

Singpur has taken measures to keep the damage low. A wall was built to halt the flood waves and prevent erosion. However, it only protects a part of the community. If the floods are strong, houses still fall victim to the encroaching water. "It took years for the government to finance the first dike with the help of aid organisations and the municipal authorities. But who pays for the damage on the other side?" a fisherman asked us. This example shows that adaptation does not always succeed, especially where there is a lack of the requisite funds. Alternatives are then all the more important for poor communities. The United Nations are trying to create the requisite framework conditions for this purpose with their "Loss and Damage" programme.

About the Resilience Academy

The Resilience Academy is organised jointly by ICCCAD, UNU-EHS and Munich Re Foundation; the participants form groups. In the succeeding months they draw up working papers on "Loss and Damage" and integrate them into important processes such as the UNFCCC. Selected papers are published in indexed journals.



2013



2015

For further information on this issue:

www.munichre-foundation.org/home/DisasterPrevention/Resilience-Academy



Left: Fishermen in Singpur explain how strongly their lives depend on the weather and monsoons. Their village lies in the middle of a grass plain for six months of the year and for the other six months on an island.

Above: Approximately 15,000 people live in 2,000 households in the village. During flooding in the monsoon season, the island is partly protected against the water masses by a robust dam.

Disaster prevention

“The river and the school fees are devouring my land”

Life in Singpur was good until the river began coming closer and closer. Now, the peaceful village in the middle of Bangladesh is losing dozens of houses every year.

Gulnaha is proud. More than twenty women and children crowd into her little hut while she is being interviewed by students from the Resilience Academy. Roughly 15,000 people live in the village. There is little water supply and only a few solar panels produce electricity. Gulnaha was born in Singpur and inherited land from her father. She owns a small house and a garden. So that her son Mahmud can one day lead a better life, he must attend school. Gulnaha needs money for her son’s education, but she has none.

There is a savings society in the village in which women put aside money for emergencies. However, Gulnaha cannot afford the monthly fees of 100 to 300 takas (one to three euros). “I had to go to the money lender,” she admits. “But I always paid back my debts on time.” However, to do this she had to sell her land. “Earlier, I had 4,000 square metres, today I only have 80 square metres left, just enough to survive. I want my son to have a better life than I did,” says Gulnaha. “His education is today devouring my land.” It is a race against time – with an unknown outcome.

Environmental changes are destroying Singpur

“The river actually is a huge problem,” comments Kohlikur Rahman, spokesperson of Singpur’s mayor. In 2015 alone, 270 families were forced to move. “The water level in the river is rising continuously, every year more land falls victim to the erosion. In five years, the house in which we are sitting will no longer be here,” says Kohlikur. The people try to halt the erosion with walls of bamboo, but they are expensive and do not even last for a year. In the last 15 years, the river has changed strongly. The rains often begin earlier than before and have become stronger and more irregular. The Academy students agree that this fits in with the observed impacts of climate change.

Word has quickly spread that strangers are in the village. Almost one hundred men, women and children have come to discuss their problems with the visitors. At the end of the conversation, the young researchers ask: “What is your greatest wish?” Without hesitation, the people of Singpur reply: “We are happy here, we want to stay in our village.”

Making bricks for a better world — Questions put to Ava Mulla



Ava Mulla is a young entrepreneur from Germany. She has designed bricks that offer greater resistance to natural disasters such as earthquakes and flash floods. The production method is environmentally friendly and inexpensive. At present she is setting up production sites in Bangladesh.

You want to change the market in Bangladesh with your new building stones. What gave you this idea?

In 2014 I travelled to Bangladesh, where I noticed a lot of disadvantages in the traditional way of making bricks. There are about 8,000 brick yards producing 18 billion bricks every year using production methods that hail back to the 18th century and are extremely inefficient. They devour 3.5 million metric tons of coal and two million metric tons of wood each year. In addition to the heavy use of resources, there is also the problem of particulate matter pollution, that alone in the capital city of Dhaka leads to hundreds of deaths. Not to mention the often miserable working conditions in the factories and the bad quality of the conventional bricks.

What's so special about your bricks, what advantages do they offer?

In principle, they're earth-cement bricks, known as CSEBs (Compressed Stabilised Earth Blocks), that have been available since the 50s: earth is mixed with cement and water, compressed and then air-dried. This saves resources and reduces CO₂ emissions by 75 to 90%. The finished blocks are much more robust than fired bricks and can even be pressed into the widest variety of shapes that interlock with each other and withstand exterior forces better.

Can you describe a CSEB press?

A manual block press is slightly larger than a washing machine and costs about €3,000. With a team of seven you can produce roughly 1,500 earth blocks a day. In two or three days, you have enough blocks to build a house.

You must assert yourself as a young entrepreneur in Bangladesh. You're operating in a male-dominated sector. That's not always easy, is it?

Exactly. In some respects, the country is very conservative. It's most unusual that a woman of 29 is not yet married, drives a motorbike and manages a production site in which mostly men work. However, the Bangladeshi people often react with respect and interest. I also meet with approval and support.

Where do you see your company Building Pioneers in ten years?

Absurd as it may sound, I hope that in ten years, Building Pioneers will have become superfluous in Bangladesh because many small and large providers will have copied our idea and are supplying the market with good and low-cost CSEBs. They have already been used to build thousands of houses all over the world. It's a fantastic product that we have to bring out of the niche and onto the market.

Rural women in Ahmedabad, Gujarat (India), proudly present their mobile phones. The phones help them to cope better with daily life and in many areas also secure their livelihoods.

Right: Insurance is often sold at the house door in Morocco. Modern telecommunications technology can reduce the costs significantly.



Insuring millennium development goals – is this feasible?



One of the millennium development goals, to halve extreme poverty by 2015, was reached years ago already. However, the World Bank is warning against too much complacency. Without adequate risk protection, there is a danger that economic shocks, food shortages or climate change could throw people back into poverty again.

Dirk Reinhard



Dirk Reinhard
is Vice-Chairman of the Munich Re Foundation
where he is in charge of
the Microinsurance Department.

In 1990, almost half the population in developing countries lived on less than US\$ 1.25 a day. According to the UN-Millennium Development Goals Report the number of the poorest people dropped to around 800 million by 2015, whereby the greatest progress was made in Asia. Africa was only able to benefit to a small extent. Parallel to the decrease in extreme poverty, the number of people with a daily income of between two and ten US dollars has risen to over 50% of the global population, as the Pew Center Research reported. Between 2001 and 2011 alone, 700 to 800 million people were able to surpass the income threshold of US\$ 1.25 per day. However, experts are warning that this development cannot endure.

For example because people are set back by illness, accidents or natural disasters. According to the “World Map of Microinsurance”, a database on microinsurance markets worldwide, only roughly 200 million people have some form of microinsurance. Although the market segment in Africa alone has grown within three years by approximately 30%, given unchanging dynamics, it would take another 30 years until more than two thirds of the people on this continent were microinsured.

To accelerate the process, experts are searching for a “game changer”, a ground-breaking innovation: what has the potential to appreciably change the boundary conditions and accelerate growth? The extremely fast spread of mobile phone technology and mobile payment systems is a promising candidate. Statistically speaking, every second inhabitant of Africa today already owns a cell phone. With the help of prepaid systems, a balance can be credited to the phone and transferred to other mobile phones. In this way, the telephone becomes a pocket bank.

In developing countries, there are approximately 2.3 million pay points – more than twice the amount of cash points – at which accounts can be topped up and money withdrawn. Well over 100 million registered mobile telephone accounts today offer a large number of people the possibility of saving money for the first time, thus making them more resilient to financial difficulties. And Africa, which is heavily impacted by poverty, is the world leader in this development.

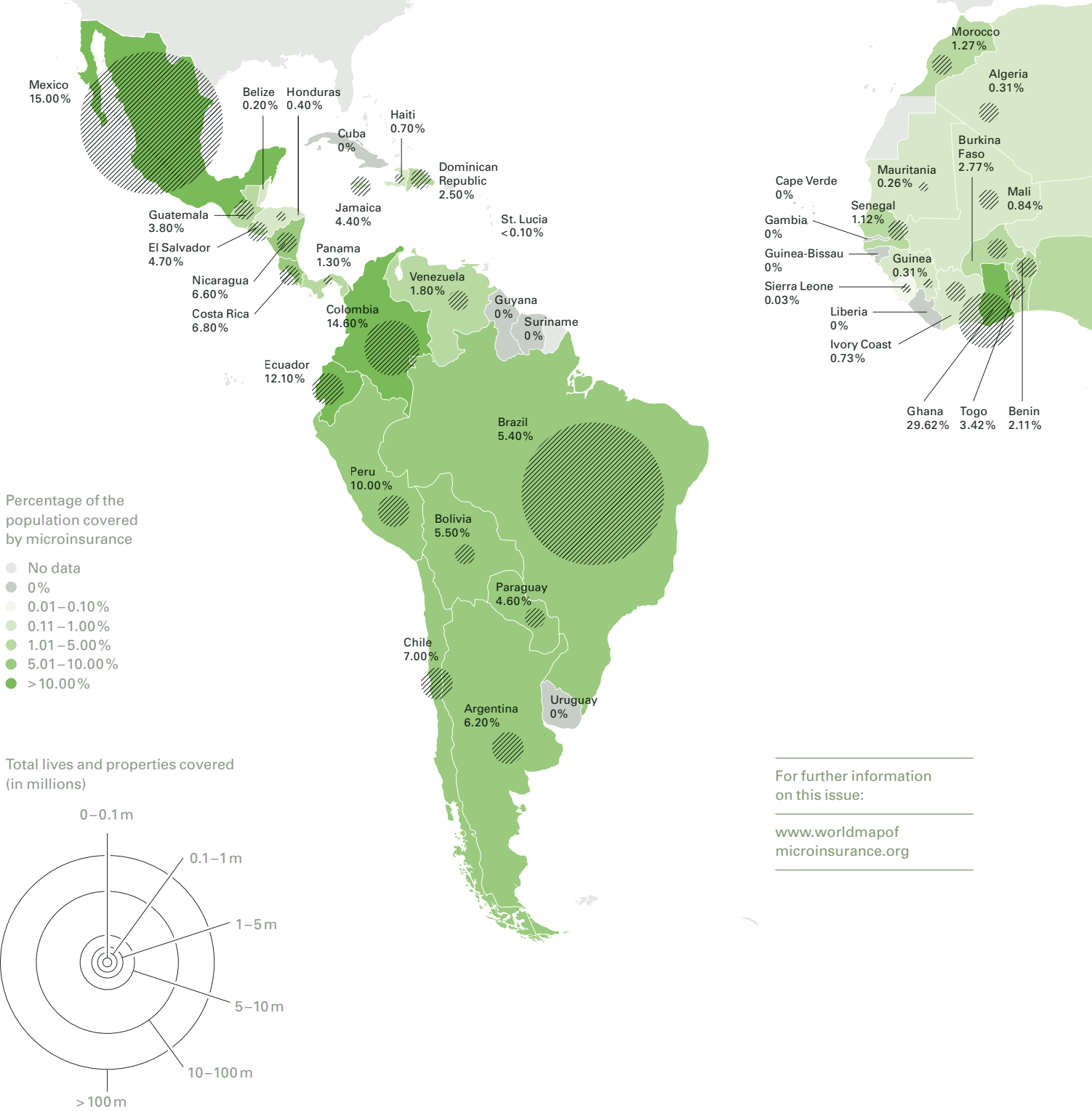
Mobile telephone services have become the most important distribution channel for microinsurances. At the moment, systems in which customer loyalty is the priority predominate. In the “freemium” models, the mobile phone company pays the premium so that the customer therefore only pays indirectly. The longer the customer calls, the higher is the insurance sum. How successful this model will be remains to be seen. One advantage is the high efficiency of this distribution channel. But even more interesting is the enormous number of customers who, within a very short time, can thus come into contact with insurance, perhaps for the first time.

