

## Contents

Review of 2005

Introduction	1	First anniversary of the Munich Re Foundation
Strategy	2	Putting people first The Munich Re Foundation's strategy
Research	6	Disasters hit the nerve Foundation Chair on Social Vulnerability
	8	Young people create knowledge Schools competition on energy efficiency
Networking	12	Poor and uninsured International Microinsurance Conference
	14	Risk awareness is the key Symposium on worldwide disaster prevention
Sensitisation	18	Facets of a life elixir Dialogue forums on water
Action	24	Red flag signals danger Mozambique flood warning system
	26	Water collectors Fog nets in Eritrea
	28	Water filters for earthquake region Emergency aid for Pakistan
From Knowledge to Action	30	Interview Dr. Hans-Jürgen Schinzler
Essay	32	Surviving with risk Patrick Illinger on the evolution of risk handling
Launch	34	The official ceremony Munich Re Foundation begins its work
Investments	36	Sustainable and profitable The Munich Re Foundation's investment strategy
	40	Board of Trustees Team 2006 overview Imprint

## First anniversary of the Munich Re Foundation

1

Thomas Loster, Chairman of the Munich Re Foundation, reviews the first year of the foundation's existence and describes its operating environment, objectives and opportunities in the face of global challenges.

The foundation began its work just over a year ago on 7 April 2005, and we wanted to ensure that it had a clear and credible profile. Of course, the foundation's work would only be successful if closely bound up with the knowledge and competence of its benefactor. Munich Re has been one of the world's leading risk carriers for more than 125 years. It helps people, companies and politicians to deal with risk situations and makes economic and technical development possible by providing insurance solutions. Its success is driven by reliability and innovation.

The foundation's work puts people first. Our team looks at a wide variety of risks and how they are networked. We seek to tap the knowledge accumulated by our benefactor and make it accessible to others, as befits our motto "From Knowledge to Action". We want to prepare people to deal with the risks and, where possible, improve their living conditions.

The issues set out in our Articles of Association – water, climate change, disaster prevention and population growth – are directly derived from our benefactor's knowledge and our own expertise. These are areas where we can be "movers and shakers".

The foundation can draw on the expertise of its benefactor and on the resources of a broad international network. Knowledge can be consistently translated into social action by combining these strengths.

To ensure our work is effective, there must be a continuous, seamless flow of information between foundation, external experts and benefactor. Thanks to the encouragement and support we have received from Munich Re staff on all hierarchical levels, there is every prospect that we will live up to our claim to use our benefactor's expertise for the common good, above and beyond any economic interests.

We are already witnessing first signs of further potential conflict and increased risk, for instance in disputes over water or climate change. In 2005, nearly 900 new foundations were established in Germany alone, more than in any previous year. Their work is set to become increasingly important. However, a mere handful of them are concerned with global challenges. The Munich Re Foundation may not be able to move mountains but it can formulate effective and sustainable solutions and thus play some small part in defusing the overall situation.

**To ensure our work is effective, there must be a continuous, seamless flow of information between foundation, external experts and benefactor.**

Thomas Loster  
Chairman of the Munich Re Foundation

March

April

May

June

July

August



7 March  
"Young people with boundless energy – Protect the climate!" – Munich Re Foundation decides to sponsor the national schools competition.  
Page 8

7 April  
The official ceremony celebrating Munich Re's 125th anniversary signals the start of the foundation's work.  
Page 34



10 May – 26 July  
We organise a series of lectures and discussions to coincide with the "Water in Myth and Nature" exhibition.  
Page 18



1 July  
First project: Munich Re Foundation establishes the Chair on Social Vulnerability at the United Nations University in Bonn.  
Page 6



2 August  
With the backing of the Munich Re Foundation, WasserStiftung Ebenhausen installs fog nets providing drinking water on Eritrea's Asmara plateau.  
Page 26

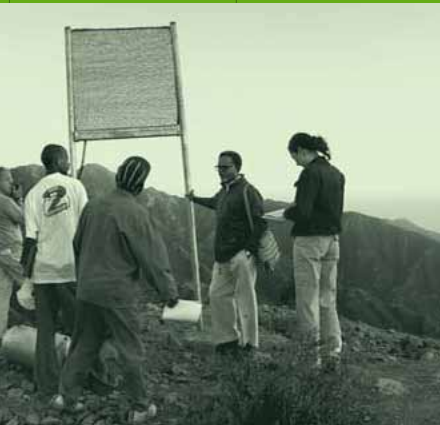


5 August  
We support the "Mozambique flood warning" project, designed to set up a simple but effective early warning system on the River Búzi.  
Page 24



2

4



5



9

14 November  
The Munich Re Foundation donates winter tents for the earthquake victims in Pakistan and launches a programme to provide emergency drinking-water kits.

Page 28



7

18-20 October  
In cooperation with the CGAP (Consultative Group to Assist the Poor) Working Group on Micro-insurance, the foundation invites experts to a conference on microinsurance.

Page 12



6



10

16-17 November  
The Munich Re Foundation organises an international symposium on worldwide disaster prevention, at which the Hohenkammer Charter is adopted.

Page 14



8

31 October  
In conjunction with the National Research Center for Environment and Health (GSF) we stage the first in a series of evenings on "The risks of living in Munich - Perceived and actual".

# Putting people first The Munich Re Foundation's strategy

2 3

In the 125 years since its establishment, Munich Re has built up a vast fund of expertise in the field of global risks. The Munich Re Foundation's role is to place this knowledge, previously used internally for business purposes, at the service of mankind in general. It is knowledge which holds tremendous potential for preventing risk and improving living conditions or, as stated in our motto, for translating "Knowledge to Action".

The foundation's work is as varied as the risks themselves and focuses on people in their different circumstances. Its principal aim is to help people in developing countries to better assess and manage the risks they face. Only if knowledge of the risks is firmly entrenched in the much-quoted "last mile" – which is the "first mile" as far as the people at risk are concerned – is it possible to provide effective support.

What sets the Munich Re Foundation apart from other institutions of this kind is its ability to bridge the narrow divide between the different disciplines. Interdisciplinary thinking implies skill networking and adopting a broad approach to the issues at stake. For instance, rather than considering water, poverty and megacities in isolation, the foundation looks for ways to supply water to poor areas in megacities. Thus, knowledge networking opens up new opportunities and realises potential.

Having a prominent benefactor, the foundation is able to gather the relevant parties from political, economic and public life around one table to seek solutions to the challenges of our time. The Munich Re Foundation acts as a catalyst in its dealings with its partners, providing new perspectives and thus creating the conditions that enable it to establish itself in society by virtue of its competence and the quality of its work.

It pursues a strategy founded on four pillars in order to provide effective aid for the people at risk:

By **researching** the risks, the foundation promotes understanding of their causes and effects.

The foundation regards **networking** between international experts and decision-makers as an opportunity to gain an overall picture of the risks and promote risk-prevention schemes.

The foundation **sensitises** the public in order to propagate knowledge of the dangers and persuade people to accept the implementation of safety measures.

Finally, the foundation provides direct help for people by **acting** specifically in their interests.

The foundation examines and deals with issues in their overall context. This reveals hidden links.



## Issues

The foundation addresses the major challenges of our time: environmental and climate change, water as a resource and risk factor, urbanisation and megacities, population growth and disaster prevention. Faced with such complex and not seldom politically charged issues, we are careful not to over-extend our resources, and advocate solutions that are manageable and consequently all the more effective.

### Environmental and climate change

Climate change is a fact. The mean atmospheric temperature has increased by some 0.8°C in the past 100 years. The poles are melting, the glaciers are receding, sea levels are rising, we are experiencing more and more precipitation and extreme wind-storms. To ensure forthcoming generations have a future worth living, we have to make the right choices now.

We are committed to combatting climate change.

### Disaster prevention

Natural catastrophes are unavoidable. However, if we are fully aware of the risks, we can deal with them more effectively, avoid casualties and minimise the damage.

Backed by Munich Re's expertise in the field of catastrophes, the foundation supports people at risk. Its objective is to make that knowledge available to a broad public and find workable solutions for those affected.

### Water: Resource and risk factor

Water is indispensable to mankind. A mere one per cent of the world's water resources is available as drinking water. Around 1.1 billion people have no access to clean drinking water; 2.6 billion have to manage without basic sanitation facilities.

At the same time, the number of floods has increased dramatically in recent years. This situation will be further exacerbated by climate change.

The foundation's objective is to promote awareness of the problem whilst directly helping people who face daily water shortages.

### Population development

The present world population of some 6.5 billion is expected to increase by just under three billion in the next 45 years. Most of this increase will affect the 49 poorest countries. By 2050, the populations of those countries will have more than doubled, from 668 million to 1.7 billion. Meanwhile the threat of an ageing population looms over the industrialised countries.

Population development is an important aspect of many of the foundation's projects.

### Urbanisation and megacities

Cities are centres of economic development. For that very reason they act as a magnet to the economically weak members of the population. The megacities of the future will mainly be found in the developing world and will face a great many problems: the growth of slum areas and shanty towns, full of noise and dirt, without clean water and proper sanitation. Whilst people on the city outskirts will frequently be threatened by floods or landslides.

We support projects that provide effective long-term help for the "forgotten populations" of the conurbations.

### Poverty

Poverty is not only measured in terms of income. The situation is aggravated by illiteracy, poor healthcare, high infant mortality, frequent cases of discrimination against women, lack of access to clean water and sanitation and increasing pollution. Natural hazards threaten the slum areas and shanty towns of the megacities. In the United Nations Millennium Declaration, 180 heads of state pledged to halve the number of people living in poverty by 2015.

The Munich Re Foundation has set itself the aim of supporting this Millennium Development Goal through its projects.

Environmental changes, population growth, poverty, ignorance: many factors are inextricably linked when a flood or cyclone develops into a catastrophe. The Munich Re Foundation supports research into the causes and consequences of catastrophes as well as into systems designed to mitigate the risks.

The foundation's UN University Chair on Social Vulnerability created in 2005 laid the cornerstone for a scientific analysis spanning a number of years into the hazards facing individuals and society in the developing countries. Furthermore, the foundation gave its backing to the budding scientific experts who came up with creative ideas on climate protection in a schools competition.

The Director of the UN University in Bonn, Prof. Janos Bogardi, in conversation with Board of Trustees member Prof. Gerhard Berz; alongside them Prof. Hans van Ginkel, UN Under-Secretary-General and Rector of the UN University in Tokyo.







The official signing of the foundation's first project, the Chair at the Institute for Environment and Human Security at the UN University in Bonn.

Environment-related extreme events are increasing throughout the world. We can only take the right strategic action if we research their causes and effects.

Prof. Janos Bogardi  
Director of the Institute for Environment and Human Security  
of the University of the United Nations in Bonn

# Disasters hit the nerve Foundation Chair on Social Vulnerability

6 7

More than three million people were left homeless by the Pakistan earthquake that struck in October 2005.

