Corporate responsibility in (re)insurance business

October 2013

Munich RE

Agenda

Munich RE

Munich Re – Key figures

Munich Re's investment case

Munich RE

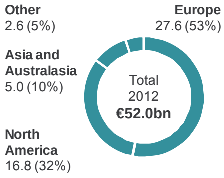
Key financial data

€bn	**31.12.2012**	31.12.2011	31.12.2010
Shareholders' equity	**27.4**	23.3	23.0
Strategic debt	**5.8**	5.2	5.4
Debt leverage (%)	**17.4**	18.3	19.0
Net profit	**3.2**	0.7	2.4
RoE (%)	**12.6**	3.3	10.4
RoRaC (%)	**13.2**	3.2	13.5

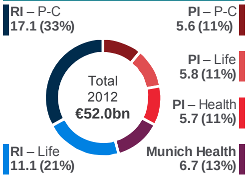
CAGR 2005 – 2012

	%
GWP	**4.0**
EPS	**10.6**
DPS	**17.0**
BVPS	**7.1**

Premium breakdown by geography €bn



Premium breakdown by segment €bn



Key share data

	2012	2011	2010
EPS (€)	**17.98**	3.94	13.06
DPS (€)	**7.00**	6.25	6.25
BVPS (€)	**152.25**	129.86	126.31
Share price (€)	**136.00**	94.78	113.45
Beta[1]	**0.9**	0.9	0.7
P/E	**7.6**	24.1	8.7
P/B	**0.9**	0.7	0.9
Market capitalisation (€bn)	**24.4**	17.0	21.4
Dividend yield[2] (%)	**5.2**	6.6	5.5
Avg. daily trading volume ('000)	**796**	1,157	1,069

Type of share	No-par-value registered shares
Votes	Each share entitles the holder to one vote
Dividend	Paid out once per year in cash
Trading venues	All German stock exchanges plus Xetra
Shares o/s	179,341,212

Key company data

Sector	Insurance	Currency	Euro
Country	Germany	Accounting principles	IFRS

Rating

Stable AA rating from all agencies since 2006

Securities codes

Reuters	MUVGn	WKN	843002
Bloomberg	MUV2	ISIN	DE0008430026

[1] Beta 250 relative to DAX (daily, raw).
[2] In relation to the year-end share price.

Munich Re – Key figures

Munich Re and our shares

Munich RE

Munich Re[1, 2]		2012	2011	2010	2009	2008
Gross premiums written	€bn	**52.0**	49.5	45.5	41.4	37.8
Operating result	€m	**5,350**	1,180	3,978	4,721	3,834
Taxes on income	€m	**866**	–552	692	1,264	1,372
Consolidated result	€m	**3,211**	712	2,430	2,564	1,579
Thereof attributable to minority interests	€m	**16**	10	8	43	24
Investments	€bn	**213.8**	201.7	193.1	182.2	174.9
Return on equity	%	**12.6**	3.3	10.4	11.8	7.0
Equity	€bn	**27.4**	23.3	23.0	22.3	21.1
Off-balance-sheet reserves[3]	€bn	**11.0**	5.7	3.6	3.2	2.5
Net technical provisions	€bn	**186.1**	181.2	171.1	163.9	157.1
Staff at 31 December		**45,437**	47,206	46,915	47,249	44,209
Our shares		**2012**	2011	2010	2009	2008
Earnings per share	€	**17.98**	3.94	13.06	12.95	7.74
Dividend per share	€	**7.00**	6.25	6.25	5.75	5.50
Amount distributed	€m	**1,254**	1,110	1,110	1,072	1,073
Share price at 31 December	€	**136.00**	94.78	113.45	108.67	111.00
Market capitalisation at 31 December[4]	€bn	**24.4**	17.0	21.4	21.5	22.9
No. of shares at year-end (ex own shares)	m	**178.5**	177.6	180.4	191.9	195.7

[1] Previous years' figures adjusted owing to IAS 8; see "Changes in accounting policies and other adjustments".
[2] In 2012, our segment reporting was modified and no longer has a consolidation column. The figures for the previous year have been adjusted accordingly. Comparability with the years 2009 and 2010 is thus limited.
[3] Including amounts attributable to minority interests and policyholders. [4] This includes own shares earmarked for retirement.

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Munich RE

Munich Re key figures

Corporate responsibility at Munich Re	Astrid Zwick	Head of Corporate Responsibility

Corporate responsibility product examples from Munich Re's three business fields

Reinsurance	Christian Scharrer
Primary insurance	Stephan Herrmann
Munich Health	Josep Santacreu Bonjoch
Integrated risk management	Markus Hummel
Responsible investments – MEAG	Holger Kerzel
Climate change – Risks and opportunities	Peter Höppe

Corporate responsibility is an integral part of our corporate strategy

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Main message	Corporate responsibility is part of the core principles and corporate strategy of Munich Re, providing business opportunities and enhancing risk management.
Why this event	A growing interest – also among mainstream investors – in the topic shows the need for a proactive dialogue to present Munich Re's approach and discuss a new dimension in business still shaped by best practice.
Our SRI targets	Increase the attractiveness of Munich Re shares through our competence in providing the best business solutions to our customers and managing all types of risks, enhancing sustainable value creation.
Why invest in Munich Re	Strong partner for clients and reliable for shareholders, delivering on our promises. Our shares are a stable, attractive investment in the insurance sector, with a balanced risk-return profile and high overall yield.

Structure of the day – Corporate responsibility at Munich Re

Munich RE

Introduction to corporate responsibility at Munich Re

1 **Corporate responsibility at Munich Re**
Strategy, organisation and action fields

Corporate responsibility in core business covers opportunities (2) and risks (3)

2 **Products and services**
Examples from (a) reinsurance
(b) primary insurance (c) Munich Health

3 **Integrated risk management**
Handling emerging risks and reputational risks

Corporate responsibility in asset management

4 **Responsible investment – MEAG**

Focus topic: Climate change – Societal and business challenge

5 **Climate change strategy – Risks and opportunities**

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Munich Re's international cooperation – A strong commitment towards corporate responsibility

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Examples

UNEP Finance Initiative Innovative financing for sustainability since 1999	**UNEP FI** Munich Re has signed the climate declaration of the UNEP FI and is active member of the UNEP FI Climate Change Working Group.
PRI Principles for Responsible Investment since 2006	**Principles for Responsible Investment (PRI)** Munich Re has actively developed and signed the UN Principles for Responsible Investment (PRI) as first German company in April 2006.
The Global Compact We support since 2007	**UN Global Compact** Munich Re is member of the UN Global Compact since August 2007. The ten principles of Global Compact are a guidance for action in our business and set the basis for our Corporate Responsibility activities.
PSI since 2012	**Principles for Sustainable Insurance (PSI)** Involvement since 2007, first holding the chair in the UNEP FI – PSI Team, now active as member of the PSI Board, as well as founding signatory since June 2012. Aim: to anchor ESG criteria into core business along the value chain.