Life and accident policies at more than 50% dominate the market for microinsurance. Coverage against climate risks – or rather weather risks – is as yet virtually non-existent. It is estimated that only about 100 million poor people are insured against climate-related risks in developing and emerging countries so far. The Climate Risk Insurance Initiative agreed at the G7 summit in summer 2015 aims to insure an additional 400 million people by 2020. This political will could become the second “game changer”. What should not be forgotten is that in the case of multinational insurance solutions, insurance sum payouts must also reach the individual person in an emergency situation.

Microinsurance is a central element in the protection of livelihoods of low-income people. If their resilience is to be improved further, a combination with other microfinance instruments and adequate risk provision will be essential. It is also important to ensure political and economic stability. In any case, the will and the technology for the expansion of microinsurance are available. With an insurance solution, the chances are good that we will meet the major challenge of not falling back behind the Millennium Development Goal of halving poverty. Even though we seize the opportunities, the goal of “insuring” the millennium development goals still remains a huge task. But it can be accomplished.



World Map of Microinsurance

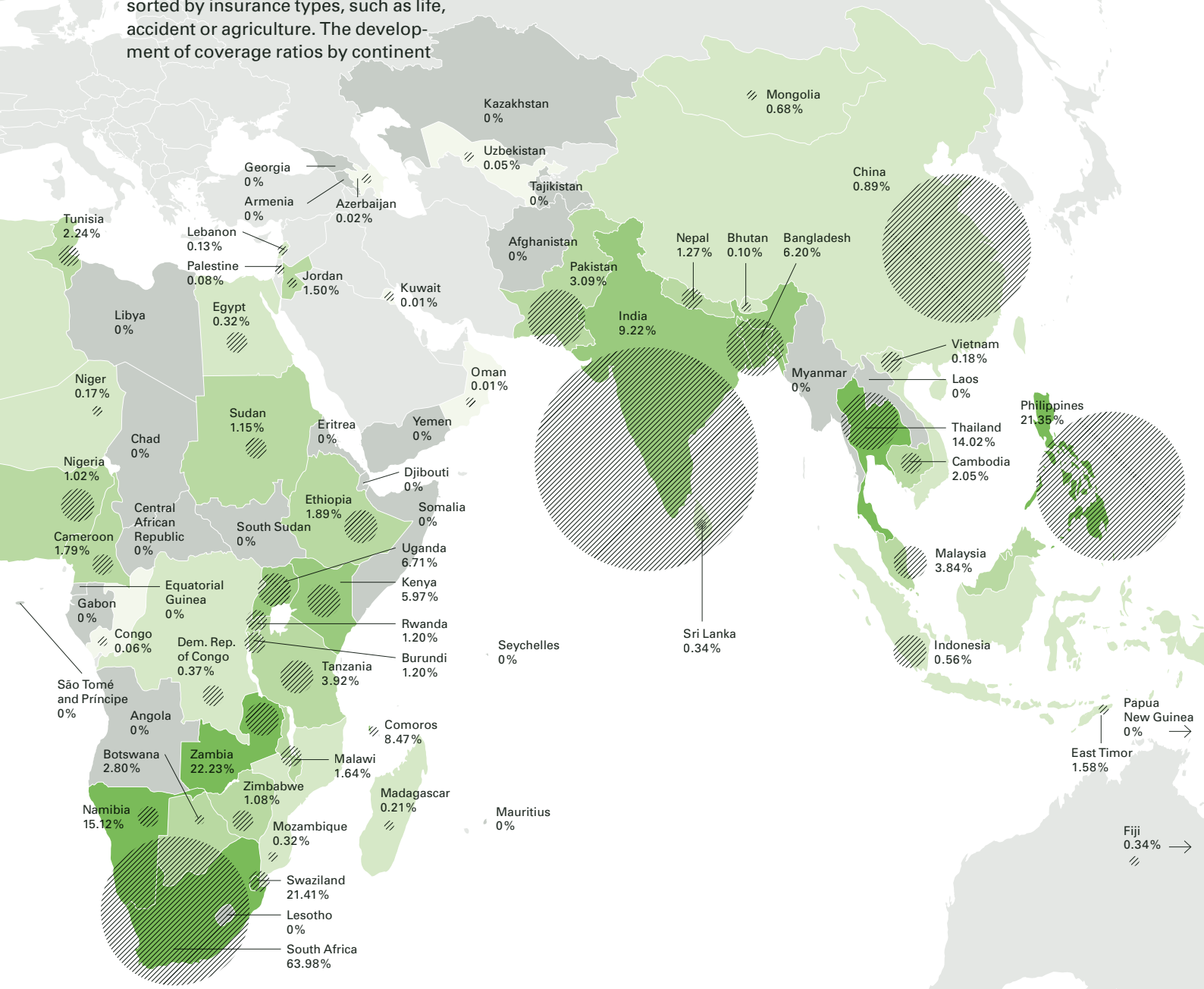


For further information on this issue:

www.worldmapofmicroinsurance.org

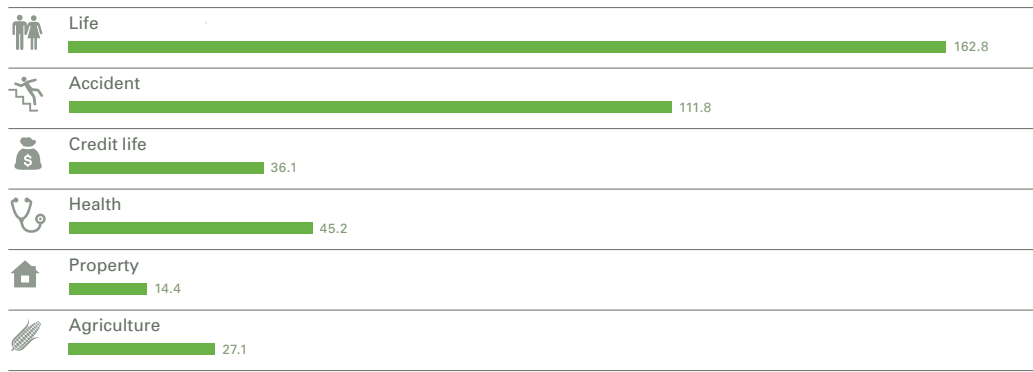
The online version of the Worldmap of Microinsurance is an interactive map showing the microinsurance coverage in Latin America, Africa and Asia. By clicking on the different countries the specific coverage ratios appear. Moreover, it is possible to display data sorted by insurance types, such as life, accident or agriculture. The development of coverage ratios by continent

over the years are shown below the map. The world map brings together all previous and current landscape studies and will be updated as soon as further studies deliver new data.



Landscape of Microinsurance: Worldwide

Types of products offered (millions of lives covered)



Lives covered

280 m

Gross written premium (US\$)

2.3 bn

Source: Munich Re Foundation 2016, own blue print; data basis: World Map of Microinsurance

11th International Microinsurance Conference — Greater diversity boosts demand



Representatives from the microinsurance sector came together from all over the world for the eleventh time to develop ideas and concepts for further growth. The new Landscape Study on Africa provided impressive facts.

For further information on this issue:

www.microinsuranceconference.org/2015

The 11th International Microinsurance Conference “Driving growth and sustainability – A business case for microinsurance” took place from 3 to 5 November 2015 in Casablanca, Morocco, and thus for the first time in the Middle East/North Africa (MENA) region. Some 350 insurance and development experts from 55 countries addressed the questions of how microinsurances can be designed so that they are more successful and sustainable.

Morocco is one of the countries in which microinsurance has experienced above-average growth in recent times. According to estimates, more than half a million Moroccans have at least one microinsurance policy. “To promote this development, the legislator has introduced a series of changes to facilitate access to microinsurances,” explained Moulay Hafid Elalamy, the representative from the

Moroccan supervisory authority. As a result, microfinance organisations are able to offer products for a wider range of risks. In addition to this, they have been exempted from certain regulatory constraints to reduce costs, and it is now possible to sell insurances via mobile phone service providers. This opens up a new and important distribution channel.

New momentum through G7

Lively discussions took place about the plans of the G7 states to insure an additional 400 million people in the coming years against climate risks and weather disasters through microinsurance. The participants called for stronger involvement of the public sector, particularly in the field of agricultural and health schemes. In addition to this, the industry must focus more strongly on public-private partnerships to bundle efforts, they said.

Left: The Microinsurance Conference was held for the first time in the Middle East/ North Africa (MENA) region. Bachir Baddou, General Director of Morocco's insurance association, FMSAR, explained the growth potential for the North African regions during the opening ceremony.

Below: The attendance of participants from 55 countries testifies to the importance of the conference.

Right: Speakers and delegates developed solutions for more efficient microinsurance systems in 26 sessions and workshops.

To encourage the industry to take greater initiative on the market, the participants recommended that the entry barriers be kept low. The insurers made it clear that an "ex-post supervision" judging performance according to outcomes would make investing in product development easier. This could take the form of regulatory authorities, for example, concentrating on important key performance indicators and intervening in the event of loss ratios that are too low, suggesting undesirable developments. In this case, an analysis would be required to ascertain whether the design of the programme is at fault or whether the customers have an inadequate understanding of how the product works.

Educating people about the benefits of microinsurance therefore remains an important factor and must be considered in the development of new markets. To ensure that such products are made available in the first place, better in-depth market research into customer needs is essential.

"But we also need to manage expectations and be realistic when it comes to time lines," said Dirk Reinhard, Chairman of the Conference Steering Committee and Vice Chairman of Munich Re Foundation. Despite new technological possibilities in distribution, and new momentum through the resolutions passed at the G7 summit, customer figures are growing only hesitatingly. Initial estimates of further trends may be available by the 12th International Microinsurance Conference in Sri Lanka at the end of 2016.

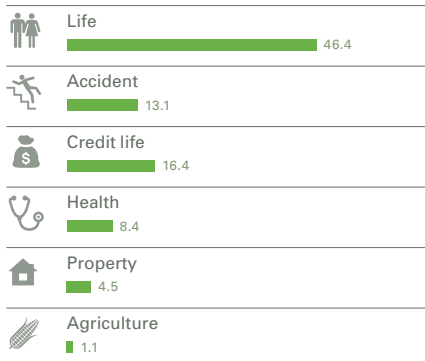
Encouraging results of the Landscape Study

The progress made in recent years was illustrated by the first results of the "Landscape of Microinsurance in Africa 2015" study presented by Munich Re Foundation and the Microinsurance Network. The preliminary report summarises the most important findings and trends of the study, which will be published in the first quarter of 2016.



Landscape of Microinsurance: Africa

Types of products offered (millions of lives covered)

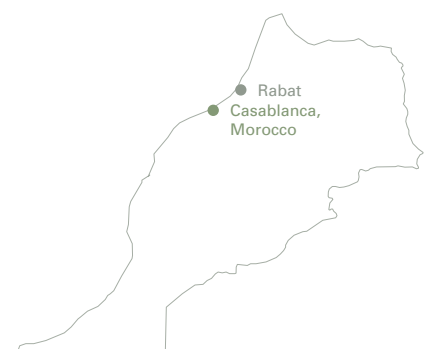


Lives covered

62 m

Gross written premium (US\$)

647 m



Source: Munich Re Foundation 2016, own blue print; data basis: World Map of Microinsurance

Although life products still dominate the region in terms of coverage, the largest growth was seen in health and agricultural covers.



According to the latest survey, 5.4% of the African population are covered by a microinsurance product (compared to 4.4% in 2011).



The publications presented by the member organisations of the Microinsurance Network were met with great interest.

According to these findings, the number of microinsured in Africa between 2011 and 2014 has risen from 44.4 million to 61.9 million. Of even greater significance is the fact that the premium income now totals US\$ 650 million. Taking only those providers who were active in both 2011 and 2014 into account, the premium income has grown by around 30%.

Although life insurance still predominates, a lot has changed for the better in Africa in terms of product development, diversity and scope. Coverages in the area of health and also in non-life and agricultural insurance underwent stronger growth than life insurances. However, the starting level in non-life and agriculture was extremely low. A broad customer base is still nowhere in sight. The “explosive” increase in health insurance – as Michael McCord, Chairman of the Microinsurance Network, called it, – is primarily due to the fact that some programmes are now distributed via the networks of the mobile phone operators.