Hurricane Katrina escalated into a tragedy in New Orleans. The evacuation process was not sufficiently tailored to the needs of the population.

Natural catastrophes are made up of two distinct factors: a major natural event such as a storm or flood and a population that is not adequately prepared to deal with it. The new Chair on Social Vulnerability of the Institute for Environment and Human Security at the University of the United Nations (UNU) in Bonn researches the complex relationships that cause human societies to be vulnerable. In 2005, the Munich Re Foundation's first project was to set up this Chair.

How do people from different cultures assess natural catastrophe risks? Given their economic situations, what preventive measures do they and can they take? Can a uniform, global risk-prevention strategy bring long-term success? The cultural and economic dimensions of risk perception that the new UNU Chair is researching are of major significance in the development of appropriate preventive and safety systems. The object is to educate international students in catastrophe management and prevention. They will put this knowledge to practical use in their home countries.

The Chair will be occupied on a rotating basis by outstanding international scientists who will build up a research network. Thus, it will be possible to pursue a long-term research objective. Each research fellow will occupy the Chair for a period of one academic year. The designated Munich Re Foundation Chair holders are:

Prof. Úrsula Oswald-Spring, Universidad Nacional Autónoma de México (UNAM) – Psychologist and politician – 2005/2006

Prof. Hans-Georg Bohle, University of Bonn, Germany – Geographer and expert on poverty in India – 2006/2007

Prof. Anthony Oliver-Smith, University of Florida, USA – Anthropologist on Central America specialising in migration and displaced persons – 2007/2008

Prof. Thomas E. Downing, Stockholm Environment Institute, United Kingdom – Climate and environmental scientist – 2008/2009.

The Institute for Environment and Human Security of the UN University (UNU-EHS), where the foundation's Chair is located, was inaugurated in Bonn in 2004. Its Director is hydrologist Prof. Janos J. Bogardi, who was previously Head of Sustainable Water Resources Development and Management at UNESCO.

The UN University comprises a global network of research and educational institutes together with associated institutions and scientists whose activities are coordinated by the UNU Centre in Tokyo. Its task is to find solutions for the world's pressing problems.

Starting in 2006, the UN University and the Munich Re Foundation will organise an annual summer academy. At that forum, outstanding PhD candidates will have an opportunity to discuss their field of social vulnerability research and the results with high-ranking scientists and international experts.

The first Academy will be held from 23–29 July 2006 at Schloss Hohenkammer, the topic being "Global water hotspots: Water-related social vulnerabilities and resilience-building". The scientists will consider how to close gaps in our academic, political and practical knowledge and discuss ways of developing the relatively new research field, social vulnerability.



## Interview

### Women are harder hit by disasters

Prof. Úrsula Oswald-Spring of the University of Mexico (UNAM) is researching how gender-specific social characteristics affect the situation of women when disasters strike. An interview with the scientist who holds the foundation's Chair on Social Vulnerability at the Institute for Environment and Human Security in 2005/2006.

### What brings a professor from Mexico to a Chair at the UN University in Bonn?

**Oswald-Spring:** Not least the 20 years' theory and practical experience in disaster research and management I acquired as Environment Minister of the Federal State of Morelos in Mexico. In addition, the new HUGE safety concept that I set up for UNESCO and is concerned with human, gender-specific and environmental security, fitted in well with the Institute's research focus.

### Are there gender-specific differences in the consequences of disasters?

**Oswald-Spring:** Women are at greater risk than men for cultural reasons. Often their social tendencies are characterised by their caring for others: their children, husbands, families, the old and needy. In today's social structure, women are often at a disadvantage in terms of income, job, workload and social status. Where highly traditional work concepts prevail, women tend to be largely confined to the home and are not as well educated.

### What effect does this have when disaster strikes?

**Oswald-Spring:** Women support the weak and needy, and frequently pay for it with their lives. At the same time, in many cultures their lives are regarded as less valuable and they are consequently less well protected. In some societies, women are not allowed to venture outside the home unless in male company. As a result, warnings of impending disaster take longer to reach them and they are often harder hit by the consequences.

### What needs to be done?

**Oswald-Spring:** First, we have to identify the gender-specific and age-specific differences imposed by society – there are practically no scientific data available at present. Then, we have to see how vulnerability is distributed within society in the individual regions. That helps us – both governments and administrative authorities – to take greater account of women's increased vulnerability, particularly when devising evacuation plans. If warnings reach the women quickly, they generally take care of the whole family.

### What will you retain after a year in the foundation's Chair?

**Oswald-Spring:** It has enabled me to reinforce my ties with other experts and I hope this will result in long-term cooperation so that we can develop an integrated view of social vulnerability. We will be able to create a fresh awareness of how social vulnerability can be reduced in the different cultures, based on theoretical considerations and empirical analyses.

Chair incumbent Úrsula Oswald-Spring researches the effects of disasters in the sociological context.



# Young people create knowledge Schools competition on energy efficiency

8 9

“Young people with boundless energy – Protect the climate!” was the theme of a national campaign organised by the German Federal Environment Ministry (BMU). Pupils were asked to draw on their knowledge of climate change, energy and energy efficiency to devise techniques or models or make other contributions on the subject. The Munich Re Foundation has been supporting this venture, designed to encourage young people to acquire knowledge which they then put into practice, since 2005.

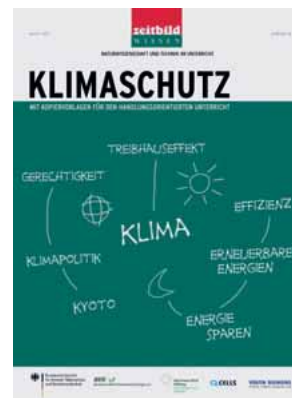
Lessons on wind energy, a model boat powered by fuel cells or a solar energy slug barrier: if these and other prizewinning 2004 projects are anything to go by, the 2005 awards will be a fascinating experience. Individual schoolchildren, complete classes and even whole schools have spent a year applying their enthusiasm and imagination to the subject of renewable energies and have come up with some novel ways of conserving fossil fuel.

The idea behind the competition is to increase awareness of climate-change issues. 26,000 German schools received support materials on the environment, mobility and climate protection in the form of worksheets, handouts and a quiz on the subject of energy efficiency. Participants were free to contact local associations, businesses and civic groups to obtain information and financial backing for their projects.

The highlight of the competition is the presentation of the prizes in Berlin on 26 April 2006. At the ceremony, the teams and their project partners present the most original and interesting ideas and receive their prizes from the Federal Minister for the Environment, Sigmar Gabriel. In addition to cash prizes amounting to €15,000, there are a number of special prizes.

The competition is organised by the Berlin Zeitbild Verlag publishing house, which has many years’ experience in education field. The Munich Re Foundation decided to partner the project because its own role of finding sustainable solutions, applying knowledge and taking appropriate action coincides with the competition’s objectives.

26,000 German schools were encouraged by brochures and posters to take part in the energy efficiency competition.



## Climate facts

**Greenhouse earth:** 2005 proved to be the warmest year since records began over 100 years ago. In that time, the temperature has risen by 0.8°C overall and by 0.6°C in the last 30 years. This has largely been due to greenhouse gases such as carbon dioxide (CO<sub>2</sub>).

Drew Shindell, Goddard Institute for Space Studies, NASA

**Heat:** The heatwave that struck central and southern Europe in 2003 was one of the biggest catastrophes since the Middle Ages and caused around 35,000 deaths. The likelihood that similar or even stronger heatwaves will occur has more than doubled as a result of human activity.

Peter A. Stott et al., 2004, Nature 432, p. 610 ff.

**Flood:** Apart from windstorms, the most frequent causes of natural disaster losses in many countries, including Germany, are floods. One third of all economic losses are due to floods. In addition to increased settlement of exposed areas, this is arguably due to climate change.

Dr. Wolfgang Kron, Munich Re, Climate Symposium, Würzburg, 3–4 May 2004

**Dying species:** Over a million species, a quarter of all land animals and plants, could become extinct by 2050 as a result of global warming. This concern has been expressed by a team of international researchers in a paper published in the highly respected journal "Nature".

Chris D. Thomas et al., 2004, Nature 427, p. 145 ff.

**Allergies:** The steadily increasing levels of CO<sub>2</sub> in the air can stimulate plant growth and pollen production, according to investigations carried out on the species *ambrosia artemisiifolia*. At the same time, higher temperatures mean a longer growing season. Allergy sufferers are thus subject to increasingly severe exposure factors.

Center for Health and the Global Environment, Harvard Medical School

**Diseases of southerly climes:** According to a study carried out by the University of Bonn, disease vectors and pathogenic agents which thrive in warm climates are gradually being introduced to Europe from Asia and Africa. Thus, as a result of environmental and climatic changes, diseases not previously encountered in European latitudes could cause problems.

German Federal Environmental Agency (publisher), 2003, Climate Change, Study No. 05/03

The earth's hotting up



If climatologists' predictions prove accurate, the atmospheric temperature will rise by up to 6°C by the end of the century. This would have dramatic consequences.

The diagram shows how the atmosphere's mean temperature has evolved in the last million years (in logarithmically spaced time intervals).

Source:  
Munich Re  
2003

By networking our knowledge of global risks, we create new opportunities and exploit fresh potential. The Munich Re Foundation provides the necessary impetus and organises symposiums and meetings of international experts to find solutions to global problems.

In 2005, two conferences were held at which experts discussed disaster risk management and microinsurance for the lowest income-bracket groups. Each produced quite specific results: the Hohenkammer Charter listed the ten major challenges of risk prevention and the Microinsurance Conference presented viable solutions to meet the needs of people in developing countries.

Our expertise is increasing by leaps and bounds. But only **networking** allows us to use that expertise to the full.

Dipankar Mahalanobis  
Microcare, Uganda



Experts at the International Symposium entitled "Worldwide disaster prevention – Awareness is the key".

From the left: Dr. Irmgard Schwaetzer, German Committee for Disaster Reduction (DKKV), Christoph Bals, Germanwatch, Dr. Eugene Gurenko, World Bank, David Peppiatt, ProVention Consortium and Dr. Juan Carlos Villagrán, UN University.

Dipankar Mahalanobis, Managing Director of Microcare, shares his experiences in loss developments and risk evaluation in Uganda and explains how the very poorest can be insured there.



## Poor and uninsured International Microinsurance Conference

12 13

Microinsurance has an important part to play in combatting global poverty. That was the conclusion of the international conference entitled "Making insurance work for the poor. Current practices and lessons learnt", held from 18–20 October 2005 at Hohenkammer. The event was organised by the Munich Re Foundation and the Working Group on Microinsurance of the Consultative Group to Assist the Poor (CGAP).

Of the four billion people throughout the world who have to manage on less than two dollars a day, fewer than ten million are currently able to afford insurance cover. Low-income households therefore have to fund medical expenses and doctors' fees largely out of their own pockets. In some cases, such outgoings can account for over 30% of their income. When natural events strike, people often lose their entire livelihoods. Microinsurance is a crucial weapon in the fight against poverty, although not easy to set up in practice.