The core principles of Munich Re include our responsible approach ...

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Core business

I. Our core business is the management of insurable risks – excellence in risk management and underwriting as well as active risk diversification are our ambition

Cooperation with clients and sales partners

II. We base our actions on our clients' and sales partners' needs and offer them the best solutions – through our knowledge, our innovative power and close cooperation

Disciplined financial management

III. We manage our Group in a disciplined and value-oriented way – with liability-driven investments and consistent capital management

Group-wide human resources management

IV. We use the management potential and knowledge within the Group – by promoting diversity, flexibility and a unifying leadership culture

Responsible approach

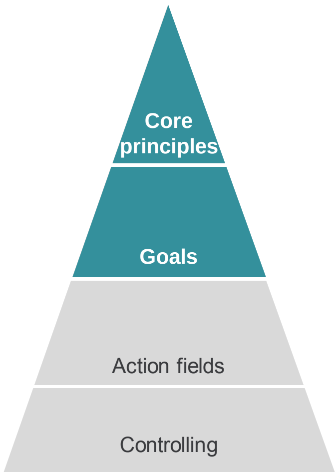
V. Our responsible approach creates sustainable value – for our clients, staff, shareholders and society

Source: Group Conference 2012

... and are detailed in our Corporate Responsibility Strategy

Munich RE

Corporate responsibility (CR)



Core principles and goals

Core principles
CR is an integral part of our corporate strategy and relevant for all business areas and operations:

- We actively incorporate ecological, social and ethical aspects in our insurance business and asset management.
- We pursue active environmental management at our locations and aim to achieve climate neutrality.
- Munich Re fulfils its responsibility as a member of society (corporate citizen) through involvement in issues closely related to its core business and, at its locations, in social and cultural areas.

Goals
We contribute to ...

... an increase in reputation and attractiveness for all stakeholders;
... potential early identification of business risks and opportunities;
... educated decisions on global risks and problems;
... a strengthening of Munich Re's share price.

Overall KPI:
Inclusion in major sustainability indices and scoring among the top 50%

Corporate responsibility at Munich Re – Overview

Five action fields in one Group-wide CR programme

Munich RE

Enabling Framework

1 Strategy & Governance

- Corporate responsibility strategy
- Corporate responsibility governance
- Compliance to UN Global Compact[1]

Core activities

2 Corporate Responsibility in Business

- Integration of corporate responsibility issues into (re) insurance business (PSI[2])
- Integration of corporate responsibility issues into asset management (PRI[3])

3 Environmental Management System

- Global CO_2 neutrality
- Global Environmental Management System policy and management

4 Corporate Citizenship

- Donations
- Corporate Volunteering
- Foundations
- Impact Assessment

Enabling Framework

5 Reporting & Communication

- Annual update of corporate responsibility portal
- Global corporate responsibility reporting
- Position in major SRI ratings

[1] UNGC = United Nations Global Compact (adopted by Munich Re in 2007).
[2] PSI = UN Principles for Sustainable Insurance (signed by Munich Re in 2012).
[3] PRI = UN Principles for Responsible Investment (signed by Munich Re in 2006).

Corporate responsibility at Munich Re – Overview

The Corporate Responsibility department is a central function at Munich Re

Munich RE

Structure

CEO

Group Communications | Group Audit | **Group Development** | Group Compliance

Corporate Strategy | Economic Research | **Corporate Responsibility** | Group HR | Corporate Office

"Guideline competency"

Business units implement strategy at local level with CR departments/coordinators, environmental managers, etc.

CR is a central function located in Group Development which directly reports to the CEO

CR triggers, monitors, controls, enables and manages Group-wide CR-related tasks

New Group Corporate Responsibility Committee (GCRC) as panel to monitor CR strategy and as Group Task Force for sensitive business issues

Corporate responsibility goals are part of the three-year performance of all Board Members

Munich RE

Three-years CR objectives of Board Members

Group environmental management objectives 2012–2014

- Standards to purchase Group-wide CO_2 certificates
- CO_2 emission reduction of 10 % per employee by 2015
- Environmental management system covering at least 75% of all employees by 2014

Group Corporate Responsibility in business objectives 2012–2014

- Inclusion in major SRI ratings
- Development and implementation of integration of ESG[1] aspects in core business
- Fulfillment of the CR commitments (UN Global Compact, PRI, PSI)

The objectives are broken down into:

Munich Re business fields and central divisions

[1] ESG = Environmental social and governance.

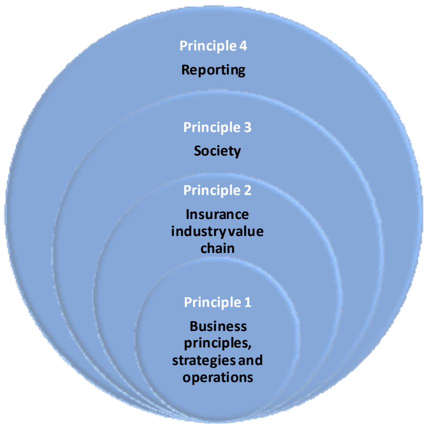
Principles for Sustainable Insurance (PSI) – A voluntary and aspirational global framework for the insurance industry

Munich RE

Principles for Sustainable Insurance

PSI Principles for Sustainable Insurance

1. Embed ESG in decision-making along the value chain
2. Work together with clients and business partners to raise awareness, reduce risk and develop solutions
3. Engage with governments, regulators and other key stakeholders
4. Demonstrate accountability and transparency



PSI signatory companies – Have combined total assets of over US$ 5 trillion

Represent about US$ 500 billion in gross premiums written or over 10% of world premium

1. Achmea (Netherlands)
2. AEGON (Netherlands)
3. ASR Nederland (Netherlands)
4. Atlanticlux (Luxemburg)
5. Aviva (UK)
6. AXA (France)
7. Bradesco Seguros (Brazil)
8. Continental Re (Nigeria)
9. Custodian & Allied (Nigeria)
10. Delta Lloyd (Netherlands)
11. FATUM Schadeverzekering (Suriname)
12. Grupo Segurador Banco do Brasil e MAPFRE (Brazil)
13. HSBC Insurance (UK)
14. ING (Netherlands)
15. Insurance Australia Group (Australia)
16. Interamerican Hellenic Insurance Group (Greece)
17. Itau Seguros (Brazil)
18. La Banque Postale (France)
19. MAPFRE (Spain)
20. Mitsui Sumitomo Insurance (Japan)
21. Mongeral AEGON (Brazil)
22. **Munich Re (Germany)**
23. Porto Seguro (Brazil)
24. RSA Insurance Group (UK)
25. Sanlam (South Africa)
26. Santam (South Africa)
27. SCOR (France)
28. Seguradora Líder (Brazil)
29. Sompo Japan Insurance (Japan)
30. Sovereign (New Zealand)
31. Storebrand (Norway)
32. SulAmerica (Brazil)
33. Swiss Re (Switzerland)
34. TAL (Australia)
35. Terra Brasis Resseguros (Brazil)
36. The Co-operators Group (Canada)
37. Tokio Marine and Nichido Fire Insurance (Japan)
38. Zwitserleven (Netherlands)