Distribution a key factor

Distribution via mobile telephone providers is reflected in the growth figures. In Zambia, where microinsurance grew strongly, the sale of a funeral costs policy via mobile phones is turning into a runaway success. In Ghana, where the microinsurance branch has also grown substantially, half the customers are canvassed via mobile phone providers. The significance of the influence of the distribution channel for the industry was demonstrated in Namibia,

Tanzania and Zimbabwe. In these countries, microinsurance coverage in the population was on the decline and products had been taken off the market because the distribution structure had been changed.

Once again, the Microinsurance Conference in Morocco delivered significant impetus for new concepts and ideas and contributed to the development of the market worldwide. In 2016 we will continue our series of conferences with an event in Sri Lanka. After all, there is still a lot to be done.

Background information on the 11th International Microinsurance Conference

The conference hosts were Munich Re Foundation, the Microinsurance Network, the Centre Mohammed VI de Soutien à la Microfinance Solidaire and the Moroccan insurance association, FMSAR. The conference was also supported by the Conférence Inter-africaine des Marchés d'Assurances (CIMA), the Center for the Economic Analysis of Risk (CEAR), the Impact Insurance Facility of the International Labor Organization (ILO), Making Finance Work for Africa and Milliman.



Field trip – A visit to AlAmana Microfinance



Microfinance is a success story in Morocco. Delegates from this year's International Microinsurance Conference were able to gain a first-hand impression of how distribution works on the ground in the country.

For further information on this issue:

www.alamana.org.ma

Above: The AlAmana loan consultant explains the advantages of insurance to a resident of the little village Dar Kaed taking an "Assistance" product as an example.

AlAmana ("Trust") is the largest microfinance institute in Morocco. Apart from providing loans, it also sells microinsurances. With a credit volume of US\$ 2.5 billion, the organisation has been serving almost 1.4 million customers since its foundation, in particular small companies and craftspeople. Approximately 70% of the customers are women.

The village of Dar Kaed with a population of 1,500 is one hour's journey from Casablanca. Loan consultants Nagat Adouline and Issam Baoukalef inform the people in the village about possibilities for ensuring themselves with the "Assistance" product from AlAmana (see insert) for US\$ 1 a month per family. The average loan is approximately US\$ 1,000, which is well below the maximum loan of US\$ 5,000 that is permitted under Moroccan microinsurance regulations. The interest rate of roughly 20% is apparently not a problem.

We met with eight customers in an AlAmana branch office in Casablanca. The group was very heterogeneous, beginning with a young mother and her new-born infant to a senior citizen who was well advanced in years. All of them use the loan to purchase products that they then resell. At the end of the credit period – usually 12 to 18 months –

the insurance coverage also expires. "When I recently broke my foot, I didn't know that I could even have called an ambulance over AlAmana," the elderly lady told us. All the customers appear to be well satisfied with the "Assistance" product in general, but would like to have more options that are not coupled to a loan. However, more comprehensive coverage means higher premiums. They could undoubtedly manage US\$ 5 a month, the customers said. However, when they realised that this would entail costs of US\$ 120 within two years, it made them stop and think.

The demand for microfinance products with supplementary insurance coverage is high. Personal contact, trust and understanding the needs of the customers are decisive for success. However, these efforts have their price. If the costs could be reduced, even more people could insure their incomes.

The main components of AlAmana "Assistance"

Obligatory insurance coverage for the period of the loan.

Monthly premium:
US\$ 1/month (family)
US\$ 0.65/month (single)

Benefits:

- Birth gift of US\$ 30 per child
- Debt cancellation in the case of invalidity or death
- Accident benefit: US\$ 100 to US\$ 500
- Hospital allowance: US\$ 150 to US\$ 500 for diagnosis after 24 hours, otherwise US\$ 50 to US\$ 100
- Ambulance service
- Funeral expenses (no limit)

Learning Sessions in Peru – In search of alternative distribution solutions



Exchange and discussion on innovations in microinsurance: more than one hundred representatives from the insurance industry gathered in Lima to participate in this meeting.

Almost a quarter of the 30 million Peruvians live on or below the national poverty line. However, as demonstrated by “The Landscape of Microinsurance in Latin America and the Caribbean” study, almost 10% of the population have a microinsurance policy. They and their family are thus insured against illness, accident or death. This above-average quota for Latin America is astonishing, as two major insurance programmes have had to cope with serious problems in recent years. As a result, almost one million customers between 2011 and 2013 cancelled their policies.

Search for new distribution channels
The bulk of the business has so far been channelled through microfinance organisations accounting for almost half of all the customers. One of the greatest challenges is to tap further customer groups via new and less expensive distribution channels. A role model in this respect could be the Brazilian finance institute Bradesco.

Its experience with sales through so-called bank correspondents – small retailers or hairdressers offering bank services on behalf of the institute – has been good. These agents even reach potential customers in towns and villages where there are no bank offices. However, alternative distribution methods alone do not guarantee success as long as they are not accompanied by other measures. For a sustainable market to develop, it is above all important to explain to people how insurance works.

In Lima, the International Labor Organization (ILO) presented an overview of public-private partnerships (PPP) and the possibilities of adapting insurance products better to customer requirements. Events on health, disaster and agricultural insurance rounded the programme off. A Learning Sessions expert round discussed the opportunities offered by mobile telephone systems, in particular with Peru’s new platform for mobile banking and its functions.

More than 90% of all the residents in the country own a mobile phone. This opens up a substantial market potential for mobile payment systems and for insurance sales and payout accounting. Tele-Salud, for example, one of the leading telemedicine providers in Latin America, uses the mobile telephone to efficiently offer customers all its health insurance services.

G7 resolutions open up opportunities

The development of the insurance market depends strongly on the economic situation of a country. The plans made by the G7 countries to increase the number of people insured against climate risks by 400 million within the next four years offer an unparalleled opportunity. Munich Re Foundation is determined to support this process. The development of sound insurance solutions for low-income groups will require the creation of well-managed partnerships between risk carriers, sales departments, sponsors and state agencies. This applies not only to climate risks but also to the

introduction of basic coverage for illness across the entire region as far as possible. The implementation of these processes requires successful cooperation at regional, national and even transnational level.

About the event

The Microinsurance Learning Sessions Peru took place in Lima from 6 to 7 July 2015. More than 100 insurance experts – mainly from Latin America – attended the conference. The event was hosted by the Impact Insurance Facility of the ILO in partnership with Munich Re Foundation and supported by the APESEG (Asociación Peruana de Empresas de Seguros) insurance association, FOMIN and the Microinsurance Network.

Latin America in the spotlight

A lot of what we know about microinsurances today, originally comes from case studies of individual countries or specific organisations. Although they are very helpful, these single studies concentrate on selected market areas and often lack general information on the microinsurance industry. This makes it difficult to identify gaps in the product offerings and recognise trends in the early stages.

“The Landscape of Microinsurance in Latin America and the Caribbean” study offers a deep insight into the market. The complete study was published at the end of September 2015. It analyses the microinsurance business of almost one hundred insurance companies in Latin America and the Caribbean and illustrates the conditions under which microinsurances are profitable. The companies interviewed for the study offer a total of over 200 microinsurance products and generate an annual premium volume of US\$ 828 million. Almost 49 million people or 8% of the population in the region are already microinsured.

The study, which is also available as a PDF file, was published by the Microinsurance Network and Munich Re Foundation.

www.munichre-foundation.org/home/Microinsurance/MicroinsuranceLandscape

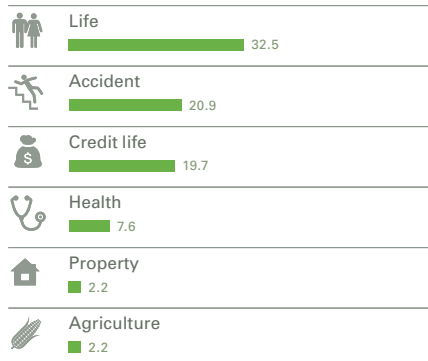


Agricultural insurances were the subject of a panel discussion hosted by Dirk Reinhard, Vice Chairman of Munich Re Foundation.



Landscape of Microinsurance: Latin America and the Caribbean

Types of products offered
(millions of lives covered)



Lives covered

49 m

Gross written premium (US\$)

828 m

Source: Munich Re Foundation 2016, own blue print; data basis: World Map of Microinsurance



Microinsurance

Learning Sessions Zambia – A model for other countries

Although most Zambians do not consider insurance a necessity, the number of microinsurances rose between 2011 and 2015 from 200,000 to more than three million. The Zambian insurance industry plans to double this figure in the next four years.

This successful result is not least due to the efforts of the Zambian Technical Advisory Group (TAG). It was founded in 2010 and has achieved a great deal since then. Zambia now intends to introduce special microinsurance legislation. The goal: to create more growth. The draft bill limits the insurance sum for microinsurance products to four times the national average income and the duration of policy terms to 12 months. At the same time, the capital requirements will be relaxed and insurance companies will be permitted to sell life as well as non-life insurance.

The sale of new products via mobile telephone service providers was conducive for the rapid growth. The cooperation between all the stakeholder groups, a clearly defined goal, a common strategy and close cooperation were beneficial in this respect. With this experience, Zambia can act

as a role model for other countries. "However, we must be patient," warned Dirk Reinhard, Vice Chairman of Munich Re Foundation. "It took the developed markets over 100 years to grow to their present size. If we expect the same thing to happen in barely developed markets within only five to ten years, we will be disappointed."

If the number of six million policies sold is actually to be reached in the coming years, not only a long-term strategy will be required but also a broad-ranging educational campaign to raise consumer awareness for the topic. The example of South African Hollard Insurance demonstrates that this is well worth the effort. It was able to acquire 7% more customers with its informational measures on funeral expense insurance. This corresponds to

From 2011 to 2014
96 new products were launched
in Africa versus 45 products
discontinued or altered for the
mass market.



In Africa 45% of the products
are sold via mobile network
operators (MNOs), retailers
and funeral parlours.



Left: It is important for small
business owners to be well
versed in financial matters.
A loan officer advises women in
the village of Eedama (Namibia)
about loan and insurance issues.

Below: At the final workshop
in Livingstone the delegates
discussed with international
experts such as Craig Churchill
from the ILO.

250,000 additional policies and
US\$ 2.3 million in insurance fees.
In comparison, the new investments
were a mere 35% of the additional
premiums.

At the Learning Sessions, several
companies and organisations presented
the activities which are intended
to attract new customers. The greatest
challenge still remains sales and
distribution. At the same time, new
technologies can strongly stimulate
market growth. As in many other
African countries, life insurance also
dominates the market in Zambia.
In contrast, the range of non-life products
available and the interest in them
is low, partly because there has been a
lack of support from the government.
Zambia has taken first steps to change
this. Many countries are prepared
to follow its example. Regulatory
authorities from Kenya, Lesotho,
South Africa, Tanzania and Zambia
had sent representatives to the
conference. The Kenyan Insurance
Regulatory Authority plan to hold
Learning Sessions in Kenya in
2016 in cooperation with the International
Labor Organization (ILO) and
Munich Re Foundation.

About the event

The Microinsurance Learning Sessions
Zambia took place in Livingstone
from 10 to 13 March 2015. The event
was attended by almost one hundred
insurance experts, most of them
from Africa. The main subject of
the sessions was "Microinsurance
business models for Africa".

The event was hosted by TAG
in collaboration with Financial Sector
Deepening Zambia (FSDZ), Munich Re
Foundation and the ILO's Impact
Insurance Facility. The event was
also supported by FinMark Trust,
the Center for Financial Regulation
and Inclusion (Cenfri), the Insurers
Association of Zambia (IAZ), the
Pensions and Insurance Authority
(PIA), the Microinsurance Network
and the African Insurance Organ-
isation (AIO).