The war on poverty is also a major factor in disaster prevention – this view was confirmed at the international symposium entitled "Worldwide disaster prevention – Awareness is the key" held by the Munich Re Foundation in November (see p. 14). Given this enormous, hitherto unsatisfied need for security, the UN, in declaring 2005 to be the International Year of Microfinance, stressed the importance of supporting those in need by means of appropriate financial instruments.

The Munich Re Foundation and CGAP Working Group on Microinsurance extended invitations to some 100 experts from 25 countries. They discussed how microinsurance could be organised so that those on very low incomes could obtain basic life and health cover. The main item on the agenda was a debate on the results of 20 case studies that dealt with existing microinsurance schemes on three continents.

"People still tend to doubt that insurance cover for the poor is possible", said Dirk Reinhard, Vice-Chairman of the Munich Re Foundation. Low premiums coupled with often relatively high risks, the level of administration costs and generally poor access to the people concerned make microinsurance an unattractive proposition in the eyes of many providers. "However, the conference has shown that there are viable solutions. Nevertheless, we still have much to learn and there has to be a greater transfer of knowledge." The various parties involved – local groups, microfinance and microinsurance organisations, development workers, authorities and traditional (re)insurers – need to pool their expertise and specialist skills.

This was confirmed by Craig Churchill of the International Labour Organization (ILO) in Geneva, who chaired the CGAP Working Group on Microinsurance: "The number of microinsurance schemes and insureds has doubled every year for the past ten years – albeit starting from a low base". Many schemes were quite small to begin with, but some held great potential. "This is shown by three programmes, one in Bangladesh, one in Uganda and one in India, each offering insurance to over a million people."

Together with CGAP we will be staging another microinsurance conference, this time in South Africa, where we are already seeing first encouraging signs.

Further  
information

[www.  
microinsurance  
conference2005.org](http://www.microinsuranceconference2005.org)



## Interview

### Simple ideas work best

Financial services provider Microcare specialises in health insurance systems for the lowest income-bracket groups and has already launched a number of successful projects in Uganda. We asked Dipankar "Dubby" Mahalanobis, Managing Director of Microcare about microinsurance needs and opportunities in developing regions.

### What is microinsurance?

**Mahalanobis:** In a nutshell, it is insurance for the poor. It is very important that people in developing and emerging countries who have no access to traditional financial services should be given a fair opportunity and affordable solutions. To date, access to microcredits and microinsurance has often been only very limited where the predominantly poor rural populations are concerned. At the same time we are mainly dealing with regions where traditional insurers are not yet actively involved.

### How can microinsurance mitigate poverty?

**Mahalanobis:** The World Bank defines poverty as living on less than one dollar a day. This means that more than 1.2 billion of the world's population are living in poverty. We all face events in our lives that cause financial hardships, irrespective of financial status. They include illness, disability, old age or the death of a relative. Microinsurance helps offset these unforeseen events. It gets people back on their feet and gives them a basis for self-sustainability and further development.

### What are the most pressing problems?

**Mahalanobis:** At the moment only a few products are economically viable. We need greater commitment on the part of the donor countries or more public-private partnerships. Another difficulty is the lack of understanding of the concept of insurance. People often only look at the premium and decide it is too expensive. Advertising by word of mouth can help, so that if certain individuals in a community have already been paid under a life insurance or education endowment policy, others soon come round to the idea. Apart from that, the simpler the idea, the more convincing.

### What have you gained from the Hohenkammer conference?

**Mahalanobis:** It was a blend of ideas, practical examples and theory. It enabled me to establish contact with many experts from a variety of different fields and countries. We realised that we are a large community and are often faced with the same problems. This network will help me in future to tackle thorny issues in my daily work, exploit synergies and come up with new ideas.



1



2



3



4

1, 3  
Some 100 experts from 25 different countries analysed more than 20 case studies in presentations and workshops.

2  
Dipankar Mahalanobis, Microcare, Uganda.

4  
Craig Churchill, International Labour Organization (ILO), Switzerland.

5  
Vijay S. Athreye, TATA-AIG Life Insurance Company Ltd, India.



5

# Risk awareness is the key

## Symposium on worldwide disaster prevention

14 15

The dramatic effects of earthquakes, cyclones and floods can only be significantly reduced in the long term if those living in the exposed areas are aware of the risks and know what to do to protect themselves. Experts attending the international symposium organised by the Munich Re Foundation approved the ten key points of the Hohenkammer Charter for optimising global disaster prevention.

The incidence of deaths and property damage was higher in 2004 and 2005 than ever before. This was largely due to disasters such as the devastating tsunami that followed the Indian Ocean seaquake in December 2004 and Hurricane Katrina, which caused widespread devastation in the southern US states of Louisiana, Mississippi and Alabama and culminated in the New Orleans flood. These acts of nature brought home all too clearly the importance of risk awareness and risk prevention.

Only with the aid of international cooperation will we succeed in implanting the knowledge of the risks in people's minds.

With this very much in mind, the Munich Re Foundation invited 100 participants from 30 countries to an international symposium. Leading representatives of governmental and non-governmental organisations such as the World Bank, the United Nations, the International Red Cross and the German Association for Technical Cooperation (GTZ) met with finance and insurance experts for a discussion entitled "Worldwide disaster prevention – Awareness is the key".

Prominent figures such as Dr. Irmgard Schwaetzer of the German Committee for Disaster Reduction (DKKV), Dr. Bernd Eisenblätter of the GTZ, Dr. Salvano Briceño of the United Nations International Strategy for Disaster Reduction (UN/ISDR) and Dr. Johann Schaar of the International Federation of Red Cross and Red Crescent Societies (IFRC) underlined the fact that the key risk prevention tasks would only be solved if politicians, economists, scientists and the people concerned worked in partnership.

The conference culminated in the drafting of the Hohenkammer Charter, in which the various experts defined the ten most important challenges for the future (see inset). "Catastrophes are unavoidable and this is something we must be prepared for", was how Thomas Loster, Chairman of the Munich Re Foundation, summed up the key points. "We can reduce suffering considerably, but only if we tackle the problems together."



1



2



3



4



5

## Hohenkammer Charter

The Hohenkammer Charter laid an important foundation stone for better combining and focusing global efforts.

The ten most important challenges for optimised risk prevention:

### 1. Poverty

People living in poverty are especially vulnerable; poverty relief is therefore a key element.

### 2. People

Disaster prevention efforts must reach or start with the people in the areas at risk.

### 3. Decision-makers

The swift implementation of viable preventative measures presupposes the committed involvement of decision-makers from communal to national government level.

### 4. Dialogue

The exchange of views between those concerned must be actively pursued in order to achieve a common understanding of the problems and solutions.

### 5. Partnerships

Politicians, trade and industry, scientists and those affected have to cooperate better and more efficiently. Alliances – public-private partnerships – have to be infused with life.

### 6. Development policy

Risk prevention has to be singled out as one of the central components of development cooperation and national programmes, and implemented accordingly.

### 7. Propagation

Promising risk prevention initiatives that currently exist at communal level must be transmitted and propagated worldwide.

### 8. Incentives

Political, legal and economic incentives are called for, to support investment in disaster prevention, and to accelerate the processes involved.

### 9. Insurance

Risk transfer, such as insurance and solidarity networks, helps reduce the vulnerability of governments and people in risk situations.

### 10. Awareness development

Developing awareness is the key to the implementation of adequate measures before disaster strikes.

Intensive discussions between politicians, scientists, economists and representatives of development organisations.

1

Dr. Maryam Golnaraghi, World Meteorological Organization (WMO), Switzerland.

2

Victor Orindi, ACTS & World Agroforestry Centre, Kenya.

3

Dr. Bernd Eisenblätter, German Association for Technical Cooperation (GTZ), Germany.

4

Dr. Norman Kin-Wai Cheung, Kings College, United Kingdom.

5

On the right, Leila Moonda of the South African Insurance Association (SAIA), South Africa and next to her Shaoyu Wang, Swiss Federal Research Institute WSL Davos (SLF).

**We can reduce suffering considerably, but only if we tackle the problems together.**

Thomas Loster

Chairman of the Munich Re Foundation

In order to take the right action, you have to know what the challenges are. The Munich Re Foundation organises presentations and discussions to sensitise the public to global risks.

In 2005, water was singled out as a special concern. Five dialogue forums were held in which the audience had an opportunity to find out about the problems of water as a resource in the megacities of the emerging and developing world and about legal aspects of water distribution. Presentations on drought, flood and natural flood protection programmes demonstrated that water could also be a risk factor. Another dialogue forum looked at its cultural significance in myth and religion.



Dr. Cecilia Tortajada, Vice-President of the Third World Centre for Water Management (left), and Prof. Janos Bogardi, Director of the UN University's Institute for Environment and Human Security, addressed the first dialogue forum on the water problems of megacities.

Living with virtually no water. Dr. Stefan Kröpelin, a project leader at the University of Cologne, maintains good contacts in northern Chad – a key factor for successful research in deserts and arid regions.

For me, responsibility begins with **sensitisation** to the risks to which others are exposed.

Dr. Stefan Kröpelin  
Project leader of the University of Cologne's special research programme on adaptation and cultural innovation in the arid regions of Africa



## Facets of a life elixir Dialogue forums on water

18 19

The idea behind the Hypo Foundation for Culture exhibition “Water in myth and nature” held at Munich’s Kunst-halle in summer 2005 was to combine information with aesthetic experience. The Munich Re Foundation supported the exhibition by staging a series of presentations and discussions revolving around the theme of water.

There is no shortage of this life-giving elixir in Germany. Supplies of good-quality drinking water are so plentiful that you can even use it to wash the car or flush the toilet. People tend to forget this, although it should no more be taken for granted than the extensive flood protection provided by the dykes along our rivers. The Munich Re Foundation’s “Dialogue forums on water” series was designed to promote public awareness of regional and global water issues.

The exhibition, which not only featured around 70 first-class paintings dating from the 16th century to the present but also covered political and scientific aspects of the issue, fitted in perfectly with the theme of the presentations. It was organised jointly by the Technical University of Munich, the Bavarian State Office for Water Management, the Deutsche Museum and Munich Re.

**Some 30–40% of Mexico City’s water is lost in the distribution process: enough to supply four million people.**

Dr. Cecilia Tortajada  
Vice-President of the Third World Centre  
for Water Management in Mexico City

### Water in megacities 10 May 2005

The relentless march of urbanisation means more and more cities with over ten million inhabitants. The provision of drinking water and access to sanitation pose serious problems, particularly in the developing countries. Prof. Janos Bogardi, Director of the Institute for Environment and Human Security at the UN University in Bonn, described the enormous challenges facing the growing conurbations in the dialogue forum on “Water in megacities”. In order to halve the number of people with no access to a toilet and bathroom by 2015, sanitation facilities would have to be installed for around a million people – the equivalent of a city the size of Cologne – every three days. This is the ambitious target set by the United Nations. The situation remains dramatic, not least due to the dearth of drinking water supplies. “Every year the number of children who die due to poor water quality is five times higher than the number killed in the tsunami catastrophe of December 2004”, Bogardi warned.