Status: October 2013

PSI supporting institutions – Global representation

PSI supporting institutions

1. Association of Insurers and Reinsurers of Developing Countries (Philippines)
2. Brazilian Insurance Confederation (CNseg) (Brazil)
3. Cadre d'Actions et de Recherche pour la Démocratisation de l'Assurance (Association CAREDAS) (Senegal)
4. Dutch Association of Insurers (Netherlands)
5. Environment & Security Initiative (Switzerland)
6. Finance Norway (Norway)
7. Financial Services Council of New Zealand (New Zealand)
8. Global Organizational Learning and Development Network for Sustainability (Belgium)
9. Insurance Association of the Caribbean (Barbados)
10. Insurance Commission of the Philippines (Philippines)
11. Insurance Council of Australia (Australia)
12. Insurance Council of New Zealand (New Zealand)
13. Insurance Institute for Asia and the Pacific (Philippines)
14. Insurance Institute of India (India)
15. Interamerican Federation of Insurance Companies (FIDES) (Peru)
16. International Cooperative and Mutual Insurance Federation (United Kingdom)
17. International Finance Corporation (United States)
18. International Insurance Society (United States)
19. Italian Banking, Insurance and Finance Federation (FEBAF) (Italy)
20. Mexican Association of Insurance Institutions (AMIS) (Mexico)
21. National Committee on International Cooperation and Sustainable Development (NCDO) (Netherlands)
22. Philippine Insurers and Reinsurers Association (Philippines)
23. Philippine Life Insurance Association (Philippines)
24. South African Insurance Association (South Africa)
25. University of Cape Town, Centre of Criminology (South Africa)

Status: October 2013

Corporate responsibility in business at Munich Re selected solutions to societal challenges … some examples

Munich RE

1 Products and services according to business field specialty

REINSURANCE

Climate change
- Nathan Risk Suite
- Agro Systems
- New coverage concepts in the area of renewable energy

Public-private partnership
- Weather-index-based insurance

Desert power
- CO_2-free power generation in North Africa

MUNICH HEALTH

Access to insurance
- Managed care & prevention
- Pilot product example: specific solutions for special groups such as Down (DKV Integral Sin Barreras)

Inclusive business model
- Fundación Integralia

ERGO

Life insurance
- Unit-linked life insurance with investment in SRI products

Motor insurance
- 10% premium rebate for environmentally friendly cars

Microinsurance
- Range of insurance products (e.g. property, personal accident, crop)
- Mobile-phone-based insurance solutions

MEAG
- Sustainability anchored in General Investment Guidelines
- Investment in renewables and infrastructure
- Provision of sustainability funds for third parties
- ESG country rating

Corporate responsibility aspects enhance broad and diverse risk knowledge base

Munich RE

2 Risk management across the business fields

REINSURANCE

ERGO

Enterprise risk management:

Quantitative risk management
- Internal risk model
- Limit and trigger system
- Risk capital allocation

Qualitative risk management
- Risk governance
- Internal control system
- Emerging risk management
- ESG aspects and sensitive business issues (part of reputational risk management)

MEAG

MUNICH HEALTH

Corporate responsibility at Munich Re – Corporate responsibility in business

Definition of environmental, social and governance (ESG) aspects at Munich Re

Munich RE

Environment

- Pollution
- Natural resources and biodiversity

Social

- Political context and public awareness
- Labour and working conditions
- Health, safety and security for the community
- Displacement of people
- Cultural heritage

Governance

- Responsible and correct planning and evaluation
- Compliance
- Consultation and transparency

Corporate responsibility at Munich Re – Environmental management

Group policy specifies the Munich Re corporate responsibility core principles – for environmental protection

Munich RE

Avoiding and reducing emissions

We consistently avoid and reduce emissions wherever possible (from business travel, energy, water, paper and waste). We establish the highest technical standards wherever economically reasonable. We consider environmental principles while choosing materials, suppliers and service providers.

Raising staff awareness

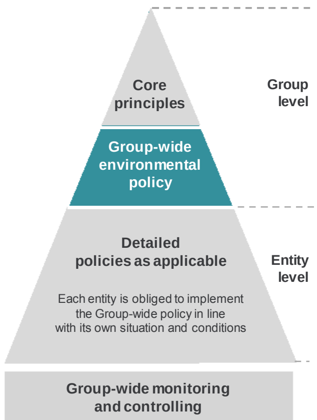
We consistently heighten environmental awareness and responsibility of all staff members and motivate them to actively protect the environment

Improving performance

We monitor and develop our environmental measures with the aim of continuously improving the environmental performance of our business operations

Communication with stakeholders

We communicate openly and inform our stakeholders about our environmental activities and environmental performance on a regular basis. We raise awareness and share information on environmental issues where appropriate. Thus we promote a culture of environmental protection.



According to ISO 14001.

Corporate responsibility at Munich Re – Environmental management

Environmental management system in practice – Achieving carbon reduction

Munich RE

Objective of **DKV Seguros**:

- Add value to the products by making carbon neutrality tangible
- Encourage the customer to buy a carbon-neutral product

Best practice at **Munich Re America**:

- 7,660 solar panels with an installed capacity of 2.5 megawatts (built in 2012)
- Reduction of annual electricity costs by almost $500,000

Corporate responsibility at Munich Re – Corporate citizenship

Corporate Citizenship concept of Munich Re: Responsibility for the community

Munich RE

Focus: natural catastrophes, science and education, environment, demographic change, health, cultural and social community projects

- A new concept designed to link our commitment more closely to the challenges facing society
- Project-based approach supported by the work of our three corporate foundations

Munich Re's foundations

Munich Re Foundation
From Knowledge to Action

ERGO Stiftung
Jugend & Zukunft

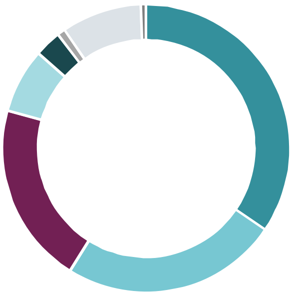
Schinzler Foundation
Taking responsibility together

Corporate responsibility at Munich Re – Corporate citizenship

Overview of Corporate Citizenship (CC) expenses 2012

Munich RE

Munich Re (Group) CC-Spending in 2012: approx. €5,000,000



Science/Education	(35%)
Social	(24%)
Health	(20%)
Culture & Arts	(7%)
Society & Demographic Change	(3%)
Environment	(1%)
Natural Catastrophes	(9%)
Not Classified	(1%)