Anniversary

10 years Munich Re Foundation

Munich Re Foundation was inaugurated on 7 April 2005 during a formal ceremony to mark the occasion. We look back in 2015 on ten years of project work.

We have held microinsurance conferences in many regions of the world, hosted dialogue forums in Munich and published more than 100 publications on disaster risk reduction, climate change and resilience. We have set up flood warning systems, awarded internationally recognised prizes in the field of disaster preparedness, initiated, supported and funded educational projects at schools and universities. The list is long and diverse. On the following four pages we recapture some of the highlights.



10 years

2000

18 December: Establishment of the foundation

2002

MEAG-MRS endowment fund set up as the first sustainability fund of a major German foundation



2005

7 April: Formal going public in Munich Re in the presence of Dr. Schinzler (left), Dr. von Bomhard (2nd from right) and representatives of the United Nations



2005

First foundation project: Chair of Social Vulnerability at the United Nations University in Bonn

2006

First Summer Academy on "Social Vulnerability" in Hohenkammer

2013

First Resilience Academy in Bangladesh within the framework of the Gibika project



2005

First International Microinsurance Conference in Hohenkammer

2014

10th International Microinsurance Conference in Mexico City

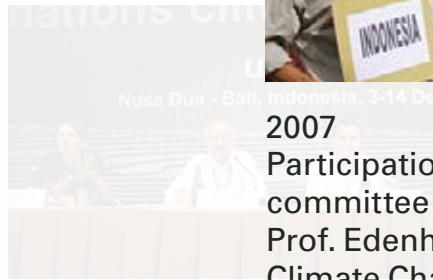
2015

10th Microinsurance Learning Sessions in Zambia

2005

"We want to prepare people to deal with risks and, where possible, improve their living conditions."

Thomas Loster, 2005



2006
2007

2007
Participation in the political committee of the COP 13 in Bali: Prof. Edenhofer (PIK) presents the Climate Change and Justice project

2011
Thomas Loster, Chairman of the foundation, speaks at the General Assembly of the United Nations

2012
Book publication of "Climate Change, Justice and Sustainability": foundation project in cooperation with Misereor, PIK and the Munich School of Philosophy, completed after four years of preparation

2006
Prize for early-warning systems awarded to Tonga at the Early Warning Conference in Bonn



2006
Publication of "Protecting the poor – A Microinsurance Compendium"

2012
Volume I of the compendium has meanwhile been published in four languages. A second, updated volume appears in April 2012

2013
(Jakarta) First market figures on microinsurance in Asia published, thus completing the "World Map of Microinsurance"



2009
Flood-warning system in Mozambique passes first endurance tests

2012
Mozambique project concluded. The concept is multiplied in the northern part of the country

2012
First RISK Award for Beira, Mozambique

2015
RISK Award: The foundation receives 145 applications from 60 countries

2008
2009



2010
Virtual Academy project launched: MRF accepts sustainability education mandate

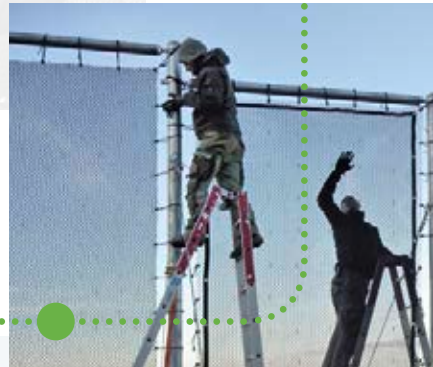
2013
 Virtual Academy gains ground: 500 videos, 30,000 visits via YouTube, 1,200 registered students

2014
 The foundation's advisory board mandate for the UN Decade "Education for Sustainable Development" ends

2015
 Munich Energy School: almost 6,000 pupils since the programme was launched in 2009

2012

2007
 The first fog nets installed in Eritrea



2012
Fog nets highlands laboratory built in Morocco: test collector installed

2015
 Inauguration of fog net system in Morocco, provision of drinking water supplies for four villages

2010
2011

"The foundation shows that there is a lot more to the Munich Re brand than a global risk carrier."

Dr. Hans-Jürgen Schinzler, 2009

2015

“The foundation has established itself firmly within the national as well as the international landscape of charitable foundations.”

Dr. Nikolaus von Bomhard, 2015



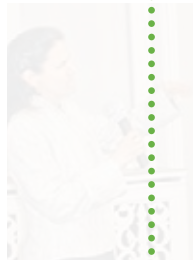
2013
Hurricane Sandy (2012) in Haiti, the barely-noticed disaster – the foundation funds emergency relief efforts

2015
Emergency aid restores water supplies in Nepal following earthquake

2005
First dialogue forum
“Water in megacities”



2012
Frank Walter Steinmeier speaks at dialogue forum on “Power and influence – Who controls the world’s destiny?”



2015
Anniversary dialogue forum marking the occasion of the foundation’s 10th anniversary – Keynote speaker Claudia Kemfert discusses the energy turnaround

By 2015
Approximately 8,000 guests had attended the dialogue forums



2013

2014

To reduce risks. To combat poverty. To improve living conditions for people all over the world. These remain the key pillars of our mission. We want to continue raising awareness for important issues such as climate change and sustainability – for a future worth living.



**Munich Re
Foundation**
From Knowledge
to Action

The inability to use a computer is a real hindrance, this also applies to those in developing countries. Work, communication, education – all of these rely on a competence and understanding of technology. Pictured are women learning how to use a computer.

Right: Peer-to-peer learning across three generations: older women learn from the younger women in literacy courses. They are all very content as the concept works well in both directions.



Empowering women through engineering and engagement



There is ample evidence that water-related development projects are more effective and sustainable when women are involved in resource management. Yet women often face substantial social, cultural and technical barriers to participation. Furthermore, additional difficulties, such as low self-esteem and lack of agency also limit their involvement.

Leslie Dodson



Leslie Dodson
is a social scientist at Colorado University, Boulder,
USA, and does research on women's rights
and development.

The Association Dar Si-Hmad, with funding from the Munich Re Foundation, has built one of the world's largest operational fogwater-collection systems to service Berber communities in the Anti-Atlas mountains of southwest Morocco. The project doesn't just address the need for reliable water service in a rural, underserved region: participatory community development is just as important as engineering success and gender equity is particularly crucial to the sustainability of the project.

Rural Moroccan women face health, education and income inequities. In some rural areas, 90% of the women are illiterate and fewer than 15% of rural girls are enrolled in secondary school. Younger women may attend a few years of primary school, but because girls are often responsible for fetching water, water scarcity contributes to an increase in school dropout rates. Rural Berber women also face considerable constraints on their physical mobility. Therefore Dar Si-Hmad operates women's literacy programs, livelihoods support and technology training. With clean water now available at home, women no longer have to fetch water from wells and have the time to engage in programs that build skills and self-esteem. Both are needed.

Dar Si-Hmad and its partners incorporate Information and Communication Technology for Development (ICTD) approaches to catalyse social development. This involves integrating computers, mobile devices and the internet to help bridge communication gaps and deliver information directly to women in remote villages. For example, the NGO trains women to use mobile phones to monitor the new fogwater system. Utilising user-centred design techniques, Dar Si-Hmad researchers and local women co-designed a mobile phone-based communication system and they shared suggestions on ways to engage and train other community members. Integrating women who had previously been excluded from design and decision-making inspired pride in the new water system and a sense of ownership in the project.

Beside literacy programs Dar Si-Hmad coordinated peer-to-peer learning across three generations of women. Young, unmarried women are the most technologically literate, and despite having been taken out of school, they are quick to try, eager to learn and enthusiastic to train others. Their participation in Dar Si-Hmad programs highlights the potential for young women to be key transmitters of enthusiasm and knowledge. They encourage and coach other women and can be relied upon to be "project animators."

When social support is available, older women, who are often the least literate and least mobile, are often eager participants in development initiatives. Encouragement and confidence-building exercises help women develop personal and communal motivation to participate in water and educational programs.

Dar Si-Hmad's social development goals are grounded in theory and practice from Gender and Development; Gender, Environment and Development; and ICTs, Climate Change and Development. Gender and Development theory identifies women as agents of change, while also recognizing that women suffer the greatest burdens of poverty and their contributions to development are often undervalued. The Gender, Environment and Development framework acknowledges that men and women interact differently with the environment. Women's water-related domestic duties often put them in closer contact with the environment, yet despite this more intensive relationship with nature, women often do not have a role in resource management or decision-making. The ICTs, Climate Change and Development model highlights the role of technology in supporting resilience in the face of environmental distress such as water shortages.

The fogwater harvesting project provides a model for incorporating women into initiatives through imaginative, innovative and participatory practices. When women are closely involved in the conception and design of systems, they create solutions that are adaptable and flexible. In this water project, women's monitoring efforts contribute to system sustainability. Their involvement builds much-needed capacity and increases their confidence to address other issues such as environmental degradation, health and education.

Participatory engagement, though, requires patience and a willingness to shift focus to address needs that arise from beneficiaries and collaborators. Collaboration opens up new possibilities to empower women and transform their lives. These efforts, in turn, stabilise communities and help mitigate social and environmental inequities.



The women reap the greatest benefits from the fog net project in Morocco. Water now flows into their homes and must not be fetched by foot and carried for hours back to the village.

Tanzanian fog nets – New water tanks ensure reliable water supplies

For more than eight years now, Munich Re Foundation has been supporting projects that harvest drinking water from fog and dew. The German non-profit organisation p(e)d world e.V. already began installing fog nets in the Babati highlands back in 2009. As of 2015, two new water tanks are in operation holding 30,000 litres of water.

The nets in the Daraja la Mungu community in the Babati region supply the rural population with drinking water. This is beneficial for the whole region. At other locations, the nets supply drinking water for schools.

Fog collectors can deliver precious drinking water to areas with high levels of air humidity. The method is actually remarkably simple and has enormous potential in arid regions. The prerequisite is the enduring and natural formation of fog: the collectors capture the fog thus allowing water drops to form in the nets and then run down into collecting troughs. The fog water harvested in this way is of drinking water quality and can be used immediately.

Bernhard Küppers and Christina Bösenberg from p(e)d world have been supervising school projects in Tanzania since 2008. In 2009 they also began to take care of drinking water supplies to the schools. The construction of conventional wells is not possible in the Babati region. The drinking water at the water points is often polluted and muddy. Children – above all girls – must set out on a daily trek of several hours to fetch water.

The conditions for harvesting fog in the region are ideal. Night after night, thick fogs form above a series of salt lakes and rise along the continental rift of Africa. Thermal winds propel the fogs onto the plateaus at altitudes of 2,000 metres. This is where the collectors are installed.

Drinking water for five schools

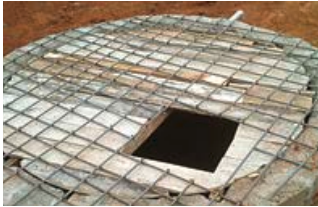
The p(e)d world project organisers first installed small test collectors. The water yield was measured at ten different locations for one year and then the project was able to begin. In 2010, the first four double collectors with a net surface area of 80 square metres each were set up at two schools in Qameyu and Umagi. In 2013, with the help of Munich Re Foundation funding, seven more collectors were built at three schools. Almost 1,700 pupils now benefit from the fog water. Another double collector is located in the village of Daraja la Mungu. It supplies the village residents.





Construction of a water tank

Together with Joachim Holst, the German project manager of p(e)d world, the employees of a Tanzanian construction company build new water tanks. It is now possible to store a total of 30,000 litres of water without quality losses. This is a good reserve supply for days when there is no fog or rain.



For further information on this issue:

www.munichre-foundation.org/home/Water/Fognets

Water tanks for reliable supply

The production of drinking water alone is not enough. It is at least as important to store the water for times when there is no fog. Until now, black plastic containers have been used in Tanzania as collecting vessels. However, they are not made of food-grade material and stand beside the fog nets in the direct sunlight. The water can only be stored in these containers for a few days, as the water quality begins to deteriorate very quickly.