Dr. Cecilia Tortajada, Vice-President of the Third World Centre for Water Management in Mexico City, used the Mexican capital to illustrate the problems. Private households alone needed 40 times as much water as Munich. “There is enough water available but it has to be transported over distances of up to 150 km, and the height difference involved is more than 1,000 m, all in all a highly energy-intensive process”, Dr. Tortajada confirmed. In addition to this, some 30–40% – enough to supply the needs of four million people – is lost in the distribution system. These are not the only problems. Falling groundwater levels are causing some areas of the city to subside by up to 40 cm a year, and the consequences for the over-burdened sewerage system are adding to the wastewater disposal problem.

Despite these major issues, the speakers agreed that megacities, with advantages such as better infrastructure, nevertheless offered enormous opportunities. In order to exploit this potential, a long-term urban development strategy had to safeguard water supplies. Every possible avenue should be explored to achieve this, and in particular partnerships between municipal authorities and private enterprise.

**The Isar plan:  
Near-natural flood protection**  
21 June 2005

It is possible to set up flood controls and still preserve the attractiveness and biodiversity of an alpine river. This was illustrated by Dr. Klaus Arzet, Head of Munich's Wasserwirtschaftsamt (Water Management Bureau) in the dialogue forum "The changing face of a river – Renaturalisation of the Isar". He took his audience on a guided tour of the banks of the city's river, the Isar, spanning past, present and future.

At the beginning of the 19th century, the Isar, which until then had regularly flooded the Au, Tal and Lehel quarters of the city, was tamed, partly by being channelled through straight canals built of stone and concrete. In the early 1990s, the state of Bavaria and the city of Munich decided to restructure the river bed. The aim of the resulting Isar plan was to optimise flood control and improve urban recreational quality by providing "more space and a return to the river's natural environment", Dr. Arzet explained.

Now that work has been completed at two of the three sites, the appearance of the river has changed. Gravel banks, meanders and islets conceal sophisticated protective structures, such as dyke reinforcements, tree conservation systems and fish ladders. Flora and fauna thrive. According to Dr. Arzet, initial surveys show that, in just a short period of time, biodiversity has greatly increased. Flood control already complies with the State of Bavaria guidelines for 2020.

By 2008, when the Isar plan has been completed, the river's attraction as a recreational destination will have been greatly enhanced. The 260-kilometre-long alpine river has long been a popular venue for excursions. The cost, some €30m in all, is low compared with other projects in Bavaria and Munich. The Isar plan will bring benefits all round. The return of the river to a near-natural state will improve conditions for people, the ecology, the city, the State of Bavaria and the Isar itself.

**Water belongs to everyone!**  
28 June 2005

Almost a fifth of the world's population has no clean drinking water. The third dialogue forum, a podium discussion entitled "Conflict over water – Human right to water" shifted the emphasis to the way resources are shared.

Prof. Peter A. Wilderer of the Institute of Advanced Studies on Sustainability, European Academy of Sciences and Arts, pointed out that worldwide food production already accounts for 70% of our water and the percentage is increasing. Prof. Wilderer, holder of the 2003 Stockholm Water Prize, appealed to the politicians to continue the dialogue on the right to water.

Dr. Andreas Kuck of the German Association for Technical Cooperation (GTZ) also spoke about the political significance of water. 40% of the world's population lives on cross-border rivers. Dr. Kuck pleaded for a more efficient use of water to defuse the conflicts on how it is shared. He chose the example of Amman, the capital of Jordan, where treated wastewater, rather than drinking water, is used for agricultural purposes.

In the third presentation, Dr. Thomas Kluge, of the University of Frankfurt's Institute for Socio-Ecological Research (ISOE), also addressed the efficiency issue. According to Dr. Kluge, the institutional and technological challenges of water provision are "not about the supplier's legal status but how the supplier is regulated". He called for wastewater treatment techniques aimed at maximum energy conservation and better use of phosphates, nitrates and other substances found in water. The relevant technologies would have to be perfected in Germany before being marketed elsewhere. Dr. Kluge stressed that the industrialised countries had to act as role models: "We have to practise what we preach."

Rosemarie Bär, coordinator for development policy at the Swiss Coalition of Development Organizations, expressed concern that "it is not the resources which are lacking but the political will". The use of water should be enshrined as a human right in order to ensure that water was freely accessible to future generations and to maintain supplies of this resource.

For some, water in the city is a barrier – flooding in Mexico City.

For others, the banks of the cooling river afford relaxation in the heart of the city – the Isar in Munich.



**Water, the myth –  
Element of sacred cleansing**  
12 July 2005

Life-giver, thirst-quencher, purifier: water has exercised a spiritual magic on people from earliest times. Prof. Matthäus Woschitz, who teaches religious studies at the University of Graz, explained in his dialogue forum presentation “Water, the myth – Element of sacred cleansing” how water has acquired a sacred quality through the medium of “homo religiosus”. Ideas and customs revolving around the processes of cleaning and purifying were thus part of religious life in all ancient cultures.

Water derives its religious symbolism as a means of purification closely linked with the ideas of salvation and spiritual well-being. One of the uses encountered in all cultures is to wash away guilt and restore the soul. Prof. Woschitz explained that the “deliver us from evil” passage in the Lord’s Prayer reflected the basic issue underlying all religions and philosophies: the release of mankind from suffering, guilt and evil. As one of the most common means of ritual purification and sanctification, water had a deep symbolic significance and represented a new spiritual beginning and an acknowledgement.

This power inherent in the basic element was not confined to religious metaphors but was also found in fairy tales and legends. For instance, in the Grimm fairy tale “Puss in Boots” a miller’s apprentice is transformed into a marquis when he bathes in the river. The Professor explained that shedding garments and bathing in the river symbolised “knowing oneself”, i.e. confessing to one’s own weaknesses. Water thus signifies a new spiritual beginning and an acknowledgement – symbolising the fundamental human issues.

20 21

Water, giver of life, quencher of thirst and purifier, is also a religious symbol in many countries.

**Water, the risk –  
Drought and floods**  
26 July 2005

Vast deserts but also areas that suffer from huge floods: many people live in regions affected by water extremes. The dialogue forum entitled “Water, the risk: Too much – too little” addressed the issue of droughts and floods. The conclusion was that the people at risk were exposed to considerable forces and that joint action was required.

The main research field of Dr. Stefan Kröpelin, project leader of the University of Cologne’s special programme on adaptation and cultural innovation in the arid regions of Africa, is the world’s largest desert. The Sahara has not always been a desert; periods of drought have alternated with periods of humidity over thousands of years. “However, the Sahara is now so dry that rain usually evaporates before it touches the ground. You don’t even find germs there”, Dr. Kröpelin added.

People had adapted to the extreme conditions, managing in some cases on less than a litre of water a day. Drinking water had to be transported over considerable distances, or pumped from wells more than 3,000 metres deep. Water from them is available as a fossil resource but supplies are not replenished by rain. Like oil, once the water has been pumped out, it is not replaced. The geographer cum geologist explained that for about a billion of the earth’s inhabitants, seawater desalination was the only practicable solution in the long term. “It is a laborious process, but there is enough solar power in the region and it should be harnessed accordingly.”

On the other hand, overuse caused the deserts to spread. “The progressive desertification of southern Europe is mainly due to agricultural overuse, not to climate factors”, Dr. Kröpelin confirmed, stating that if the excessive use of the land were halted, the environment would have a chance to recover, as research in the Sahara desert showed.





Similarly, it is people who play a key role in floods. Dr. Wolfgang Kron, Head of Hydrological Risk Research in Munich Re's Geo Risks Research Department, is convinced that "there are few places on earth today where people are safe from flash floods, even on mountains". A single flood could cause catastrophic damage, as in Bangladesh in 1998, when 40% of the land was inundated. In industrial countries, a single flood event often caused economic losses in the order of many billions of euros. The increased risk of flood due to climate change called for the formation of a risk partnership between policymakers, industry and the public. "We must learn to live with floods, but we also need to work together to prevent rising losses and tragic events", said Dr. Kron.

But all too often we quickly forgot about the risks, even after severe losses. Long-term preventive measures such as flood protection zones, tended to founder on the resistance of the local population. "Our only chance is to increase people's awareness of the flood risk", Dr. Kron concluded.

Summing up, foundation Project Manager Anne Wolf commented, "We are already eagerly looking forward to the autumn 2006 series of dialogue forums on 'The risks of living in Munich'".

Drinking water has to be transported over considerable distances, or pumped from wells more than 3,000 metres deep.

When Bangladesh was hit by floods in 1998, 40% of the country was inundated.

## 2005 Munich Re Foundation presentations

To make people aware of the global challenges it seeks to address (see p. 3) in addition to the "Dialogue forums on water", the foundation's team members have also given presentations at a number of different events. An extract:

16 March

Natural disasters – Trends and consequences  
GTZ, Frankfurt

21 April

Natural disasters and climate change – Observations and trends  
Allianz Landesbeirat, Mühlacker

19 May

Climate change – Risks and opportunities for the banking and insurance sectors  
UNEP FI, Barcelona

2 June

Development cooperation – An overview  
Geo round table, Munich

22 June

Financial products  
Red Cross Work Conference, The Hague

23 July

Storms, floods, earthquakes – Is there still hope for us?  
Tsunami day, University of Applied Sciences, Rosenheim

27 July

The effects of climate change on the frequency of disasters  
BayernLB, Munich

23 August

Concept and background of the Munich Re Foundation  
Stockholm Water Week

12 September

Global natural disasters – Serving people at risk  
STS Forum, Kyoto

13 September

MDGs: A business case for the financial industry?  
10th International Business Forum 2005, New York

28 September

Sustainable investment – Choice or obligation?  
MEAG, Munich

3 October

Disaster prevention – The last micrometre  
ISR, London

9 October

Natural disasters, climate change and the MDGs  
Journalists' seminar, University of Hohenheim

24 October

On water  
WasserStiftung Ebenhausen

14 November

UNEP FI – A global partnership in support of the Kyoto process  
Evangelische Akademie, Tutzing

18 November

Global challenges  
InWent, Lauingen/Donau

21 November

From Knowledge to Action – Natural disasters – Awareness is the key  
Lions Club, Schleißheim

24 November

Climate change, weather disasters – What lies ahead? What can we do?  
Verein Energie mit Zukunft, Bad Endorf

24 November

Microinsurance  
Geo round table, Munich

15 December

Water and desert – Disasters and options  
InWent, Feldafing



Flood early warning system: Wolfgang Stiebens knows Mozambique like his own back yard. Here he explains the benefits of the River Búzi early warning system, which needs the support of the entire village community if it is to succeed.

The foundation's projects translate knowledge into specific actions to support people in risk situations, working in cooperation with competent partners. The projects are directly geared to the needs of those at risk and actively involve the people themselves and the existing structures.