Additional spendings for:
Donation in kind
Political donations
Corporate Vounteering hours

Project examples:

Disaster prevention – Landslide mitigation in Aizawl, India
- Partnership with GeoHazards International (2012)
- Two-year disaster prevention project in northern India

Fresh water accessibility – Water Benefit Certificates
- Private -public partnership (PPP) founded in 2011 to develop an innovative financing mechanism to create Water Benefit Standard

→ Aim: To create sustainable water management in regions with great water shortages

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Munich RE

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Primary insurance	Stephan Herrmann	
Munich Health	Josep Santacreu Bonjoch	
Integrated risk management	Markus Hummel	
Responsible investments – MEAG	Holger Kerzel	
Climate change – Risks and opportunities	Peter Höppe	

Reinsurance – Green Tech Solutions

Existing insurance policies and the pipeline

Munich RE

With **Green Tech Solutions**, Corporate Insurance Partner **pools expert resources** and know-how in the field of **renewable energies**. **Innovative solutions** offer all participants along the value chain the stability and security they need to master the changing requirements of the energy landscape.

Photovoltaic industry

- Performance warranty for solar modules
- Performance cover for solar parks
- Performance warranty for concentrated solar power

Wind industry

- Performance warranty for Wind turbines (serial loss cover)
- Coverage for offshore logistic delays

Further solutions

- Performance warranty for lithium ion batteries
- LED performance warranty cover

Reinsurance – Green Tech Solutions

Product development in Green Tech Solutions continually increasing

Munich RE

2010	2011	2012	Pipeline
▪ PV performance warranty for photovoltaic modules	▪ Performance cover for photovoltaic parks (option cover)	▪ Performance warranty for wind turbines (serial loss cover) ▪ LED performance warranty cover ▪ Performance warranty for concentrated solar power ▪ Performance cover for photovoltaic inverter and module optimiser devices	▪ Biomass performance warranty ▪ Coverage for offshore logistic delays ▪ Performance warranty for energy storage

The product development and implementation process is continually improving

Reinsurance – Green Tech Solutions

Need and content of warranty coverage

Munich RE

Investor's revenue risk	Investor's performance risk	Manufacturer's risk[1] (company perspective)	Project performance risk (investor's perspective)
Feed-in tariff for 25 years	Performance warranty 25 years	Extended warranty insurance for manufacturers (corporate cover)	Extended warranty insurance for investors and banks (option cover)
Guaranteed energy sales price	Guaranteed minimum performance	Balance sheet protection against excessive warranty claims	Protection against low module performance in case of manufacturer´s insolvency

[1] Through excessive warranty claims.

Reinsurance – Green Tech Solutions

Our pioneering risk solutions for the wind industry

Munich RE

Serial loss cover for wind turbines

Manufacturers and component suppliers

Covers the risk of large technical loss in the wind industry

Offshore logistics delays

Project developers and offshore firms

Delays of offshore projects due to adverse weather conditions are covered

Lack of wind

Project developers and investors

Protection against loss of revenues in low-wind years

Reinsurance – Green Tech Solutions

The new tailor-made serial loss cover for the wind industry provides comprehensive coverage

Munich RE

We treat a serial loss[1] as a single insured event.
Most cost items related to a serial loss can be covered

Serial loss event
The costs of all individual serial failures are aggregated:

Physical damage

+ **Pro-active repairs** for all **defective** components in the series (retrofits)
+ **Component suppliers' warranty default**
+ **Availability guarantees** (onshore)
+ **Offshore logistics costs** (limit per affected turbine)

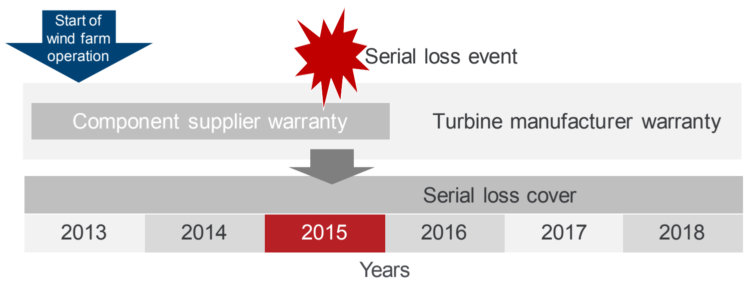
[1] Failure of a minimum number of wind turbine components with a similar root cause.

Reinsurance – Green Tech Solutions

How does the serial loss cover work?

Munich RE

Cover structure for settlement of a serial loss claim



Terms and conditions:

- **Multi-year** (max. 5 years) cover written for each production year (onshore) or project (offshore)
- Claims do not entitle insurer to **cancel the cover**
- Any **serial loss is fully allocated to the year in which the first loss** occurs

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Primary insurance – Our values

We are committed to our corporate responsibility and to sustainable business practices

Munich RE

Thinking and acting for the long term is at the heart of our business

Corporate governance
- Codes of conduct for in-house staff and sales agents
- Compliance unit to ensure compliance with internal and external guidelines

Investments
- Majority of fixed-interest bonds and shares invested sustainably
- Investment focus on fixed-interest securities
- Broad spread of investments minimises risks

Products
- Eco-friendly property-casualty products
- Insurance cover for renewable energies
- Sustainable funds for individual old-age provision and wealth building

Customers
- Guidebooks, services, information for customers
- Fair and transparent advice

Primary insurance – Sustainable products at ERGO

Products: Sustainability is integrated into our portfolio (I)

Sustainable Products

- Responsibility is an essential part of ERGO's corporate strategy. Our business – protection against risks – is a promise for the future and thus cannot be separated from acting responsibly and in a prudent way
- Sustainability is also reflected in our insurance solutions. We consider the protection of the environment and changing customer needs, which are integrated into our product development.
  E.g. in India, we help people to safeguard their livelihoods at affordable conditions

Insurance with ecological aspects

Innovative insurances

Microinsurance in India

Primary insurance – Sustainable products at ERGO

Products: Sustainability is integrated into our portfolio (II)

Insurance with ecological aspects

- Minimum revenue insurance and D&O insurance for photovoltaic installations
- Environmental impairment insurance for corporate clients for damaged ecological systems
- Household insurance which assumes the extra costs for more eco-friendly appliances in the event of a claim
- Reduced motor insurance tariffs for cars with low CO_2 emissions

Innovative insurances

- ERGO Balance Protect provides specific support after traumatic events
  - It is possible to take out the post-treatment insurance of ERGO Tarif even if the event insured has already occurred
- ERGO Zahn-Ersatz-Sofort
  - dental supplementary insurance without exclusions

Microinsurance in India

- ERGO has developed micro-insurance products in collaboration with specialists on the grassroots level, ranging from life, accident and property insurance to cover against the loss of important livestock, health insurance and life insurance.