For this reason, the p(e)d world project managers decided to build two large water tanks with a capacity of 10,000 and 20,000 litres at the Qameyu and Umagi schools. Local building companies began work in August 2015 and everything went without a hitch. The water tanks were checked by water engineers from the Babati regional government in November 2015 and were approved without restriction. Munich Re Foundation supported the measure with funding.

Huge demand

Unfortunately, the fog water harvested is still not enough. Every day, over 500 pupils must be supplied in each of the schools. The demand for drinking water is immense. The project managers therefore decided to also collect the rainwater from the roofs of the schools (rainwater harvesting) and fill it into the tanks. Almost all the school buildings were fitted with drain pipes and roof gutters. In Umagi, a filter system was also installed to ensure the high quality of the water.

All these measures bring improvements to the living conditions of the school children in Qameyu and Umagi. Although the water and storage capacities are not yet quite sufficient to provide the schools with water for the whole year, the small project successes are worth the effort: they show how important it is to keep on working at improvements.



Water

Fog nets in Morocco – A vision becomes reality

Fog nets have been supplying several hundred people with drinking water in the barren regions of the Anti-Atlas mountain range since March 2015. The winners, above all, are the women: they are spared up to three hours walk to the well every day.

Right on time for International Water Day on 22 March 2015, our fog net project on Mount Boutmezguida in Morocco was officially opened with an inaugural ceremony. Now, the water harvested from fogs flows from the top of the 1,225-metre mountain into the valley, supplying four villages and a school. Our Moroccan partner organisation Dar Si-Hmad has installed 600 square metres of fog nets. "It was a long journey," summed up Aissa Derhem, president of the NGO, during the opening ceremony of the project near Sidi Ifni. The goal has now been reached: the water tanks are full, the people have easy access to drinking water. The foundation has been supporting the project since 2011.

Fruits of hard labour

Roughly 8 km of pipelines were dug into the stone-hard mountain slopes during years of work. Filter systems had to be procured, water tanks built or replaced and the supply lines connected up to the households. Prior to this, the villagers had to get by on roughly just eight litres of water a day.

Now they all have adequate supplies. The entire village community enjoys the benefits of the new situation, in particular the women and girls. It had previously been their job to undertake the strenuous journey on foot every day to fetch drinking water from a remote well. Their quality of life has now improved.

There were naturally setbacks during the long construction phase. Nets ripped under wind strengths of up to 120 km/h on the mountaintop, roads were often blocked or closed. Or the heat in the summer made building work impossible. But the Dar Si-Hmad project team received repeated support and positive feedback, among others from donors such as the USAID aid organisation. This boosted the team and gave it strength – and the feeling of being recognised.

Fees to prevent water wastage

The fog water is not free of charge. Each household connected to the supply must pay a monthly water rate of around €2 and approximately €0.40 per 1,000 litres of water. Never-

Above: Aissa Derhem (middle) is president of the Moroccan NGO, Dar Si-Hmad. He explains how the fog nets work during the opening ceremony of the project.

For further information
on this issue:

www.munichre-foundation.org/home/Water/Fognets

theless, the fog water still costs less than water from the well. The decision against free distribution was taken consciously. If something is free of charge, it is quick to be wasted. It was important to commercialise the project, Aissa Derhem is convinced. Otherwise it cannot be sustained in the long term, as the maintenance of the facilities costs money. The villagers pay a small fee by means of a prepaid system. If everything goes well, the project will be handed over to the people in the communities in the medium term.

The fog nets deliver as many as 6,000 litres of drinking water daily during the fog season from December to June. Enough to supply more than 400 people and satisfy half the requirements of the region. Large water tanks ensure that supplies do not fail in the dry season.

New-generation fog collectors

Since the spring of 2012, Peter Trautwein, an engineer at WaterFoundation Ebenhausen, has been testing new net materials and sturdier structure designs directly on site in the project region. With funding from Munich Re Foundation, he has developed the "CloudFisher" – a new-generation fog collector. It is wind resistant and delivers significantly higher yields (see page 47). Dar Si-Hmad's goal is to consolidate the project and equip it totally with the new nets. The technology can subsequently be multiplied in Morocco and other countries all over the world. "We can then prove that a simple and innovative technology is capable of improving the living conditions of countless people in fog regions," says Aissa Derhem happily. A wonderful goal that has now come within reach.



Dar Si-Hmad employees install fog collectors in Morocco's Anti-Atlas Mountains. The arid and in some parts rocky ground poses a particular challenge.



Clearly defined tasks for science — Interview with Victoria Marzol



Victoria Marzol, geographer at the Universidad de La Laguna, Tenerife, has been doing research on fog net technology for many years. She has been providing scientific support for the Moroccan project from the beginning.

Victoria, since when have you been researching fog net technology and why?

In 1994 I was in Chile and visited a large fog net project there. It had 74 nets, that fascinated me. The net facility was practically in the desert and supplied people in La Serena and the fishing communities on the coast with drinking water. Unfortunately, El Niño later destroyed the nets. I spoke about this at my university in Tenerife and we started our own project on the island.

What was the project about?

In contrast to the facility in Morocco, we did not focus entirely on drinking water but addressed many different aspects. The water was used for animals such as goats and bees and also for plants and reforestation. In addition to this, we also used it for fire-fighting purposes and supplied reservoirs with fire-extinguishing water.

That demonstrates the diversity of possible applications?

Yes, absolutely. Drinking water is not the only issue at hand.

What do you think of the project on Mount Boutmezguida?

It's wonderful and I am proud to have been involved since the very beginning. To my mind, several components have been decisive for its success: the clear vision that something like this can work, and the stamina that Dar Si-Hmad demonstrated. In Morocco, numerous stakeholders from the widest spectrum of countries have worked together, and this diversity – paired with the openness and strong will of Dar Si-Hmad's project manager – ultimately led to success.

This does not work as well in all projects, does it?

No, you need a mixture, like in Morocco, if you want to be successful. You don't meet with a comparable situation very often.

You have heard about the latest fog net technology.

Will the new nets developed by Peter Trautwein from the Water-Foundation revolutionise fog net technology?

I think so, yes, because the new nets have two advantages: they have a higher yield and are much more stable, which is an enormous advantage in windy areas for example. In Tenerife we are currently comparing the conventional "Schemenauer technology" yields with those of the new nets in Morocco by means of scientific measurements. I'm expecting the Trautwein nets to perform much better. But, in the final analysis, it's also the price that counts. The technology must not be too expensive.

What do you consider to be the role of science in fog net technology?

Science must not just act for the purpose of research alone. There are three clearly defined tasks: it must examine fog physics, such as the size of the water drops and quantities. They vary greatly depending on the elevations. Then, logically, it must also deal with water chemistry. Aspects such as mineralisation but also subjects such as contamination and wastewater are important. And last but not least, it must also address the actual use of the water. As I mentioned, there are many different possibilities of using it. Water can serve humans as drinking water, but it is also important for plants, animals and the environment. This all must be investigated more closely. Fog net technology can therefore be a blessing for many regions of the earth.

CloudFisher ready for serial production

The innovative collector is the first serial production type worldwide which withstands wind velocities of up to 120 km/h. It passed all tests with flying colours during its trial phase of almost two years.

Below: The new CloudFisher, developed in Munich, has been installed on Mount Boutmezguida in Morocco's Anti-Atlas Mountains next to the first-generation fog nets. Despite strong winds there was still no damage of any kind by the end of the test phase in July 2015.

Right: Draft of a fog collector: structural engineers have calculated the requisite strength of the masts and braces so that even heavy winds cannot cause damage.



From spring 2012 until summer 2015, Munich industrial designer Peter Trautwein, from the WaterFoundation Ebenhausen, researched, designed and made repeated improvements. Countless discussions on wind speeds, structural design, material wear and water yields ultimately led to success: with the CloudFisher Trautwein has designed a completely new fog collector and set up a test version on Mount Boutmezguida in Morocco's Anti-Atlas Mountains. Munich Re Foundation organised important contacts and supported its technological development financially. The Technical University of Munich assisted the project with the scientific work.

Greater stability and yields

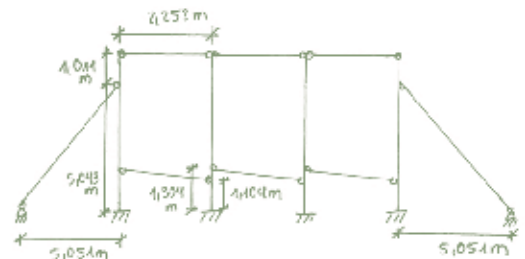
The great advantage of the new CloudFisher is that all components, such as posts, steel cables, pegs, screws, net fabric and attachment fittings along with the concrete foundations, have been calculated to withstand strong, gusty winds. In the highlands of Morocco this stability has proven extremely important. In addition to this, Peter Trautwein tested many different types of net fabric to obtain the highest water yields possible, from a simple Raschel net to high-tech materials. All the

materials used are of food-grade quality and are extremely resistant to sunlight and other environmental influences. The CloudFisher can be installed quickly and easily, it does not need energy for operation and is extremely low maintenance.

First major test under real operating conditions planned

Some important funding issues have not yet been clarified conclusively. However, if everything goes according to plan, the newly designed CloudFisher may possibly be already installed in a large-scale net facility in spring 2016. Our Moroccan partner organisation, Dar Si-Hmad, has decided to replace all the old fog nets on Mount Boutmezguida with second-generation collectors.

The WaterFoundation and Munich Re Foundation are supporting the project. The largest functioning fog net facility in the world would then be created in the Anti-Atlas Mountains. The goal of all the project partners is to make the new net technology internationally known and multipliable as quickly as possible.



Just a few weeks after the terror attacks on 13 November 2015, Paris once again hits the headlines. 195 countries conducted negotiations on how to curb climate change at the COP 21 summit in Le Bourget. The photo shows a demonstration on the sidelines of the talks.

Right: On 12 December 2015, French president Francois Hollande and Foreign Minister Laurent Fabius, who presided with great skill over the summit, announced the successful outcome of the negotiations. The Paris Agreement was adopted under thunderous applause in the presence of UN Secretary General Ban Ki-moon.



COP 21 in Paris — Climate conference throws open the doors to a new energy era



One month after Paris became a symbol for terror, hatred and destruction, the city rose as a symbol for international cooperation and transformation like a phoenix from the ashes. The resolutions of the Paris climate conference in December 2015 will accelerate the energy turnaround worldwide.

Christoph Bals



Christopher Bals
is the political CEO of Germanwatch e.V.,
a German NGO. He has attended and analysed
all the UN climate summits.

“Paris will always be associated with this historic turning point in global climate policy”, said German chancellor Angela Merkel commenting on the Paris climate conference. Unexpectedly for many observers, the international community of states proved its ability to take action in times of obviously increasing crises – IS terror, the challenge of the refugee masses, the Ukraine crisis etc. The UNO demonstrated a long-missed great strength: they adopted international law that applies to the whole world. For the first time ever, 195 states voted to accept legally binding climate obligations. The small and vulnerable nations, such as the small island states in the Pacific and the group of the poorest developing countries, that do not have a voice in any other forum, became the decisive motor behind an ambitious Paris agreement. The central goal of the conference was to send out a clear signal to governments, investors and societies for the medium-term phase-out of coal, oil and gas. And to develop a sound solidarity package for the poor countries that to date have made almost no contribution to climate change.

Signal for coal, oil and gas phase-out

The Economist, one of the leading economic journals of the world, considers the agreement to be precisely this signal to investors, and argues: “The united governments of the world are thus declaring that the dusk of the fossil energy era has begun.” The Reuters news agency reported “world marks turn from fossil fuels” with the landmark climate accord. The stock exchange prices of renewable energy companies rose significantly on the Monday following the historic agreement weekend.