In 2005, the foundation sponsored three water projects: one to help people living along a river in Mozambique to set up a flood warning system; another to erect fog nets to enable the inhabitants of Eritrea's Asmara plateau area to produce their own drinking water; the third to equip Pakistani earthquake victims with drinking water filters to protect them from potentially fatal diseases.

People can only **act** responsibly when they have grasped the point of risk prevention.

Wolfgang Stiebens

Adviser to the International Institute for Disaster Risk Management (DRM),  
GTZ project leader for the Mozambique flood warning project



In 2005, women and children in Africa spent some 40 billion hours fetching water on foot. Education and training tended to fall by the wayside.

# Red flag signals danger Mozambique flood warning system

24 25

The state of Mozambique in southeast Africa is frequently hit by storms. The torrential rain causes the rivers to swell and burst their banks in no time, sweeping people to their deaths and leaving behind a trail of devastation. In future, a group of local volunteers will monitor water levels to ensure people have adequate warning. The Munich Re Foundation is sponsoring this simple but effective early warning system.

2000 was a dreadful year for the people of Mozambique. A low-pressure system and cyclones Eline and Gloria brought excessive rainfall in February and March, causing widespread flooding, particularly on the Búzi und Save rivers in Central Mozambique. Some 19,000 square kilometres of land, more than 2,000 of it arable, were flooded. 700 people died in the catastrophe and thousands lost their livelihoods.

Until now, it has not been possible to predict the onset of the severe floods that constantly plague the country. Rainfall and water levels are not systematically recorded. Mozambique, one of the world's poorest countries, lacks the financial resources to set up a hydrological model.

In 2005, the foundation supported the Mozambique flood warning system, which involved installing simple but effective early warning surveillance on the River Búzi to alert the local population to the threat of flood waves.

The system is operated by villagers specially appointed to check water levels using easy-to-read gauges, and record daily precipitation amounts. Once the readings reach a critical level, an analysis and early warning committee in the district capital of Búzi is alerted by radio. If the reports indicate widespread heavy rainfall, the blue, yellow or red flag is raised, depending on the degree of alert. Designated helpers swarm out, armed with megaphones, to raise the alarm. The areas at risk are evacuated.

The system was installed by the German Association for Technical Cooperation (GTZ) and the World Institute for Disaster Risk Management (DRM). They called in experts from Honduras who had successfully set up a similar locally-administered scheme in their own country. Volunteers from Munich Re's South African office supported the project and helped to monitor it.

A successful trial run in November 2005 showed that the people on the river's upper reaches fully appreciated the social responsibility they bore. Village elders, mayors and district administration were all behind the project.

Búzi hazard maps will now be drawn up and the project will be extended to include other exposed regions in Mozambique. The Munich Re Foundation and the GTZ also want to organise a district disaster prevention consultancy service in conjunction with Mozambique's National Disaster Management Institute (INGC).

The River Búzi is a lifeline for the people of the Province of Sofala in Central Mozambique. When the waters are calm, the river can be navigated by dugout.

In Mozambique, women and girls have the task of fetching water. Distances of some 30 kilometres are by no means unusual.



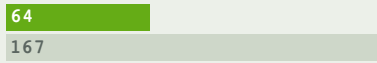
**Insights**

Mozambique / Germany

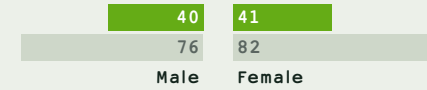
Access to clean drinking water (%)



Days rain per year in Maputo / Berlin



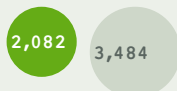
Life expectancy in years



Illiteracy rate (%)



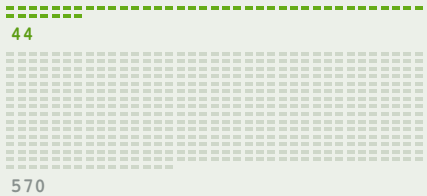
Kilocalories / person / day



Number of kilometres of tarmac roads (%)

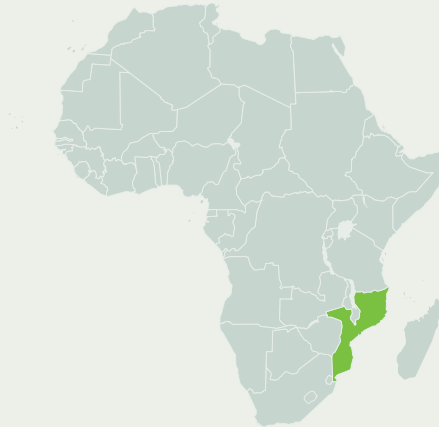


Radios / 1,000 people



**Mozambique**

Area  
801,590 sq km  
Population  
19.4 million  
Population density  
24 inhabitants per sq km



**Battle-scarred**

In 1975, soon after Portuguese colonial rule ended and independence had been declared, a civil war broke out in Mozambique that was to last 17 years and claim at least a million lives. Large areas of the country and its infrastructure were devastated. Even now, some 70% of Mozambique's population lives on less than US\$ 0.40 a day. More than half the inhabitants can neither read nor write; the infant mortality rate is around 12.5%. The average life expectancy will continue to fall, in part due to the number of people infected with HIV.

The country is frequently hit by natural disasters. Apart from cyclones and heavy storms, which sweep over the southeastern part of the African continent each year, there have also been periods of severe drought in the recent past.

Despite this, Mozambique's economic fortunes took a turn for the better when the peace treaty was signed. Annual economic growth has averaged 6% since 1995, although this has primarily benefitted South African companies. In 2004, the rate of children starting full-time education was 92%; democracy has stabilised.



Designated helpers learn what to do in emergencies.

The village community gathers to hear about the latest developments.

Risk awareness begins at school – the village school in Búzi.

Easy to read: red markings indicate the danger levels along the river.



## Water collectors

### Fog nets in Eritrea

26 27

Eritrea, which was once covered in dense forests, now suffers from a chronic water shortage. Special collecting devices that can harvest minute droplets of water from fog could soon provide urgently needed drinking water for many people on the country's Asmara plateau. The Munich Re Foundation is sponsoring a fog net project organised by WasserStiftung Ebenhausen.

It is generally the females who fetch water on the African continent. Women and girls spend some 40 billion hours each year transporting this vital commodity. This is a particularly strenuous task in the Asmara plateau area of Eritrea, which lies some 2,000 to 2,500 metres above sea level. Women often spend many hours walking to water-holes in the valleys, laden with 20-litre canisters, since springs and wells are few and far between on the plateau. Tankers from the capital, Asmara, also sell water in the valleys but in general poor people cannot afford it.

Rain seldom falls on the plateau outside the summer rainy season. However, in the dry season between November and March, fog and cloud develop in the mountain range some 500 kilometres long that separates the plateau from the coast. They are formed when hot air from the country's interior rises, drawing in moist air from the Red Sea.

Collecting the minute water droplets from the fog is a simple but highly effective process, yielding large quantities of precious drinking water. With the backing of the Munich Re Foundation, WasserStiftung Ebenhausen has begun to erect fog nets to supply about 1,000 people with clean water. The droplets condense on contact with the fine plastic fibres of the nets and the water thus collected can then be channelled away. Fog-Quest, a Canadian NGO, developed the technique and has already successfully installed nets in dry coastal parts of Chile and the Yemen where there are frequent fogs.

Following a successful trial run in 2005, some 40 nets will be erected in 2006 which will yield around 300 litres of water per net per day and supply three villages. A reservoir with a capacity of 30,000 litres is being built to store the water. A local water committee will handle the administration and distribution aspects and fix prices that are affordable. The reservoirs will be guarded and opened for a few hours a day.

The fog nets show that experience handed down over the years can be put to good use. In South Africa's Kalahari desert, Bushmen have long managed to survive by collecting the dew from plants. Using the same simple but effective principle, the Eritrean fog nets have the potential to vastly improve people's lives in the long term.

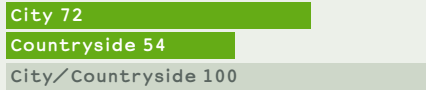


The Board of WasserStiftung Ebenhausen is delighted: the donation made by Munich Re and the foundation will finance 20 fog nets in Eritrea.

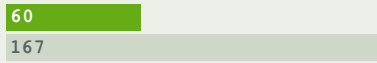
## Insights

Eritrea / Germany

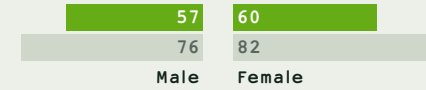
Access to clean drinking water (%)



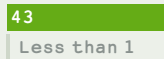
Days rain per year in Asmara / Berlin



Life expectancy in years



Illiteracy rate (%)



Kilocalories/person/day



Number of kilometres of tarmac roads (%)



Radios / 1,000 people



## Eritrea

Area  
121,144 sq km  
Population  
4.6 million  
Population density  
36 inhabitants per sq km



## Unity amidst cultural diversity

Eritrea is the youngest state on the African continent. In 1993, after nearly 30 years of war, the country won its independence from Ethiopia. Over the years, the war and subsequent border conflicts with its neighbour have taken their toll.

Despite its war-stricken past and desperate economic plight, Eritrea is developing a strong cultural awareness. Its constitution confers an equal status on all nine languages of the different ethnic groups. Each group will foster its cultural traditions and primary school teaching is to be available for all children in their native language.

The Ministry of Culture and Education is promoting schemes to identify and protect sites of historical and archaeological interest, which will also make Eritrea more popular as a tourist destination.



A team installs the nets. The photograph shows a small prototype that can provide up to 30 litres of drinking water per day.

The method of installation has to ensure that as much water as possible is harvested in the November to March dry season.

In order to refine the technology, it is important to update the records and statistics. Delegates from the villages taking part in the project and members of the Canadian FogQuest organisation analyse the data.