Primary insurance – Sustainable products at ERGO

A few examples of products in the non-life segment

Munich RE

Tariff for environmentally-friendly cars	ERGO became one of the first German insurers to implement an environmental tariff based on CO_2 emissions. ▪ A product for electric vehicles, recognising that E-mobility clients need specific product features, such as extended battery coverage and special assistance in case of technical issues ▪ The tariff does not differentiate between hybrid, gasoline, diesel or natural-gas engines; instead, the CO_2 emissions in connection with the vehicle class are binding ▪ there are currently about 50 different models
ERGO engineering insurance	We accompany our domestic and international clients with the insurance of photovoltaic systems. ▪ End of the 1980s: ERGO already started to deal with the topic of renewable energy ▪ 2005: Developing special covers for all renewable energy technologies ▪ 2008: ERGO was the first provider of reduced-yield insurance for photovoltaic systems
Industrial property (insurance of energy supply systems)	An additional component in industrial buildings insurance. We cover against property insurance risks for systems which supply the insured building: ▪ photovoltaic and solar thermal systems ▪ block-type thermal power stations ▪ heat pumps ▪ ventilation and air-conditioning systems

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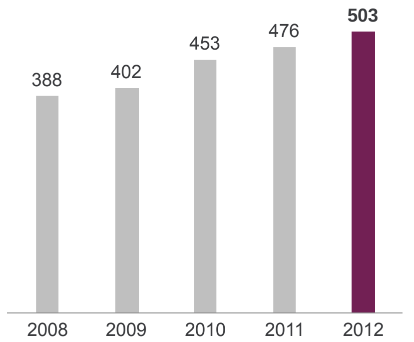
Responsible investments – MEAG	Holger Kerzel
Climate change – Risks and opportunities	Peter Höppe

Munich Health

DKV Seguros – Key figures

Munich RE

Gross written premium[1] €m



Combined ratio[1] %

DKV Seguros is one of the leading health insurance companies in Spain, committed to people and oriented to a sustainable development

[1] IFRS figures, 2008–2010 before elimination of business with Munich Re, 2011–2012 consolidated, after elimination of all Intra-Group business.

Munich Health – Relevance of CR within DKV Seguros

How ESG issues are factored into business and turned into business solutions

Munich RE

DKV 360º is a holistic approach to integrating CR in the company focusing on health (WHO definition: Health is a state of complete physical, mental and social well-being and not merely the absence of disease)

Healthy professionals

- Employees
- Collaborators

Healthy companies

- Clients
- Organisation

Healthy society

- Planet
- Social integration
- Promoting health

DKV 360º objective is to create value in our relationships for all our stakeholders

Munich Health – Relevance of CR within DKV Seguros

Customers

Munich RE

Responsible products and social innovation

- Extended the entrance limit until 70 years (75 in Jan 2014)
- Policy for life: commitment to keep the agreement with all 3-years-customers
- Adopted children
- Commitment to not increase for a higher frequency of use.

Pilot product example: we develop solutions to special groups such as Down (DKV Integral Sin Barreras)

Responsible services

www.dkvhablaclaro.com

Fair and transparent advice using clear language in our contracts plus other specific actions such as workshops, guides, etc.

- Clarity certificate (UCE)
- Client and mediator decalogue
- Web dkvhablaclaro.com
- UNESPA transparency guide

Munich Health – Relevance of CR within DKV Seguros

Customers

Munich RE

A pilot product example: Green product innovation pilot in burial insurance

- Ecofuneral ERGO Family Protection is the first policy that offers certified ecofunerals (by Terra Foundation)
- This project, piloted in Barcelona, is a worldwide pioneer and developed in collaboration with the funeral provider group Mémora
- Green burial (biodegradable urns, reminders on recycled paper, certified wood coffins without varnish, etc.) also facilitating the responsible funeral planning aspects of the funeral
- Also includes collaboration with the environmental improvement of surroundings so customers can see the results
- Pilot already recognised as a Global Compact Spain (UN) award finalist
- 383 insured members in September 2013

Munich Health – Relevance of CR within DKV Seguros

General public and customers

Munich RE

Responsible services: Enhancing health and well-being among general public and customers

COMUNIDAD VIVE LA SALUD: First insurance social network online provides a forum for clients, best doctors and patients' associations to support people with information and same experiences (diabetes, pregnancy, etc.)

MI PLAN DE VIDA SALUDABLE: Prevention plans: obesity, heart, cancer, stress …

Munich Health – Relevance of CR within DKV Seguros

DKV INTEGRALIA FOUNDATION: Integration of people with disabilities in the workplace

Munich RE

- Contact centre created 13 years ago
- Excellent service: 94% effectiveness, 7,419 calls per day
- Serving other organisations (Unilever, Novartis, Oxfam …)
- Employees: 241. Total DKV disabled people: 23% (first company). Ex-employees working in other companies: 112
- Non-employees trained and working in other companies: 27
- Low staff turnover rate (3.69%) and low absenteeism (50% less than call-center sector)
- Excellence and social impact awards
- Employee pride of belonging
- Social innovation easily understandable and highly valued by our main stakeholders (clients, agents, doctors)
- 2013: IESE business school case

DKV integralia
Fundación para la integración laboral de personas con discapacidad

a member of MUNICH HEALTH

Munich Health – Relevance of CR within DKV Seguros

Transparency: We are a leading company in reporting, ethics and environmental audit

Munich RE

Ethical management

- Codes of conduct for in-house staff and other stakeholders
- Compliance responsible for ensuring compliance with internal and external guidelines

Transparency – open organisation

- 11 sustainability reports since 2001
- 2001: First sustainability report in insurance sector in Spain.
- 2002: First insurance company to adopt GRI
- 2002: UN Global compact member
- 2002: First insurance company to have KPMG triple audit
- 2003: Good governance information included
- 2005: Top 6 Best sustainability report in Spain by *Instituto de censores jurados de cuentas de España (ICJCE)*
- Actual level of reporting: G3 (A+ *Accordance*), AA1000APS e ISAE3000.
- 2007: First insurance company to offset CO_2 (carbon-neutral products zero CO_2) + SGE21 (ESG in management, governance)
- 2010: ISO14001 + first insurance company EthSI seal (ethical investments)
- 2011: EMAS
- Feb 2012: Carbon footprint per product PAS 2050 (first insurance co. in Europe)
- 2012: ISO14001 in two commercial offices

UNE-EN-ISO 14001

DNV

ACREDITADO POR ENAC

EMPRESA CERTIFICADA

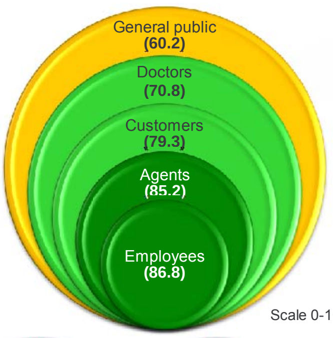
2012 cero CO_2

a member of MUNICH HEALTH

Munich Health

Reputation KPIs: Reptrak[1] results

Munich RE



Scale 0-100

2012

[1] RepTrak ™ measurement and tracking system has been analysing DKV's reputation among the general public, customers, DKV employees, insurance agents and doctors since 2010; it also makes it possible to analyse the strengths and weaknesses as well as the supportive behaviour of the main insurance companies towards each stakeholder, describing which are the most relevant variables for each of these groups when evaluating these companies' reputation.