The investment signal comprises several components: the international community has set itself a temperature limit for global climate change of well under two degrees, and even intends to “pursue efforts” to limit the temperature rise to 1.5 degrees Celsius. A special report by the International Panel on Climate Change (IPCC) will examine this option. The agreement secondly translates the temperature goal into a clearly defined target for policymakers and investors: greenhouse gas neutrality in the second half of the century. By then, more man-made greenhouse gases may not be released than can be recovered from the atmosphere by reduction measures such as reforestation. According to the planned scenarios, this means that the global phase-out of coal, oil and gas must succeed by the middle of the century. It is also significant that by the year 2020, all nations must submit a strategy for how they intend to organise the transformation of their energy systems. From 2018, stocktaking will take place every five years with the aim of defining higher

goals. This is urgently needed, as the measures so far would more likely lead to a temperature increase of three degrees Celsius. With a “continue as before” policy, the two-degree-limit, not to mention a 1.5-degree-limit, cannot be achieved. The EU is expected to quickly improve its current targets and fundamentally reform emission trading. However, it is more important for China to bring forward its latest date of peak emissions from 2030 to an earlier date.

“We didn’t solve the problem, but we laid the foundation for it,” wrote the New York Times quoting the leading American climate researcher, Christopher B. Field. To express it in terms of a metaphor from the language of soccer: climate conferences can bring the ball close to the penalty box. The national governments and parliaments, the investors and civil society must then score the goals. The German minister for the environment has already announced that the German government will make a concrete statement on phasing-out coal by the middle of 2016. Such a decision is required to meet the targets. The G20 states are responsible for 75% of all greenhouse gas emissions. The next two G20 conferences must ensure that the member states submit a decarbonisation plan by 2020. At the same time, they must push the reduction of subsidies for fossil energies and the introduction of a CO₂ tax ahead.

A solidarity package for adaptation

One important result of the Paris climate conference also is the integration of the long-term goal of not leaving the nations that are particularly badly affected by climate change alone to cope with adaptation, resilience building and climate-compliant development. Financial contributions were specified and funds mobilised to reach these important targets. From 2020, the industrial countries will provide at least US\$ 100 billion annually for this purpose. In 2025, the goal is to be redefined with at least the same amount of money. However, from then onwards, the emerging nations will also have to dig deeper into their own pockets.

Staying with the football image, the Paris resolutions have played the ball to the front of the goal. Now it is up to Germany and the EU among others, not to mention the investors, to score the goals. In plain language this means: the energy turnaround must be implemented quickly and vigorously. Transformation partnerships with Africa or India can advance the energy turnaround in these regions. When such goals are scored everywhere in the world, we will have every reason to celebrate. We now are working to this end with new momentum.

The achievement of the 1.5- or two-degree-limit will require massive investments in wind and solar energy, as the world community must make its economies CO₂-neutral between 2050 and 2070 at the latest.



Climate, poverty, catastrophes – save the world!

Mankind is pushing the planet to its limits. This was the warning issued by researchers from the Stockholm Resilience Centre at the beginning of 2015. Together with over 200 participants on each evening, our dialogue forum panellists searched for ways to escape from this trap.

The gap between poor and rich is constantly widening all over the world. The CEO of Oxfam Germany, Marion Lieser (middle), discussed this issue together with poverty researcher, Mar Cabezas, and the German Minister for Economic Cooperation and Development, Gerd Müller (right).

The audience's keen response clearly showed that the topic, "Climate, poverty, catastrophes – save the World!", had its finger on the pulse of the times. It is high time that counter-measures are taken to curb climate change. An urgent task that also preoccupies Christoph Bals, policy director of Germanwatch: "It was only the largely stable climate of the past 10,000 years that provided the basis for human coexistence on our planet. If we now catapult ourselves out of this stable equilibrium, we must expect severe consequences," he believes.

Climate change as the main problem
A negative trend is already unmistakable: "Since 1980, the number of natural disasters per year has tripled from approximately 350 to 1,000," explained Peter Höpfe, Head of Geo Risks Research/Corporate Climate

Centre at Munich Re. In particular weather-related disasters such as storms, floods and droughts are on the rise. There are many indications that humanity is accelerating this development through the increasing emission of greenhouse gases. Apart from climate change, the loss of biodiversity and excessive land use are also taking their toll on the ecological balance. If certain limits are exceeded, this can have fatal consequences for life in many parts of the world and undermine the battle against poverty.

Increasing resilience

A challenge faced by aid organisations such as the German Red Cross (DRK), active in 45 countries with 280 projects, is the reinforcement of resilience capabilities. Its work concentrates on emergency relief, reconstruction and long-term development cooperation.





Claudia Roth, Vice-President of the German Bundestag makes it clear that “We must lead the way by setting a good example and redefining growth and wealth” at the dialogue forum in May 2015.



A detailed summary of the 2015 dialogue forums can be found on our website and in the accompanying “Positionen” publication. It is available in PDF format.

www.munichre-foundation.org/dialogforen2015

“Our focus is on disaster risk reduction, precisely because natural disasters are increasing,” explained Thorsten Klose from the General Secretariat of the DRK. “The main point is to pursue a development-oriented approach from an early stage and to think about where we actually want to go.” It is important to connect government and civil society protagonists with each other, and create the smoothest possible transitions between the different working areas such as health, nutrition, water supply and sanitation. The goal is to strengthen the resilience of the local population.

If we do not succeed in doing so, a lot is at stake: “Unless a certain degree of resource and environmental justice can be secured for all people, the chance of maintaining peace is very low,” fears environmental activist and biologist Christine von Weizsäcker.

What measures must then be taken to leave a healthy environment behind for future generations? It is clear that there is no way around binding international agreements, difficult though this may be. “The decisive things do not happen at the plenary sessions in the great halls of negotiation, but take place in many locations outside these halls. You need a lot of allies and staying power and should not be easily discouraged,” explained

Heike Kuhn from the Federal Ministry for Economic Cooperation and Development. She admitted that things often only move forward in millimetre steps. However: “The silent routine work going on behind the scenes is often not even noticed, failure all the more so.”

Solutions on the table

Not everyone can come to terms with the tedious task of arriving at often watered-down compromises. “The snail’s pace of the international negotiations is decidedly too slow,” cautioned marine biologist Mojib Latif. Even if we stopped all CO₂ emissions today, the temperature would still continue to rise by about 0.5 degrees in the coming decades. “The solutions are on the table, it’s the will alone that is lacking, and ultimately it’s all about money.” With sufficient funds, the problem would be solved in ten to fifteen years, he is convinced.

A major shortcoming of many agreements is that they are often mere declarations of intent and do not constitute enforceable rights. Agreements in which significant financial interests are at stake, such as the global economic agreement of the World Trade Organization, prove that this does not always have to be the case. The organisation has a court of arbitration and very effective sanctions.

"We should therefore not be surprised that economic interests prevail more strongly than the environmental agreements," commented Christine von Weizsäcker critically.

Policy makers in some areas have enough problems as it is with the subject of the environment. "If we in Germany want to keep our promise to reduce the CO₂ emissions to 40% lower than the levels in 1990 by 2020, we would actually have to take coal-fired power plants from the grid. However, no-one even dares mention this necessity," admitted Annalena Baerbock, climate policy spokeswoman for BÜNDNIS 90/DIE GRÜNEN. She believes that climate change cannot be effectively combatted without restrictions, such as in individual mobility. Growth and CO₂ emissions must also be decoupled from each other once and for all. "Without regulatory policies, this will not be possible, appeals on their own are not enough."

Setting a good example

Claudia Roth, Vice-President of the German Bundestag, makes it clear that self-deprivation is not the primary issue: "We must redefine growth and wealth, and also the way in which we manage the economy and production," she urged. It would be totally wrong to paternalistically impose our findings on other countries, she said. "We must begin to assume a leading role and live life in a responsible manner," was her proposal.

Every individual can make a contribution. The job of the policy makers is to make the problems comprehensible for the people and explain where individual participation is possible. "It was easier to mobilise an anti-nuclear power movement in the 70s because everyone immediately understood what it was about. Today, however, it is terribly difficult to emotionalise the climate crisis. For many people it is far away and hard to grasp," Roth noted.



Who really earns the money?

Almost 60% of the costs of a T-shirt, or €17, go into the pockets of the retailers. The seamstresses, who often work in low-wage countries in Asia, receive a mere €0.18, or 0.6%. This is unfair and inhumane. According to the Asian Floor Wage Alliance, the so-called living wage in Bangladesh is approximately €260 per month, which corresponds to roughly five times the national minimum wage.

Source: Munich Re Foundation 2015; data basis: Clean Clothes Campaign (2014)



Gerd Müller, German Minister for Economic Cooperation and Development, advocated a fair and just eco-social model for the economy. His conclusion: "Fairness hasn't to be costly."

Critical mass required to set things in motion

"I think we have a 25% chance of saving the world, which isn't bad when there are no alternatives," estimated entrepreneur Frithjof Finkbeiner. In contrast to some of his older colleagues in the Club of Rome who have become resigned about the state of the world, he has retained his optimism. "We have good chances of changing something if more people take to the streets and we can reach a critical mass. If another event occurs as an added catalyser, such as Fukushima in the debate about nuclear power, changes can happen very quickly," hopes the coordinator for the Global Marshall Plan Initiative which is dedicated to a "World in Balance".

What is more important than self-deprivation is that we get the policy makers to create the right framework conditions, said Finkbeiner. Such as limiting the CO₂ emissions of cars. Another thing that everyone can do immediately is plant a tree. "They are the only carbon sinks that can be multiplied. No one has an excuse for not joining in," he made clear. For example, you can support an organisation that uses donations to plant trees in sub-tropical zones. Vegetation in these

areas can store particularly large amounts of carbon. "A study at Yale University showed that there is room for 1,000 billion trees all over the world, which could bind approximately one quarter of human-generated CO₂ emissions."

There is no scarcity of possibilities for working towards a fairer world. And, as many international agreements have meanwhile gathered momentum, the human race may possibly still come to reason and find sustainable solutions. Each and every individual is called upon to become involved, even if the outcome is uncertain. We do not have the choice between guaranteed success and guaranteed failure, but rather between guaranteed failure and possible success.

On tour with the Energy School workshops – Interview with Veronika Fröhlich



Veronika Fröhlich works with Green City as a project leader in the area of environmental education and since 2015 has been responsible for the Energy School Munich. She organises and hosts different workshop modules at schools.

For further information
on this issue:

[www.munichre-foundation.org/home/
EducationClimateChange/
EnergySchoolMunich](http://www.munichre-foundation.org/home/EducationClimateChange/EnergySchoolMunich)

The Green City e.V. brings the topic of energy and climate protection to primary and intermediate schools with its Energy School Munich. Green City's team of experts discusses energy conservation, renewable energies and professions in the field of renewable energy production during interactive workshops and exciting field trips using a wide range of teaching aids. The pupils carry out experiments, research, and so experience not only how complex the topic is, but also how individuals can change things through their behaviour. Munich Re Foundation has been supporting the work of Green City for many years now. Veronika Fröhlich assumed leadership of the project in 2015 and for two years has been supervising the various workshop modules at the schools.

Veronika, how is the “Sun-full of Energy” workshop implemented in a primary school class? Is it easy to excite the children for the topic?

When we're introducing the project, we ask the children which devices at home and in the classroom use up electricity. It always astonishes me how many energy hogs the children can think of! And, at the very latest when they're allowed to climb onto the power bike and try to bring the water in the kettle to boil with the power of their own muscles, all the children are full of enthusiasm and cheer each other on.

How old are the pupils and what sort of devices can they use for their experiments?

The children are between eight and ten years old. At our “Energy researcher” station they measure how much power a radio, a TV, a hair-dryer or a water boiler requires. They also learn the difference between a conventional light bulb, a low-energy bulb and an LED bulb.

Is it more difficult to awaken the interest of the older children participating in the “Energy for the Future” module at the intermediate schools?

At the beginning, yes. They often think that climate change doesn't affect them at all. However, in the course of the workshop, they begin to understand that we in Bavaria can already feel the effects of climate change too.

What exactly do you do during the project days?