## Water filters for earthquake region Emergency aid for Pakistan

28 29

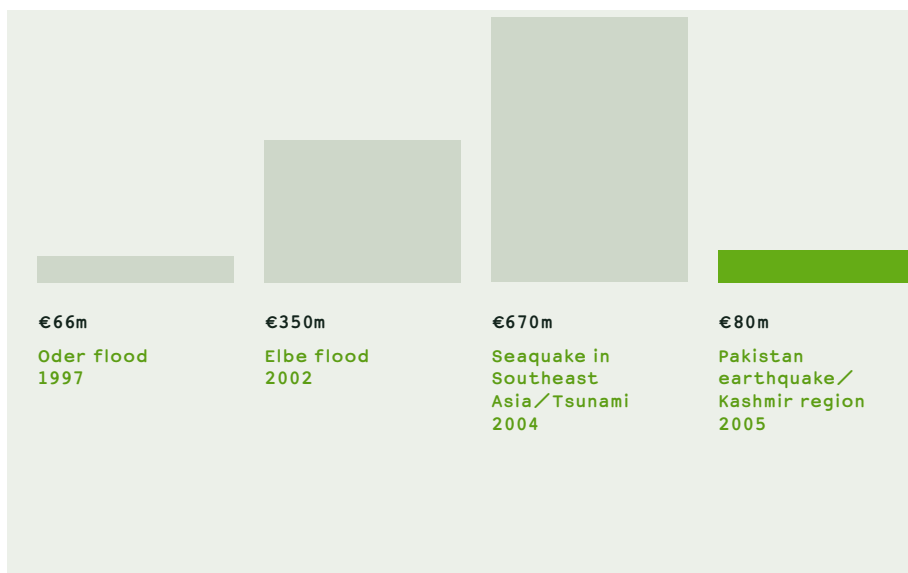
In the early hours of 8 October 2005, the Kashmir region of Pakistan was shaken by one of the most violent earthquakes of the last hundred years. The top priorities for many thousands of victims were to obtain shelter from the rigours of winter and clean water. The Munich Re Foundation donated winter tents and launched an initiative in cooperation with Germany's federal disaster relief agency (THW) to supply emergency drinking-water kits so that people could treat water themselves.

According to United Nations estimates, 88,000 people died and 3.3 million were left homeless by the Kashmir earthquake, which had a force of 7.6 on the Richter scale. The approach of winter, which is very cold and brings heavy snows in the foothills of the Himalayas, coupled with widespread destruction of water pipes and sanitation facilities called for swift measures. As a result of consuming unclean water, children and expectant mothers in particular were severely affected by gastroenteritis, which proved fatal in some cases.

The joint programme to provide emergency drinking-water kits ensured supplies for 150 families – 1,000 people in all – at a makeshift camp near Balakot. The city, situated close to the epicentre and once home to 60,000 people, was almost completely destroyed by the earthquake. Nevertheless, people descended on it from the surrounding mountain villages, remote areas being cut off from any help.

Employees of the local Pakistani-American Dosti Foundation aid organisation taught the families how to use the water filters in Urdu, their native language, oral instruction being essential in view of the region's 55% illiteracy rate. The people were divided into groups of 10 to 15 for the half-hour information sessions, in which they learnt basic water storage and hygiene techniques. Each family received a water filter and an instruction leaflet translated into Urdu by local THW employees. Thus, clean drinking water supplies were assured for around 100 days at a cost of just €10 per person.

Donations in Germany



Germany had always proved very willing to donate at times of major natural disasters. The tsunami of 26 December 2004 far outweighed anything previously encountered.

By comparison donations for the autumn 2005 Pakistani earthquake, where the death toll was 88,000, were considerably lower.

Source:  
German Institute  
for Social Issues  
(DZI), 2006



**Insights**

**Pakistan / Germany**

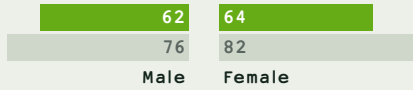
Access to clean drinking water (%)



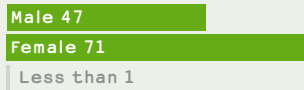
Days rain per year in Islamabad / Berlin



Life expectancy in years



Illiteracy rate (%)



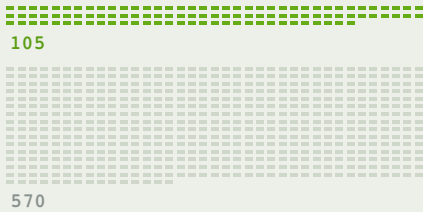
Kilocalories / person / day



Number of kilometres of tarmac roads (%)

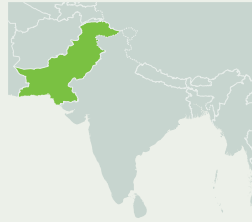


Radios / 1,000 people



**Pakistan**

Area  
803,940 sq km  
Population  
162 million  
Population density  
186 inhabitants per sq km



**Pakistan – The forgotten catastrophe?**

International and national aid to the earthquake victims in the Pakistani area of Kashmir got off to a slow start. Not until calls went out for urgent donations and a UN donors' conference was organised in mid-November 2005 did at least some of the desperately needed supplies arrive.

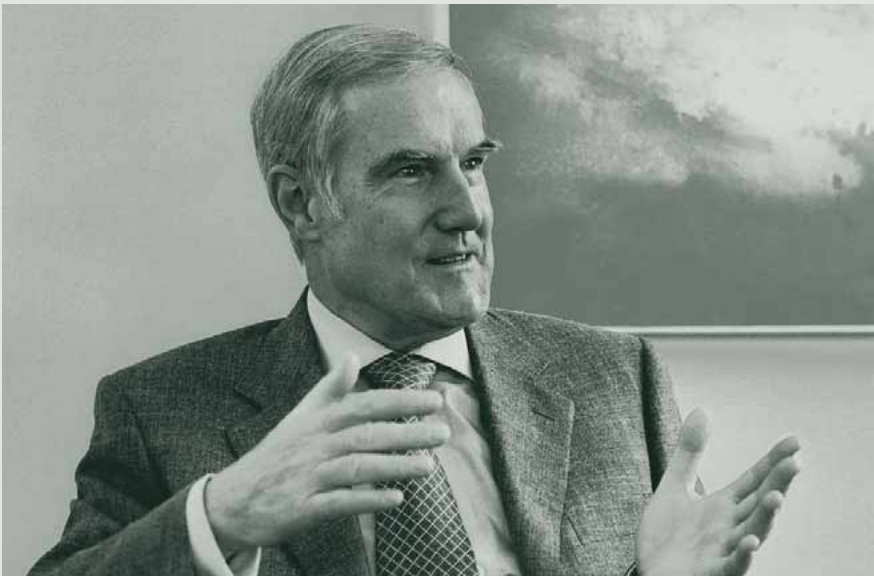
Unicef spokesman Rudi Tarneden blames this on the large number of disasters that struck in the course of 2005. Tsunami aid, the famine in Niger, the hurricanes in the Caribbean and the Pakistani earthquake had stretched aid organisations, the public and a number of governments to their limits.

In addition, little information trickled through from this remote area, a restricted military zone where the way of life is very different, and hard for Europeans to identify with.



The initiative of THW and the Munich Re Foundation secured supplies for 150 families in emergency camps. Enough drinking water for 100 days can be obtained at a cost of €10 per day.

The head of the family explains how to treat the water.



Dr. Hans-Jürgen Schinzler

## Interview

Dr. Hans-Jürgen Schinzler is Chairman of Munich Re's Supervisory Board. From 1993 to 2003, he was Chairman of the Board of Management and has been a prime mover in setting up the foundation. As Chairman of the Board of Trustees, he is closely involved in the foundation's work.

Mr. Schinzler, the foundation has now completed its first year's work. What conclusions do you draw?

**Schinzler:** Initial results of our activities, such as the flood warning system in Mozambique or the fog nets in Eritrea, show that in just one year we have managed to improve the quality of life for people living in these regions. If our commitment were emulated elsewhere, that would indicate long-term success.

What was your main concern as Chairman of the Board of Trustees?

**Schinzler:** I particularly wanted to ensure that we did not set targets that would take ten years to achieve. We wanted something we could really "get to grips with" – a commitment that would bring results in the short term and have lasting impact. Apart from project work, we have also been involved in research to increase knowledge of risks and enhance public awareness.

During the past year, the foundation has been active in developing countries on the African continent. Is that the geographical focus?

**Schinzler:** Our principal objective is to be a positive driving force in developing and emerging countries. However, unlike traditional development cooperation, the foundation's projects are not limited to the world's poor areas. The industrialised nations, too, will face problems such as water shortages. The foundation's initiative can get things moving on many fronts.

The foundation has set a new trend and shown that even a small lever can move big weights.

**Dr. Hans-Jürgen Schinzler**  
Chairman of the Supervisory Board of Munich Reinsurance Company  
and Chairman of the Board of Trustees of the Munich Re Foundation

## Surviving with risk

### Patrick Illinger on the evolution of risk handling

32 33

We have come a long way since the Stone Age. But we still do not deal with risks much better than our ancestors did. Dr. Patrick Illinger, Science Editor at the Süddeutsche Zeitung, reflects on the problems human beings have surviving in today's world with brains formed in prehistoric times.

Life would be hell if humans had to calculate all the risks of everyday life with mathematical precision. Before crossing a road we would have to weigh the merits of getting to the other side against the risk of being run over. Car journeys would be sheer torture given the stochastically not negligible probability of finishing up as one of the 5,000 or so killed each year on Germany's roads. And each boeuf à la mode would be spoiled by the piquant flavour of a cholesterol-rich coffin nail.

In that respect, it is fortunate that nature has endowed us with a generous portion of irrationality. The majority of life's pleasures are ultimately hazardous to a greater or lesser extent. Generally speaking, all progress involves risk. Were it not for derring-do, curiosity and a willingness to subject themselves to considerable suffering, our ancestors would never have started chipping away at stones in Tasmania's Olduvai Gorge and using them to slit open tough-skinned fruits some 2.5 million years ago. The benefits of this first-ever authenticated innovation in human history ultimately outweighed the risks.

However, evolution can also explain some of modern man's foibles. The homo sapiens brain attained its present form at least 50,000 and possibly 200,000 years ago. This much-prized intellectual organ was thus fashioned at a time when the determinants of survival were of a different ilk from those of today. Two accomplishments were particularly crucial: the ability to elude predators and clobber your enemies. Our period of apprenticeship in the savannah equips us to perform some amazing feats today, such as the ability we have to rapidly sort a huge number of optical impressions according to hazard potential when we find ourselves in traffic for example. On the other hand, hominid evolution presumably also explains why some western industrial nations currently fear terrorists more than climate change.



Dr. Patrick Illinger

Man is always strong when directly faced with danger. If a predator leaps from a bush, the body reacts involuntarily. Our behaviour is governed by hard-wire reactions which thus, in the best case, ensure our survival. In this situation, our own actions have nothing to do with the reasoning and weighing up associated with a vague problem of sizeable temporal or spatial proportions.

However, the danger with less transparent risks is that we will fail to respond adequately or take preventive action. Prior to 26 December 2004, not more than a handful of eccentric marine geologists had half an eye on the tsunami issue. The fact that viruses not only infect birds but are also spread by birds appears to have caught a number of politicians unawares. And one harsh winter suffices to make even the most savvy of our contemporaries doubt the phenomenon of climate change. This shows how difficult it is for human beings to develop an awareness of a problem based on scientific facts alone. In consequence, dedicated researchers occasionally attempt to revive the globally languishing commitment to reduce carbon dioxide emissions by comparisons with tangible threats such as terrorism. This, however, is the wrong approach because the fear stimulus does not automatically trigger the right reaction. Humanity should not let itself be deprived of the luxury of using reason to find long-term solutions to complex problems. However, this means that complex risks must be recognised as such.