Agenda

Munich RE

Munich Re key figures		
Corporate responsibility at Munich Re	Astrid Zwick	
Corporate responsibility product examples from Munich Re's three business fields		
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Munich Health	Josep Santacreu Bonjoch	
Integrated risk management	Markus Hummel	Head of Risk Identification & Control
Responsible investments – MEAG	Holger Kerzel	
Climate change – Risks and opportunities	Peter Höppe	

Integrated risk management at Munich Re – Organisational framework

Clear segregation of underwriting responsibilities and controls

Munich RE

Board of Management

- Specifies the business and risk strategy
- Defines risk appetite and sets limits based on risk-bearing capacity
- Monitors business and risk profile (e.g. based on risk report)

First line of defence – Risk takers

- Responsible for the treatment and control of the business units' risks, especially for the identification, analysis and management of all significant risks within the business unit
- Reports exposures to independent risk management function

Second line of defence – ERM[1] functions

- Independent risk identification and analysis on at least an aggregate level
- Challenge and provide input for risk strategy and risk decisions
- Recommends limits and monitors compliance with limits
- Designs and implements risk control processes

Third line of defence – Internal audit

Independent verification that effective controls are in place and functioning properly

Segregation between business units and risk controlling up to management

[1] Enterprise Risk Management.

Integrated risk management at Munich Re – Organisational framework

Enterprise risk management at Munich Re

Munich RE

Integrated risk management (IRM) at Group level

Risk Identification & Control	Risk Analytics & Reporting	Risk Strategy/Asset & Liability Management	Solvency Consulting
▪ **Emerging risk management** ▪ Accumulation control ▪ **Operational risk management** ▪ Risk disclosure	▪ Development and maintenance of risk models ▪ Legal entity models ▪ Risk capital calculations ▪ Allocation of risk capital for steering purposes	▪ Risk strategy ▪ Strategic Asset & Liability Management ▪ Limit and trigger-system ▪ Risk governance ▪ Risk reviews and new product approval	▪ Enable operational units to display the value of reinsurance ▪ Strengthen client relationship through Solvency II-related advice and service

Peripheral risk management with mandate from Group IRM

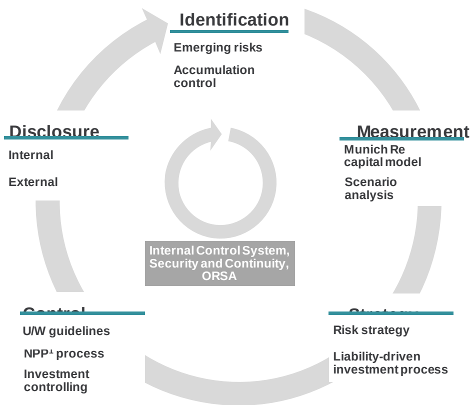
Segments/lines of business:	**Legal entity:**	**Asset management:**
Property & casualty, life, health, credit	e.g. ERGO-IRM, CRO North-America Life & Non-Life	MEAG Investment Controlling

Structure aligned with risk control process. Functional reporting lines between Group IRM and Enterprise Risk Management functions established

Integrated risk management at Munich Re – Risk Management Components

Risk management components are designed to achieve Munich Re's objectives

Munich RE



- All types of risks are explicitly addressed by risk management tools
- All regulatory requirements are explicitly addressed by Munich Re's risk management tools
- The various risk management components are consistent and build upon each other
- Tools take into account Munich Re's complex business operations

Balance regulatory requirements with business objectives and culture

[1] New Product Process.

Integrated risk management at Munich Re – Emerging risk management

What are emerging risks?

Munich RE

Emerging risks are newly developing or changing risks

They include trends and potential shock events with

- a high degree of uncertainty (occurrence probability, loss amount), and
- a substantial potential impact on an organisation

Integrated risk management at Munich Re – Emerging risk management

What we want to achieve …

Munich RE

Overarching objective: Protect the Group reputation and enable it to sustainably optimise and protect shareholder value

Emerging risk committees

Munich RE

The Emerging Risk (ER) process is managed by the **ER Core Team** (Steering Committee)	The **ER Think Tank** is an international, heterogeneous and inter-disciplinary team of specialists …	… supported by the international **ER Community**
		Internat. Org.
Claims	**Monthly meetings**	MR America
Corporate UW	**Life**, **Non-Life**, **ERGO**, **IRM**, **Group-/ RI Dev.**, **ALM**, **UW**, **Claims**	MRoC, Temple, MLMC, MARC Life
Integrated Risk Mgmt	Regular conference calls	MR UK branches
Group Development		...

Holistic approach via integration of interdisciplinary teams

Emerging risk process

Munich RE

Identify	Analyse	Manage
Internal and external sources, knowledge exchange (e.g. ER Think Tank, ER Community)	Specific literature, interviews with specialists, etc.	All information collected (for decision by the ER Core Team)
How can we ensure that we know all significant emerging risks?	How can we ensure that we understand these ER well enough?	How can we manage these ER appropriately?
Prioritised list of emerging risks	Fact sheet, internet monitoring tool (IMT) analysis	▪ Internal controls ▪ UW guidelines, best practices, topic papers ▪ Adjust MRCM[1], risk limits ▪ Strategic business plan ▪ New service or products

Reporting (annual ER report, internal/external risk report)

Emerging risk process designed to create management impact

[1] MRCM: Munich Re Capital Model.

Emerging risks – Examples of successful identification and management

Munich RE

- Pandemics
- Demographic change and longevity

Found direct way into risk modelling and risk strategy

- US housing bubble in 2005 and subsequent subprime crisis
- Global financial crisis following the subprime crisis and recession scenarios
- Social unrest as a consequence of the financial crisis
- Heat and drought scenarios

Analysis lead to reduction in certain risk exposures

Recent emerging risks topics

Munich RE

Focus topic cyber risks

- Dependency on IT infrastructure
- Cyber liability
- IT viruses
- Cloud computing
- Cyber war

Related publications

Selected topics discussed in 2012/2013

- Technology at the limits of controllability
- Biometrics
- Social media
- Artificial intelligence
- Privatisation of government responsibilities
- Obesity
- Scarcity of resources
- Protectionism
- Migration of species
- Loss of biodiversity
- Contentious diseases
- Autonomous vehicles
- Counterfeit products
- Distressed cities
- Food security and safety
- Wind turbines
- Hydrofracking
- Social unrest

Reputational risks

Munich RE

Reputational risk is the risk of a loss resulting from damage to the Group's public image (for example with clients, shareholders or other parties)

Process-related reputational risks
(How do we conduct business?)