We from Green City present renewable energies to the pupils in our workshops, we give them tips on how to save energy, we talk about the impacts of climate change worldwide and in Bavaria, and carry out an insulation experiment. We work together with an energy consultant who brings an infrared camera to the workshop. This goes down a treat with the children because they can take thermal pictures of themselves which they can also then take home.

Among other things, this module also addresses professional perspectives in the field of climate protection. How is this received by the young students?

Most of the pupils still don't know what they want to do when they finish school. This is a great possibility for them to get to know other professions than the ones they're already familiar with. We take them to a forest kindergarten, an organic super-market, a community garden and to the Guild for Sanitary Engineering and Air-Conditioning Technology. The pupils can try out things themselves and ask questions about training. We've already been able to organise a few internships through the project!



Above: Two young “energy researchers” concentrate on measuring the power consumption of a desk lamp. It quickly becomes clear where the power consumption is highest and how electricity can be saved.

Below: Making lamps light up or bringing water to the boil using only the power of your own muscles: the pupils can try this out on the energy bike. This gives them a good feeling for energy and output.

How are the teachers integrated? Do they take an active part in the project? And do the contents fit in with the curriculum? For the teachers we bring along additional material such as worksheets and experiment instructions. This allows them to return to the topics discussed once the project is over. For us, the involvement of the teachers is important for integrating the contents into daily school lessons so that they can be taught to the entire school family. At grade three in primary school, the “Sun-full of Energy” modules are a wonderful supplement to Social, Environmental and Scientific Education lessons. At grade seven in primary school, the subject of climate change is an integral part of the curriculum and can be illustrated with the “Energy for the Future” module.

That all sounds very interesting. Do you get a lot of positive feedback from the children? Or from their parents? We can see ourselves how much the children enjoy the Energy School Munich in our workshops. Sometimes parents write to us too that their children have reported at home with great fervour about the power bike or solar cooker. We also receive very positive feedback from the teachers. The work in small groups and independent research are particularly well received.

What do you personally like best?

What I like best about our workshops is that the children can experience the rather complex subject of energy in such a multifaceted and playful way. My favourite workshop is the solar cooker workshop. The children always wonder how we plan on cooking something with this funny satellite dish. However, when they notice how much energy is packed into the sun, and experience how they can use this power to cook, then the sun-boiled tortellini already taste twice as good!



Joint university projects

Munich University of Applied Sciences

Environmental degradation and climate change are advancing. They are influencing our lives and will influence those of the generations to come. The political sector has long since realised that fast action is needed, and it is trying to find solutions with the aid of laws and treaties. In the seminar “Water, climate, environment – on the sustainable management of global challenges”, Thomas Loster, chairman of the Munich Re Foundation, discusses with university students about political options and possible solutions that take aspects of sustainability into account. Water and global climate change are the focal points, but topics such as development, globalisation and the fight against poverty are also looked into.

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www.hm.edu

Eberswalde University for Sustainable Development

The world is changing. An ever increasing number of people inhabit it. Resources are becoming scarce, living space is shrinking and cities are growing at an alarming rate – especially in developing countries. What is the best way to control these changes? This is what the master’s course of study “Global Change Management” at Eberswalde University covers. Every year, the Munich Re Foundation and Munich Re invite around 25 students to Munich for a week of study, where the topics are environmental development, development politics and activities of the private sector.

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www.hnee.de

Transdisciplinary seminar with Munich’s Ludwig Maximilians University

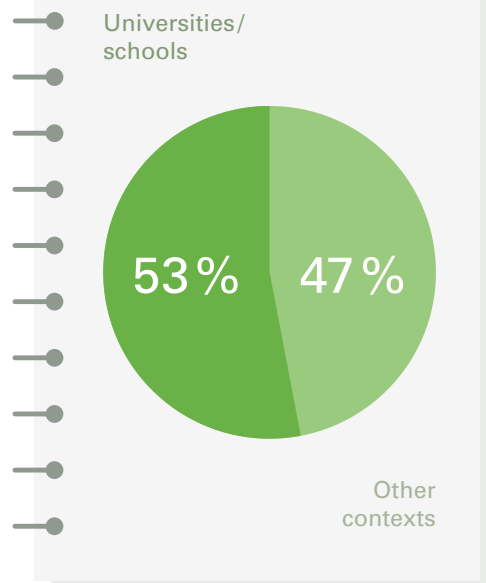
Many issues in today’s complex world have to be considered and dealt with in an interdisciplinary fashion. The Geography faculty at Ludwig-Maximilians-Universität (LMU) in Munich offers its students the opportunity to take part in a transdisciplinary seminar. They can take a look beyond the edge of their geographic plate and get to know the way other disciplines see things. These disciplines include social research, economics and development politics. The Munich Re Foundation supports this seminar as a provider of topics and tutor. In the winter semester of 2015/16 we occupied ourselves with resilience: What does it mean for various cultural regions and how can we increase resilience levels in order to make people and societies more resilient? The Master’s students chose Bangladesh as the case study. The lessons learnt in this study benefit our Gibika project (see page 16).

—
www.geographie.uni-muenchen.de

Training modules, lectures, panel participation and moderation in 2015

The staff members of Munich Re Foundation offer training on requested topics, hold presentations and participate in panel discussions, both as panelists and as moderators. One of our main focuses is on university and school education.

Source: Munich Re Foundation 2016



Innovation incubator – Questions put to Christina Weber



Christina Weber heads the research department of the Strascheg Center for Entrepreneurship (SCE) at the Munich University of Applied Sciences. Her research focuses on dynamic networks based on the example of disaster management. The SCE supports students and business start-ups in the field of research and science. The Center escorts young entrepreneurs from the development of their idea through to a marketable innovation.

The SCE combines academic theory with practical entrepreneurship. How many students are enrolled each year and in which areas are they active?

Apart from a university degree, the SCE also offers a lot of programmes that take us out of the lecture halls. Creativity, interdisciplinarity and cooperation with real clients or companies play an important role in this context. Courses such as “Development of a business idea” or “Development of an entrepreneurial personality” need practical experience. Every year we reach approximately 1,200 students with our programme.

What are the success rates, how many ideas take off?

We are naturally very pleased about SCE spin-offs that are a real success, although we don't believe that they alone are indicators of an innovation culture. In extremely simplified terms, a sort of 50% rule can be recognised: two hundred initial consultations per year lead to 100 ongoing consultation processes. Of these, half again apply for our grant programme and approximately 25 start-ups qualify for the SCE incubator annually.

Can you describe this “incubator” to us?

The incubator is our Team House. It occupies one storey of a large building in which founding teams work in neighbouring offices and network with each other. This creates synergies which produce wide-ranging results and individual stages of development. The start-ups are not always in the field of technology. The young entrepreneurs are active in every area conceivable.

Can you name a few examples?

Freeletics, for example, concentrates on everything to do with the development of personal drive, sport and fitness: individual training schedules that are tailored to the customers. And Nearbees, as the name suggests, is dedicated to bees in the local area: to honey, the town, nutrition, quality and sustainability.

Networking and innovation consequently play a decisive role?

Innovations develop systematically by supporting innovation processes. The SCE promotes “Responsible Entrepreneurship”. Right from the very beginning, it is all about the respective appropriate context: you must address the correct topics at the start, develop a common vision and then pursue it step by step through the dynamics of innovation. What is important in this respect is to always look at the outcome of the project from different perspectives. Cooperation between the widest diversity of players, for instance in our incubator, is important and helpful.

Munich Re Foundation cooperates with Ava Mulla who took part in a number of SCE programmes. The young entrepreneur designs building bricks for improved disaster resistance (see interview on page 21). What role did the SCE play in this? With her international start-up, Ava Mulla is indeed a picture book example of the entrepreneurial personality formed during university studies. Her SCE “career” began with the one-week Spring School for students, in which the topic of “Disaster as the starting point for sustainable innovation processes” was introduced. She came back with her own business idea at a later point, received advice and was able to develop her project in a global context. Entrepreneurial solutions are of central importance in sustainable disaster management. The most important thing is bringing global and local stakeholders together. This is the key to success. Setting up contact with Munich Re Foundation, for me, was then the most obvious thing to do.

Klimaherbst – Munich companies for climate protection

Climate change concerns everyone: politicians, the private sector and consumers alike. Under the motto of “Munich companies for climate protection”, Munich Re Foundation invited three representatives from BMW, Munich Re and Siemens to a discussion between experts.

Ursula Mathar, Head of Sustainability and Environmental Protection with the BMW Group, explains to the audience how her company actively contributes to climate protection. One prerequisite for measures is that the policymakers create the proper framework.

Year after year, Munich’s Klimaherbst programme draws attention to the responsibility that we all share. Under the motto of “Politik. Macht. Klima. – und wir?” (Politics. Power. Climate. And us?), the Netzwerk Klimaherbst e.V. association organised more than 60 exhibitions, films, excursions, lectures and discussions in October 2015. Munich Re Foundation participated with a panel discussion in front of a hundred-strong audience of interested citizens on 20 October. “For us, climate change is a strategic issue,” said Peter Höpfe, Head of Munich Re’s Geo Risks Research and Corporate Climate Centre, opening the evening. Back in 1973, the company had already addressed the climate change as a future risk. Munich Re has a vested interest in curbing the global rise in temperature as far as possible, because: “90% of the global insured losses incurred by natural disasters are today caused by weather-related disasters.”

Panel host Alexander Rossner, Board member of Klimaherbst, cited the use of fossil fuels in industry and transport as a major cause of climate warming. Ursula Mathar, Head of Sustainability and Environmental Protection with the BMW Group, countered by pointing to recent successes in the automotive industry. “BMW is working relentlessly to reduce CO₂ emissions. Forty-five BMW models already emit less than 120 g CO₂/km.”

Siemens’ global CO₂ missions amount to approximately 2.2 megatons, the equivalent of roughly 25% of the carbon produced by the city of Munich. “We want to halve our emissions by 2020. By 2030 at the latest, we want to be carbon neutral,” said Ralf Pfitzner, Vice President of Sustainability – Resource and Energy Efficiency with Siemens AG.

Climate-friendly investments as the key

What can people do quickly and relatively simply today already? Peter Höpfe has a simple answer to this: “Investments are an important lever for greater climate protection.” If investors withdraw capital from non-sustainable sectors and increasingly invest in climate-friendly enterprises, they can bring about tremendous changes. All the panelists agreed that CO₂ should cost a commensurate and much higher price than it does at present. “The best thing would be the introduction of global emissions trading, but we unfortunately are still a long way off from this goal,” the experts concluded.



You can find the whole report on our website:

www.munichre-foundation.org/home/EducationClimateChange/Klimaherbst_Muenchen



Disaster relief

Emergency aid restores water supplies in Nepal

Following the devastating earthquake in Nepal in April 2015, the arche noVa aid organisation used a donation by Munich Re Foundation to restore water supplies in remote Himalayan villages.

The tremors on 25 April 2015 hit the rural area to the north of the capital, Kathmandu, particularly severely. The community of Ghyangphedi is situated here and was cut off from the water supplies following the quake. An intolerable situation, as the nearest spring is several hours' walk away. Whereas international aid very quickly arrived in Kathmandu and other large cities, the remote mountain villages initially had to fend for themselves. Support was provided by the arche noVa e.V., which received a donation from Munich Re Foundation through the Aktion Deutschland Hilft relief coalition. The money was used to restore the water supply system in Ghyangphedi.

Pipelines, new tanks and sanitation courses

The project was based on a participatory approach and long-term support: "The residents perform the majority of the work themselves, arche noVa supports them with know-how and material," explained a member of the organisation. In this way, metre upon metre of pipelines

were repaired or replaced with the energetic assistance of the local people, and thus made it possible to restore the water supplies within a short time. With the financial support of Munich Re Foundation, arche noVa was able to install 7 km of pipelines, build five water tanks and install fifteen distribution points with taps. Now, after the successful conclusion of the work, approximately 650 people in the mountain villages have access to fresh drinking water again.

Parallel to this, arche noVa also held sanitation courses in the community to teach the people about the risks of illness due to contaminated water. Hygiene standards had suffered considerably following the collapse of the water supplies.