This is impeded by the simple biological fact that individuals are not able to react emotionally to long-term, theoretical, multi-causal risks. Humanity can only make up for this shortcoming collectively. It requires thorough research and knowledge of the state of the world. Just as we have acquired an appreciation of art, pleasure and symbolism, so we should feel compelled to understand coherences in nature. That would be the most fitting consequence of the commitment shown by our Olduvai Gorge ancestors, who once managed to escape the destiny of being mere submissive playthings of the forces of nature.

**The danger with complex, long-term risks is that we will fail to respond adequately or take preventive action.**

**Dr. Patrick Illinger**

**Science Editor at the Süddeutsche Zeitung and member of the Board of Trustees of the Munich Re Foundation**

#### **Dr. Patrick Illinger**

Dr. Illinger, born in 1965, has a PhD in physics and is a science journalist. He has been on the editorial staff of the Süddeutsche Zeitung since 1997 and Head of the Science Desk since April 2002. Since December 2004, he has also edited "SZ Wissen", a popular science magazine. Dr. Illinger is a member of the foundation's Board of Trustees.

## The official ceremony Munich Re Foundation begins its work

34 35

Munich Re had something special in mind to celebrate its 125th anniversary. The anniversary celebrations on 7 April 2005 marked the inauguration of the Munich Re Foundation. Its Chairman Thomas Loster and Prof. Janos J. Bogardi signed an agreement establishing a foundation chair. The "Munich Re Foundation Chair on Social Vulnerability" at the UN University in Bonn will conduct risk research focusing on cultural differences in the approach to loss events and environmental changes.

### Donating our knowledge

In his address at the official ceremony marking the start of the anniversary celebrations, Dr. Nikolaus von Bomhard, Chairman of Munich Re's Board of Management, outlined the reasons for setting up the foundation.

" ... This jubilee event, Munich Re – 125 years, is indeed something to celebrate. "Jubilee" comes from the Hebrew word "Jovel", a "joyful noise". Today, we want to share our joy but we also want, in some measure, to share our knowledge. Companies with broad knowledge have a certain responsibility, and acting responsibly means sharing that knowledge.

By establishing the Munich Re Foundation with its capital of €50m, Munich Re is assuming its responsibility. And, as well as donating our money, we are also donating our knowledge. The new foundation's projects will translate knowledge about 'people and risks' into action.

Today marks the birth of the foundation. It also signals the start, within hours of its birth, of the foundation's project work.

The foundation deals with issues whose complexity matches the causes and circumstances of the risks. Population development is inextricably bound up with the element of water, on the one hand a valuable resource and on the other, as is the case with floods, a risk factor. This is also true of environmental and climate change or disaster prevention and poverty relief. The foundation seeks to examine overarching aspects from a variety of perspectives in order to develop sustainable solutions in the area of risk prevention."

**Companies with broad knowledge  
have a certain responsibility,  
and acting responsibly  
means sharing that knowledge.**

Dr. Nikolaus von Bomhard  
Chairman of the Board of Management of Munich Re

**Why do people take greater care of their possessions than their lives?**

The new foundation's first project was to set up a chair to conduct research into social vulnerability. In his address Prof. Bogardi, the Director of the UN University in Bonn, explained the need to investigate societies' vulnerability to risks, which was often attributable to cultural factors.

" ... The research conducted by our institute is based not on the usual scientific risk components associated with extreme events and gradual environmental changes but on the vulnerability of people and societies.

When quantifying vulnerability, we tend to equate it with substitute indicators such as poverty. We then lose sight of traditional risk-handling techniques and the extent to which high-tech societies set themselves up as sitting targets. It is more than pure supposition that, where vulnerability is concerned, there is a yawning gap between reality and perception.

One of the most poignant photos of the floods that hit Mozambique in 2000 shows a group of people seeking refuge from the rising waters clustered around a tree on a small embankment. Their most treasured possessions, which include a bicycle, have been hoisted into the safety of the tree.

Why do people expose themselves to danger rather than risk losing their possessions? Would the reaction be the same in Asia, Latin America or Europe? Can this attitude of a few people be applied on a wider scale? – There are many questions involved that have not yet been adequately researched but we need urgent answers in order to create a workable basis for disaster prevention – not just to be able to take political decisions but also for public information and early warning purposes. Human safety can only be improved if we seek to reduce our vulnerability in the long term. Which is why we are especially thankful to the Munich Re Foundation for making this long-term commitment and giving the UNU-EHS Institute an opportunity for further study and research."



Dr. Nikolaus von Bomhard and Prof. Janos Bogardi addressing the guests at the official ceremony marking "Munich Re – 125 years" on the subject "People at risk".



Prof. Klaus Töpfer, UN Under-Secretary-General and Executive Director of UNEP, emphasises the importance of environmentally sound economies.

## Sustainable and profitable

# The Munich Re Foundation's investment strategy

36 37

The Munich Re Foundation's work is financed entirely out of income generated from its own assets. Thus, careful management and good returns are essential to its success. It takes special investment strategies to be able to reconcile ecological and social with economic criteria.

According to a study conducted by the Bertelsmann Foundation, among the most common reasons for establishing a foundation are the desire to make things happen and a sense of responsibility towards others. Moreover, the benefactors like to decide for themselves what form their social commitment will take. So too, the decision taken in 2000, which culminated in the establishment of the Munich Re Foundation in 2005, was prompted by a sense of social responsibility and the desire to give the general public a greater stake in Munich Re's success.

Endowed with a capital fund of €50m, it ranks as a medium-sized foundation in Germany. According to the federal association of German foundations, such institutions currently manage assets totalling some €60bn and their popularity is on the increase. Whilst in the 1980s an average of 150 new foundations was established each year, the figure reached an all-time high in 2005, with 880. There are now 13,940 civil law foundations in Germany.

Two special features characterise the way they manage their assets. Firstly, they are in principle established in perpetuity and consequently have to take a long-term view. Indeed one German foundation has roots going back to the 12th century. The Lüneberg Saint Benedict Hospital fund is the oldest German foundation, having enjoyed a virtually uninterrupted existence since its inception in 1127.

The second characteristic is that they are legally obliged to conserve their assets, and thus required as a rule to invest prudently and profitably. This is in marked contrast to the not uncommon investor practice of pursuing short-term gains at relatively high risk.

The foundation's asset management also has to tread carefully between return expectations and its own aims and purposes. Sustainability is not just an image-building exercise but an important part of successful asset management.

### Is sustainability an issue for foundations?

To what extent should asset managers take sustainability factors into account? In other words, should they consider ecological and social as well as purely financial criteria. Surprisingly, studies such as the Heissmann Foundation survey (2005) show that, up to now, foundations have not tended to do so. However, these are issues to which the Munich Re Foundation gives high priority. After all, people might justifiably question the credentials of a foundation which earned investment returns from the very ecological or social ills it set out to redress. At the same time, a foundation remains true to its long-term perspective by managing its assets in a way that reflects a concern for the living conditions of future generations.





### The return on sustainable investments

A frequent misconception is that sustainable investment means lower returns. However, numerous surveys have been carried out that refute this argument. Indeed, studies carried out by WestLB Panmure (2002) and Schröder (2005), although not based on statistical evidence, concluded that sustainable investment actually improved performance and reduced the risk profile.

It is quite conceivable that companies which do not switch to production processes and products that conserve fossil fuels in response to the challenge of climate change will suffer the economic consequences in the medium to long term. The sharp increase in the world's population coupled with rapid economic growth in countries like China and India will, in the long run, mean soaring energy consumption figures and, as seen in 2005, a consequent hike in fuel prices. At the same time, it is likely that climate protection regulations will become more stringent and that tougher sanctions will be imposed on emissions of greenhouse gases. Even China has now imposed maximum vehicle fuel consumption limits.

### The Munich Re Foundation's investment strategy

To maximise the available investment opportunities in accordance with its legal status, the Munich Re Foundation and MEAG, the Munich Re Group's asset manager, created a special fund at the beginning of 2002, MEAG MRS. This vehicle was chosen not least because, more than any other, it enabled the foundation to manage dividends earned in accordance with its needs. At the same time, the costs were more acceptable than for other forms of investment, given the volumes involved.

The fund is managed in accordance with the total return principle, that is to say performance is based on absolute year-end earnings rather than on a benchmark. The regional, rating and asset-class criteria that govern MEAG's investment strategy are laid down in the mandate. To reduce the risks, equity exposure is limited to 30%, the remainder being invested in corporate and government bonds. Investments are only made in Europe.

In addition to these requirements, the foundation's Board of Trustees has passed a number of sustainability guidelines. The acceptance criteria state that companies can only be admitted to the investment universe if they are among the leading companies in their particular class in terms of sustainability. For instance, companies are eligible if they have a high ranking in one of the many sustainability ratings. Small and medium-sized companies, which are not normally covered in these ratings, can still be included in the investment universe if they are active in a qualifying sector such as renewable energies or water treatment. The guidelines also lay down negative criteria applying to the armaments industry, for instance.

### Sustainable investments – A growth market

According to an Avanzi SRI Research survey, the number of European sustainability funds had risen 6% to 375 by mid-2005. In the same period, the volume of assets under management increased by 27% from €19bn to over €24bn. This form of investment is clearly no longer a niche market. Although on the whole smaller than conventional funds (with average assets of around €64m at the present time) there are a number of notable exceptions, for example some British funds already manage assets in excess of €1bn.

Institutional investors are also starting to take an interest in the sustainability issue. It is difficult to put a precise figure on sustainability assets since it is not easy to identify the proportion of such assets within a portfolio. The Carbon Disclosure Project seeks to encourage industry to do more for climate protection with the backing of institutional investors. Indeed, in 2005 such initiatives found favour with companies administering assets worth some €26bn.

## Portfolio selection process

The selection process is in two stages. First, MEAG's fund managers and the foundation compile a list of around 400 issuers in accordance with the mandate and sustainability requirements. The fund managers can then select the most promising securities from this list without having to refer the matter for approval.

A completely different set of issues is involved in defining the investment universe. The social responsibility criteria applied in selecting European government bonds are neither highly sophisticated nor sufficiently performance-linked. The positive criteria used by sustainability rating agencies at the present time are not especially relevant for the foundation since some of the negative criteria by which certain countries are excluded, such as human rights' infringements, do not apply to funds which invest only in Europe. Another problem is that the negative and the positive criteria sometimes conflict, so that a market leader in the water treatment field may fail to qualify in other respects. Decisions have to be taken on the merits of the particular case.

The investment mix can be changed when necessary, for example if a suitable candidate files an initial public offering. The fund managers are free to build up a portfolio of the most promising securities from this pool without consulting the foundation. This two-tier assessment process is now used by many sustainability funds.

Twice a year, MEAG and foundation representatives meet with Munich Re finance experts to plot the fund's strategy. The fundamental decision concerns the split between bonds and shares in the light of anticipated market developments.

## Convincing investment strategy in difficult times

In the past few years, investment trusts have discovered foundations as potential clients. Although there were only two possible alternatives on the market when MEAG MRS was launched, by 2005 the figure had risen to seven.