- Operating issues, e.g.
  - Fraud
  - System security
  - Product flaws

Core business related reputational risks
(What business do we do?)

- (Re)insurance business, e.g.
  - Polluting projects
  - With enterprises that abuse human rights
- Investments, e.g.
  - Soft commodity trading
  - Derivative trading

Different aspects of reputational risks need to be addressed

Identification of process-related reputational risks

Munich RE

Internal control system (ICS)	Whistle-blower procedures	Ad-hoc process
Holistic management of operational risks, inter alia arising from reputational risks	The whistle-blowing system enables to report reputational risk issues – anonymously if desired	New significant risks that arise between the regular risk reports have to be reported without delay – timely communication is key

The responsibility to avoid, identify and report reputational risks is up to all employees

Reputational risk committees

Munich RE

Group compliance committee (GCC)	▪ Dealing with compliance and reputational risks at Group level ▪ Uniform analysis and handling of risks throughout the Group ▪ Focus on reputational risks that arise from one or more specific cases or are subject of enquiries from business units affecting the entire Group
Group corporate responsibility committee (GCRC)	▪ Evaluating and prioritising "sensitive issues" ▪ Submitting decision proposals to the Group Committee to clarify Group position
Reputational risk committee (RRC)	▪ Evaluation of actual cases that could involve reputational issues ▪ RRCs exist on segment level

Organisation

Munich RE

Group	Group Compliance Committee (GCC)			
Segment	Reinsurance	Primary insurance	Munich Health	Asset management (MEAG)
Implementation in Reputational Risk Committees (RRC)	**Central Divisions** ▪ Group Communications ▪ Group Development (Corporate Responsibility) ▪ Integrated Risk Management ▪ Corporate Underwriting ▪ Group Legal/Compliance Officer **Business Units** ▪ Life ▪ Non-Life ▪ International Organisation (branches)	**Separate RRC**	**Separate RRC**	**Separate RRC**

Interdisciplinary aspect of reputational risk management is key

Operation mode of Reputational risk committee's

Munich RE

Reputational risk committee (RRC)

Mission
- Consultation of business segments
- Analysis and assessment of individual cases

Working mode
- Reporting of critical issues prior to closing of a deal
- RRC responds within 48 hours, giving clear guidance
- Escalation to Board of Management by RRC coordinator in case of non-compliance

Examples of requests
- Investment / Insurance of specific entities / Groups
- (Re)Insurance of potentially polluting projects
- (Re)Insurance of projects in specific countries
- Insurance of clinical trial participants
- Critical products

Reputational risks are monitored and steered within RRCs

Agenda

Munich RE

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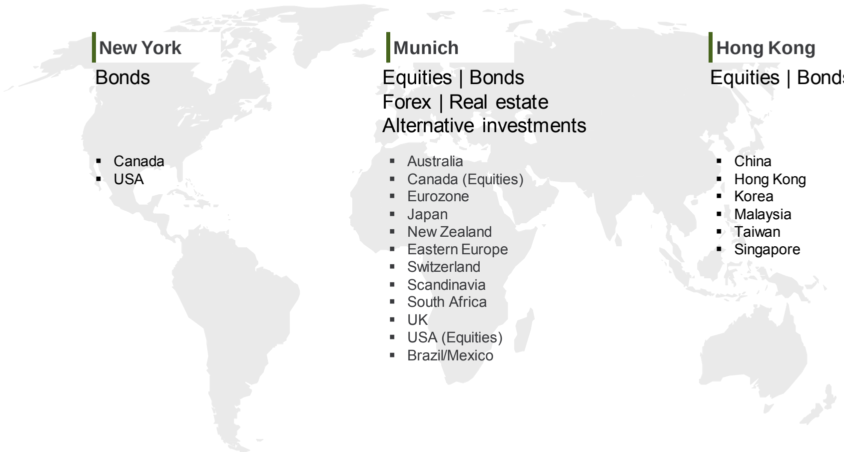
Responsible investments – MEAG	Holger Kerzel	Managing Director at MEAG
Climate change – Risks and opportunities	Peter Höppe	

Responsible investments – MEAG

MEAG is a global player with international presence

Munich RE



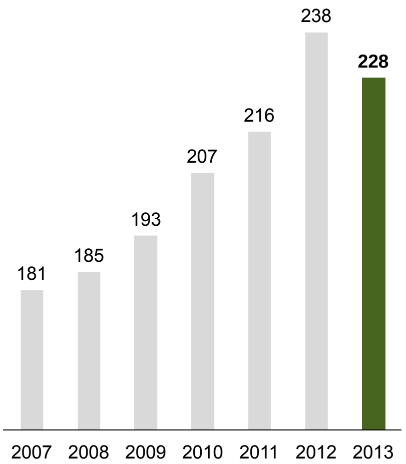
Deep expertise and experienced staff in major capital markets

Responsible investments – MEAG

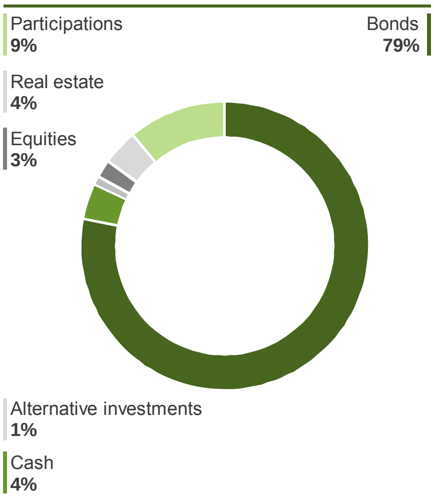
Assets under management at MEAG

Munich RE

Development[1]



Asset classes[1]



[1] Figures as at 30 June 2013.