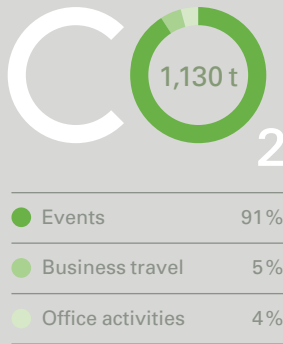


Above: The villagers in Nepal take an active part in helping to repair the water lines. In this way they take ownership of the project and assume responsibility.

Emissions since 2006
(CO₂ in t)



Emissions in 2015
(CO₂ in t)



The hydropower station in Joshimath uses the natural gradient of the river for power production. This means that no dams have to be built.

Source: Munich Re Foundation, 2016, own blueprint

Internal foundation issues

Munich Re Foundation – 2015 carbon footprint

In 2015, Munich Re Foundation's total CO₂ emissions amounted to approximately 1,130 metric tons. They were down almost 400 tons on those of the previous year. To offset this footprint, we purchase certificates from a hydropower project in Joshimath, India.

Most of the CO₂ emissions, almost 1,030 tons (91%), were caused by events organised by the foundation. We offset the emissions from trips made by conference delegates travelling to and from events. Emissions from office activities (electricity, heating) and business travel at 39 tons (4%) and 58 tons (5%) respectively were low by comparison. Both categories are offset by our founder, Munich Re.

The operation of the offices caused the same amount of emissions as in 2014. The business trip emissions dropped by approximately 35 tons of CO₂, and the figures for events fell by well over 360 tons of CO₂. This was largely due to the Microinsurance Conference in Morocco. Compared to the previous year (Mexico), the delegates' flights were shorter on average. The number of participants also decreased slightly.

Water power in Joshimath, India

To keep our work in 2015 carbon-neutral, we are supporting a hydro-power project in Joshimath, India.

Four electrical power stations use the natural flow of the river to generate an output of 100 megawatts.

More than 70% of the energy in the region around Joshimath results from burning fossil fuels. This creates emissions and damages the environment in the long term. The run-of-river power stations in the Alaknanda River make a valuable contribution to environmentally friendly energy generation and secure a reliable electricity supply in the region. The project allows an annual total of CO₂ savings amounting to 1.3 million tons of CO₂ equivalents.

In contrast to many other hydropower projects, no artificial reservoirs must be built in Joshimath as the river bed has enough natural drops in height. For the residents of the surrounding communities, this means that no resettlement programmes are required. This benefits both the people and the environment.

For further information on this issue:

www.munichre-foundation.org/home/About-us/Environmental

Global partners

Microinsurance

Microinsurance Network
 Conférence Interafricaine des Marchés d'Assurances (CIMA)
 German Society for International Cooperation (GIZ)
 German Federal Ministry for Economic Development Cooperation (BMZ)
 International Labour Organization (ILO)/ Impact Insurance Facility
 Georgia State University's Center for the Economic Analysis of Risk (CEAR)
 Zambian Technical Advisory Group (TAG)
 Financial Sector Deepening Zambia (FSDZ)
 FinMark Trust
 Center for Financial Regulation and Inclusion (Cenfri)
 Insurers Association of Zambia (IAZ)
 Pensions and Insurance Authority (PIA)
 Munich Climate Insurance Initiative (MCII)

African Insurance Organisation (AIO)
 Asociación Peruana de Empresas de Seguros (APESEG)
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RISK Award
 Global Risk Forum (GRF)
 UN International Strategy for Disaster Reduction (UNISDR)
 ONG Inclusiva
 All India Institute of Local Self Government (AIILSG)
 Gibika and Resilience Academy
 International Centre for Climate Change and Development (ICCCAD)
 United Nations University in Bonn (UNU-EHS)
 Disaster aid
 Aktion Deutschland Hilft
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**D+C Development and
cooperation journal
published by the German
Federal Ministry for
Economic Cooperation and
Development, Berlin:
Advisory Board member**

(From left to right)
Jayoung Eckl-Lee, Christian Barthelt,
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Publications 2015

Own publications

2014 report

Date of publication
03/2015
Order numbers
German: 302-08591
English: 302-08592

RISK Award:

First-hand news –
Best project
proposals 2015
Date of publication
03/2015
Order number
English: 302-08612

Report 10th International Microinsurance Conference 2014: Making insurance work for the poor

Date of publication
04/2015
Order number
English: 302-08621

Programme overview 2005–2015

Microinsurance: Making insurance work for the poor

Date of publication
06/2015
English

Factsheet

Microinsurance: Making insurance work for the poor

Date of publication
06/2015
German and English

Factsheet

Education on climate change and sustainability: Raising awareness of global challenges

Date of publication
06/2015
German and English

Factsheet

Dialogue forums: Creating awareness in the region

Date of publication
06/2015
German and English

Factsheet

Disaster prevention and resilience: Protecting people at risk

Date of publication
06/2015
German and English

Factsheet

Water as a resource and risk factor:

Improving quality of life
Date of publication
06/2015
German and English

Positionen Dialogforen 2015: Klima, Armut, Katastrophen – rettet die Welt!

Date of publication
09/2015
German: digitally available
on our website

IntoAction – Fog nets

Date of publication
11/2015
Order numbers
German: 302-08821
English: 302-08824





For further information on this issue:

www.munichre-foundation.org/home/MediaCentre

UNU-EHS Working papers – results of the Resilience Academy

Differentiated migration as community disassembly: resilience perspectives on catastrophic disturbances in livelihood systems
Date of publication 02/2015

Understanding the sociomaterial boundary qualities of livelihood resilience to climate change
Date of publication 02/2015

Re-framing islands as champions of resilience in the face of climate change and disaster risk
Date of publication 02/2015

Maintaining and building “place” through managed and forced community relocations
Date of publication 02/2015

Livelihood resilience in a changing world – 6 global policy recommendations
Date of publication 12/2015

Publications with project partners

The Landscape of Microinsurance in Latin America and the Caribbean 2014 – Full report
Date of publication 09/2015

The Landscape of Microinsurance in Africa 2015 – Briefing Note
Date of publication 11/2015

Current projects 2015



International Microinsurance Conference

Project partners:
Microinsurance Network,
GIZ and CEAR

The International Microinsurance Conference offers representatives from supervisory authorities, donor organisations, the insurance industry, the scientific community and practitioners a forum for sharing knowledge and networking. The conference has been held annually since 2005, each year on a different continent. The aim of the platform is to tackle poverty and create a basis for improving the living conditions of people in developing countries.

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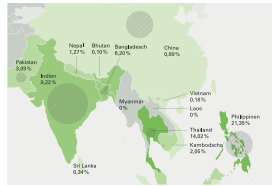


Microinsurance Learning Sessions

Project partners:
Microinsurance Network,
GIZ and CEAR

In some countries of the world, the microinsurance markets are particularly dynamic. Factors such as economic growth, reliable boundary conditions or efficient regulation are decisive factors for such developments. In seminars that focus on regional solutions, we work together with partners to share the related knowledge and experience. These Learning Sessions complete our microinsurance programme.

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The World Map of Microinsurance

Project partners:
ILO, MFW4A, IADB and
Microinsurance Centre

Since 2012, we have been working together with our partners to make the development of microinsurance transparent all over the world. Studies and interactive maps on the topic are being created for this purpose. In 2015, an update for "The Landscape of Microinsurance in Latin America" study was published as well as an online platform.

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Preview of 2016

21 January

Transdisciplinary project with the Ludwig-Maximilian University in Munich, final presentation

21 January

Dialogue forum "Energy turnaround the only alternative – Right on track with sun, wind and water"

16 February

Dialogue forum "Energy turnaround – Who will pay the bill?"

3 March

Dialogue forum "Electromobility – From gas guzzler to lean green machine?"

15 March

Start of the summer semester at the University of Applied Sciences, Munich, "Seminar on Sustainability"

4–8 April

Themed week on Global Change Management with the University of Applied Sciences Eberswalde

6–7 April

Microinsurance Learning Sessions, Kenya

12 April

Dialogue forum „National Action Plan on Energy Efficiency – Will Germany be the energy world champion?"

12 May

Dialogue forum "Do something! – My contribution to the energy turnaround"

31 May

Dialogue forum at the University of Applied Sciences, Munich, "Do something! – My contribution to the energy turnaround"

28 August

IDRC Davos, Announcement of the 2017 RISK Award

4–10 September

Resilience Academy discussing "Enhancing Resilience to minimise Loss and Damage" on Frauenchiemsee island, Germany

1 October

Start of the winter semester at the University of Applied Sciences, Munich, "Seminar on Sustainability"

15–17 November

12th International Microinsurance Conference in Colombo, Sri Lanka



The 2015 dialogue forums – “Climate, poverty, catastrophes – save the world!”

At these events, which are open to the general public and held in Munich, we address current topics. Politicians, scientists and persons concerned take a look behind the scenes and engage the audience in discussion. The dialogue forums have been held regularly since 2005. They are designed to heighten awareness of the subjects we focus on, such as demographic trends, risk perception and development policies.

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Education projects

Project partners: Green City, Munich University of Applied Sciences, LMU Munich, others

We support the Energy School Munich which seeks to introduce primary and secondary school pupils to the world of climate protection, energy efficiency, resources conservation and similar fields using a fun, hands-on approach. Our “Climate, water, energy – Managing global challenges sustainably” seminars that we have been holding at the Munich University of Applied Sciences since 2010 address similar issues. Together with the Ludwig-Maximilian University of Munich, we are planning an interdisciplinary project seminar for Master’s students in Geography. Cooperations with the University of applied sciences Eberswalde and the Humboldt University Berlin conclude our education projects.

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Resilience Academy – Uniting research, politics and practice

Project partners: ICCCAD and UNU-EHS

We are inviting 25 young experts from science, industry and politics to an intensive week of study, this year in Bangladesh and next year in Germany. Together we will analyse what resilience means for different societies and how it can be strengthened in emerging nations, in particular in Bangladesh. Field excursions in which theoretical approaches are compared with reality play an important role at these academies.

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Increasing resilience in Bangladesh

Project partners:
ICCCAD and UNU-EHS

In regard to natural disasters and the impact of climate change, Bangladesh is one of the most highly jeopardised countries in the world. In partnership with the United Nations University in Bonn, we support the International Centre for Climate Change and Development (ICCCAD) in Dhaka. In addition to research on the resilience of the people in Bangladesh, the aim is to safeguard several communities in risk zones against natural disasters.

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RISK Award for disaster prevention

Project partners:
UNISDR and GRF,
ONG Inclusiva, AILLSG

Disaster prevention is more vital than ever and local projects show particular promise in this respect. The RISK Award, launched in 2012, grants a groundbreaking project up to € 100,000 in prize money. The winning projects extend the scope of the early warning systems in Mozambique and Tonga. Knowledge acquired from UNU projects benefits our early warning projects.

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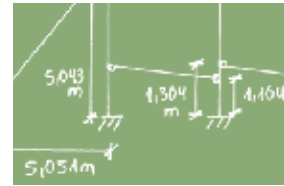


Fog net projects in Morocco and Tanzania

Project partners:
Dar Si-Hmad and p(e)d world

Fog nets provide access to ample supplies of drinking water even in arid and virtually inaccessible regions. The foundation is currently sponsoring two projects: one in the Anti-Atlas Mountains of Morocco and another in two regions of Tanzania. We use innovative resources to ensure a fully functioning water supply and thus enhance the life quality and improve the resilience of people at risk. The potential is tremendous.

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Funding fog net technology

Project partners:
WaterFoundation Eben-
hausen, Peter Trautwein
and TUM

For decades, fog net technology has undergone hardly any changes. In rough and difficult regions it increasingly reaches its limits: anchoring fixtures break, strong winds destroy the nets, captured water is lost due to inefficient collecting systems. In cooperation with WaterFoundation we sponsor further development of the technology. A testing laboratory for modern proto-types developed in Munich is currently being built in the Moroccan highlands. The Technical University Munich is assisting the project with scientific work.

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