Table 1 compares MEAG MRS's performance with that of other foundations' funds. Although MEAG MRS measures performance in terms of total return, a benchmark has been provided for the purposes of comparison. It consists of 85% FTSE Eurozone Government Bond Index (all maturities) bonds and 15% DJ STOXX 50 shares. The bond index comprises Eurozone government bonds with at least one year to maturity. The average unexpired period at 31 January 2006 was 7.9 years.

**Table 1**  
Performance of selected foundation funds

Fund	2002	2003	2004	2005	Performance p. a. <sup>1</sup>
LIGA-Pax-Balance-					
Stiftungsfonds-Union	-21.86	2.71	4.93	11.32	-0.73
F&C HVB-Stiftungsfonds	-4.40	10.68	7.25	8.40	5.48
DVG-Stiftungsfonds	-	2.59	4.89	7.34	4.94
Fonds für Stiftungen INVESCO	-	-	5.95	15.56	10.76
DEKA-Stiftungen Balance	-	-	4.38	7.93	6.16
dit-Stiftungsfonds Balanced	-	-	1.75	2.65	2.20
dit-Stiftungsfonds Bonds	-	-	2.96	3.21	3.09
Average	-13.13	5.33	4.59	8.06	4.56
Benchmark <sup>2</sup>	2.20	6.13	7.52	7.97	5.96
<b>MEAG MRS</b>	<b>1.34</b>	<b>9.41</b>	<b>7.19</b>	<b>8.94</b>	<b>6.72</b>

Comparison of MEAG MRS's performance with that of other foundation funds available in Germany.

<sup>1</sup> Performance p.a. based on the available data.

Performance (%) – from publicly available data sources and MEAG as at January 2006.

Performance p.a. shows the moving average for the years reported.

<sup>2</sup> Benchmark: 85% FTSE Eurozone Government Bond Index (all maturities), 15% DJ STOXX 50.

The result is highly satisfactory. MEAG MRS achieved above-average returns in each of the reported years. Although for much of the period the number of peer comparisons was limited, the 6.72% average annual performance since 2002 nevertheless also constitutes a peak value. Despite the tough climate in the financial markets in 2002, MEAG MRS managed to not only maintain its value but even marginally increase it. In subsequent years, it was consistently among the front runners, giving a solid performance. The slight underperformance against the benchmarks in 2002 and 2004 was more than made up for by the 2003 and 2005 results.

However, what counts is the longer-term evolution rather than the performance in a given year, particularly since foundations do not generally change their asset mix from year to year but favour a steady course.

Table 2 shows the return on €100 invested in the various funds between 1 January of the respective years and 31 December 2005 (expressed on total return basis).

The result highlights the strength of MEAG MRS's investment strategy, even from a long-term perspective. Since its inauguration at the start of 2002, no alternative investment in one of the other funds has achieved a comparable total return. Thus, the low-risk policy can be seen to have paid off and the fund has succeeded in preserving its capital base even in a bear market. Despite its relatively low risk profile, the results were among the best even in the good years. Although just behind the top performers in some years, this has virtually no impact in the long term.

### Conclusion

The MEAG MRS special fund has shown that sustainability does not have a negative effect on yield. On the contrary, the fact that social and ecological factors have been taken into account has contributed to its success. Furthermore, by not slavishly following an index, the fund is able to make full use of favourable opportunities such as those offered by the solar industry in 2005.

Moreover, through its special investment strategy, the foundation is able to demonstrate a credibility and sense of responsibility that have far-reaching implications. Whilst it is true that past performance does not guarantee future results, the foundation is confident that it is on the right track.

Table 2

MEAG MRS and other foundation funds – A comparison (1.1.2002 = 100)

Fund	Category	Investment on 1.1.2002	1.1.2003	1.1.2004	1.1.2005
LIGA-Pax-Balance-Stiftungs-	Mixed fund with different				
fonds-Union	investment objectives	93.75	119.97	116.81	111.32
F&C HVB-Stiftungsfonds	Defensive euro-area mixed fund	123.01	128.68	116.26	108.40
DVG-Stiftungsfonds	Defensive euro-area mixed fund	–	115.50	112.59	107.34
Fonds für Stiftungen INVESCO	Mixed fund	–	–	122.44	115.56
DEKA-Stiftungen Balance	Defensive euro-area mixed fund	–	–	112.66	107.93
dit-Stiftungsfonds Balanced	Guarantee fund	–	–	104.45	102.65
dit-Stiftungsfonds Bonds	Guarantee fund	–	–	106.27	103.21
Average		108.38	121.38	113.07	108.06
Benchmark		125.92	123.21	116.09	107.97
MEAG MRS	Mixed funds	129.47	127.76	116.77	108.94

Comparison of MEAG MRS's performance with that of other foundation funds available in Germany.

Value of €100 investment on 1 Jan. of the relevant year as at 31 Dec. 2005 assuming the yield is reinvested in full.

Performance (%) – from publicly available data sources and MEAG as at January 2006.

The Board of Trustees takes all decisions regarding fundamental issues and monitors the management of the foundation. The members of the Board of Trustees are:

**Dr. Hans-Jürgen Schinzler**

Chairman of the Supervisory Board of Munich Reinsurance Company (Chairman of the Board of Trustees)

**Prof. Gerhard Berz**

Former Head of Munich Reinsurance Company's Geo Risks Research Department

**Dr. Nikolaus von Bomhard**

Chairman of the Board of Management of Munich Reinsurance Company

**Prof. Hartmut Graßl**

Former Director of the Max Planck Institute for Meteorology in Hamburg

**Stefan Heyd**

Member of the Board of Management of Munich Reinsurance Company (until December 2005; on the Board of Trustees until December 2005)

**Prof. Peter Höppe**

Head of Munich Reinsurance Company's Geo Risks Research Department

**Dr. Patrick Illinger**

Science Editor at the Süddeutsche Zeitung, Munich

**Dr. Torsten Jeworrek**

Member of the Board of Management of Munich Reinsurance Company (on the Board of Trustees since January 2006)

**Dr. Dirk Johannsen**

Head of Corporate Communications, Munich Reinsurance Company

**Christian Kluge**

Member of the Board of Management of Munich Reinsurance Company

**Prof. Lenelis Kruse-Graumann**

Institute for Psychology, FernUniversität in Hagen, University of Heidelberg

**Thomas Loster**

Chairman of the Munich Re Foundation

**Prof. Renate Schubert**

Head of the Institute of Economic Research of the Swiss Federal Institute of Technology, Zurich

**Dr. Wolfgang Strassl**

Member of the Board of Management of Munich Reinsurance Company (on the Board of Trustees since June 2005)

## Imprint

© 2006  
Munich Re Foundation  
Königinstrasse 107  
80802 München, Germany  
Telephone +49 (0) 89/38 91-88 88  
Fax +49 (0) 89/38 91-7 88 88  
info@munichre-foundation.org  
www.munichre-foundation.org  
Letters: 80791 München, Germany

Order number  
302-05 001

Editorial team  
Anne Wolf, Thomas Loster

Editorial support  
Science&Media  
Office for scientific and  
technological communication,  
Unterföhring/Munich

Karin Groß-Kaun, Beate Brix  
and Florian Wöst  
Corporate Communications  
Munich Re

Design  
Keller Maurer Design, Munich

Printed by  
WKD Offsetdruck GmbH  
Oskar-Messter-Strasse 16  
85737 Ismaning, Germany

## Picture credits

Zeitbild Verlag, Berlin  
Inside front cover/1, page 8

Oliver Jung, Munich  
Inside front cover/2, 7, 10  
Pages 4, 5, 10, 11, 13, 14, 35

Anne Wolf, Munich Re Foundation  
Inside front cover/3  
Page 16

Ilona Roberts, UN University, Bonn  
Inside front cover/4

Thomas Loster, Munich Re Foundation  
Inside front cover/6  
Pages 23, 24 right, 25 top  
and bottom left

WasserStiftung Ebenhausen  
Inside front cover/5  
Page 27

National Research Center  
for Environment and Health (GSF)  
Inside front cover/8

Federal disaster relief agency (THW)  
Inside front cover/9  
Page 29

Alexander Allmann, Munich Re  
Page 6 top

Reuters/Corbis  
Page 6 bottom, 19, 21 right

Prof. Úrsula Oswald-Spring, Mexico  
Page 7

Dr. Stefan Kröpelin,  
University of Cologne  
Page 17

Ansett Richard, Corbis/Sygma  
Page 20

Peter Turnley, Corbis  
Page 21 left

Wolfgang Stiebens, DRM/GTZ  
Page 22

Colin Griffiths, Munich Re, South Africa  
Pages 24 left, 25 top right

Dirk Reinhard, Munich Re Foundation  
Page 26

Karsten de Riese, Bairawies  
Page 30

Thomas Dashuber, SZ Wissen  
Page 32

David Pollack, Corbis  
Page 36

Oliver Soulas, Munich  
Inside back cover

## Sources

Fischer Weltalmanach 2005  
CIA World Factbook 2005  
UN World Development Indicators 2005  
www.auswaertiges-amt.de  
www.fao.org  
www.ipicture.de/daten  
Pages 25, 27, 29

Team of the  
Munich Re Foundation

**Thomas Loster**  
Graduate in geography; Chairman  
of the Munich Re Foundation

**Dirk Reinhard**  
Graduate in Industrial Engineering  
and Management; Vice-Chairman

**Anne Wolf**  
Geographer, specialist in German  
studies, MBA; Project Management,  
Media Relations

**Angelika Boos**  
Team Assistant

**Anja Milberg**  
Qualified lawyer, licenciée en droit;  
Project Management (until November 2005)



Left to right:  
Angelika Boos,  
Thomas Loster,  
Anne Wolf,  
Dirk Reinhard  
and Anja Milberg

## March

**27 March**  
The Munich Re Foundation awards the first Munich Re Foundation Early Warning System Prize in cooperation with the German Committee for Disaster Reduction (DKKV). The €50,000 price is in recognition of an innovative project aimed directly at "people at risk".

## July

**23-29 July**  
We hold the Summer Academy on Social Vulnerability at Schloss Hohenkammer. This conference, which focuses on "Global water hotspots", is organised by the foundation and the Institute for Environment and Human Security of the University of the United Nations in Bonn.

## September

**September to November**  
"The risks of living in Munich" will again be a topic of discussion in 2006. Five dialogue forums will explore a number of risk aspects in depth.

## November

**November**  
Microinsurance opportunities and prospects will be on the agenda again in 2006. The foundation and the "Consultative Group to Assist the Poor" Working Group on Microinsurance, are organising another conference, which will take place in South Africa.

Munich Re Foundation  
Königinstrasse 107  
80802 München, Germany

Telephone +49 (0) 89/38 91-88 88  
Fax +49 (0) 89/38 91-7 88 88  
info@munichre-foundation.org  
www.munichre-foundation.org

Letters: 80791 München, Germany



**Munich Re  
Foundation**  
From Knowledge  
to Action