Definition: Sustainable investments

In addition to the traditional investment goals of return, risk and liquidity, sustainable investments take into account the **sustainability of the issuers of securities**, i.e. the degree to which they fulfil:

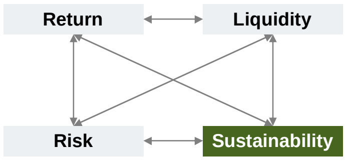
- **E**nvironmental criteria

  (energy consumption, environmental management, data release on environmental performance)
- **S**ocial criteria

  (employee relations, staff programmes, social standards and reports)
- **G**overnance criteria

  (risk management systems, transparency guidelines)

The "Magical Square" of investment



Munich Re: History as a sustainable investor

- Munich Re has been considering sustainability in its securities investments since 2002
- In 2005, Munich Re implemented principles of sustainability in the form of General Investment Guidelines (GIG)
- Munich Re was the first German company to sign the (UN) Principles for Responsible Investment (PRI)
- Strong commitment to incorporate ESG criteria into investment decisions

Responsible investments – MEAG

Commitment to the Principles for Responsible Investment (PRI)

Munich RE

- As institutional investors, it is our duty to act in the best long-term interests of our customers
- We believe that **environmental, social and corporate governance (ESG)** topics can influence the returns and risks of an investment portfolio
- ESG topics affect the assessment of the value of companies, regions, sectors and investment classes to varying extents
- Taking ESG topics into account leads to a more complete understanding of companies and should ultimately lead to higher returns and/or lower risk
- Using these principles harmonises the company's investments with its goals and improves long-term returns in particular

Responsible investments – MEAG

What are the Principles for Responsible Investment?

Munich RE

The Principles for Responsible Investment[1]:

- Are a catalogue of **voluntary best-practice standards** proposed by the **United Nations (UN)**
- Serve as a **guideline** for institutional and private investors and for investment consultants for taking into account **sustainability criteria** in their capital investments
- **Worldwide** more than 1,200 signatories have **committed** to upholding the Principles
- The total amount of all investments involved here is around **US$ 34 trillion**

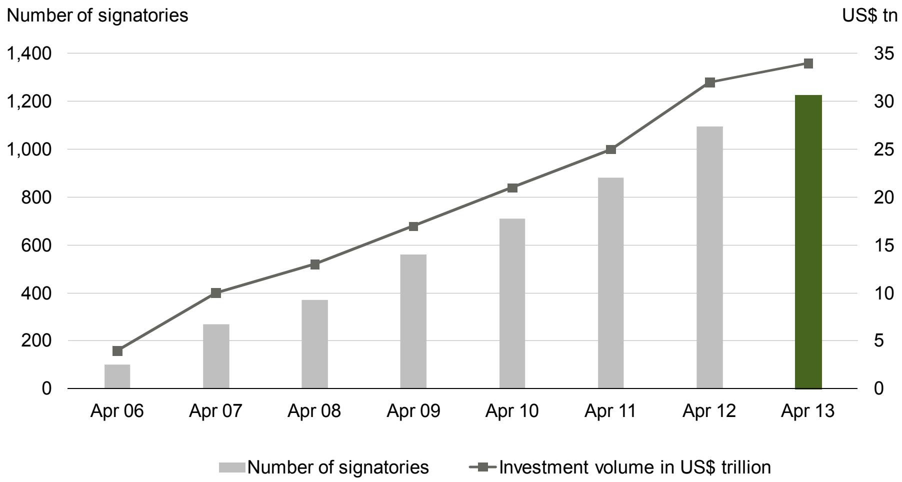
PRI Principles for Responsible Investment

Responsible investments – MEAG

Growth in PRI signatories and investment volume

Munich RE

1,226 signatories and US$ 34 trillion in assets under management



Source: PRI Association, figures as of 30 June 2013

Responsible investments – MEAG

Munich Re as a sustainable investor

Munich RE

- The sustainability demands are anchored in the MEAG **mandate** (policy paper)
- Most of Munich Re's investments meet sustainability criteria
- Sustainability criteria for equities, corporates, covered bonds and government bonds already in place
- RENT und commercial real estate built after 2010 have been incorporated into the calculation of the sustainability ratio
- Integration of ESG criteria for infrastructure investments intended
- MEAG management strives for active ESG shareholder dialogue with companies
- PRI status report (annual survey) shows significant improvement in sustainability ratio

Responsible investments – MEAG

Munich Re: The definition of sustainability

Calculating the sustainability ratio

Equities	Corporates	Government bonds	Real estate
Based on the criteria of major sustainability indices	Same as for equities (issuers); bank debt and covered bonds are evaluated on the basis of oekom research rating	Sustainability is assessed on the basis of a Munich Re approach, taking into account criteria from the fields of environment/climate protection, human/civil rights and corruption	Guiding principles with environmental criteria for the purchase, construction and renovation of real estate

Responsible investments – MEAG

Munich Re: Sustainability in real estate development projects

WESTGATE Cologne

- Awarded the EU Green Building Certificate for low energy consumption
- Geothermic seasonal heat storage
- Use of ground water from the building's own well for heating and cooling

Cologne Oval Offices

- MEAG's first EU Green Building Certificate
- Use of the Rhine bank filtrate to cool the building
- Primary energy requirement of 105 kilowatt hours per square metre per year

Responsible investments – MEAG

Munich Re as a provider of sustainable investment products

Munich RE

Sustainable **special funds** for **Munich Re Group** and **institutional investors**:

- Custom-tailored investment concepts (equity, bond and balanced funds) for foundations (e.g. Munich Re Foundation, defensive balanced fund since 2002), churches, pension funds, etc.
- Individual sustainability criteria (index-based or external research providers)

Sustainable **mutual funds**:

- **MEAG Nachhaltigkeit**
  - A global equity fund focusing on large caps (best-in-class); launched in 2003
- **MEAG FairReturn**
  - Investment focus on European bonds (equities blended), with the goal of achieving positive returns on an annual basis; launched in 2009

Responsible investments – MEAG

MEAG Nachhaltigkeit – A sustainable global equity fund

Munich RE

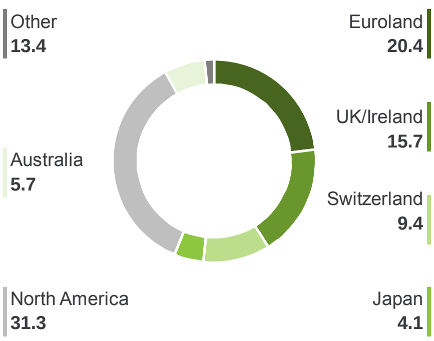
Fund concept

- A **global** equity fund focusing on **large caps**
  - Global blue chips from the Dow Jones Sustainability World ex all universe (best-in-class approach)

Exclusion criteria

- Tobacco, alcohol, arms, weapons, gambling

Country weightings %



Responsible investments – MEAG

MEAG FairReturn – A sustainable balanced fund

Fund concept

- Constant returns
- Capital preservation
- Limited risk

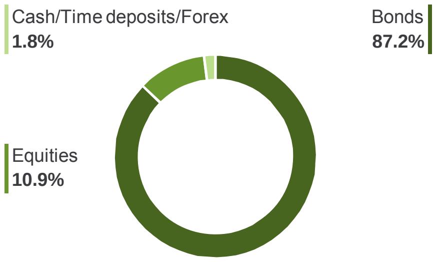
Product character

- Proven "absolute return concept"
- Taking ESG criteria into account

Exclusion criteria

- Alcohol, gambling, green gene engineering, pornography, armaments manufacturer, tobacco, animal testing

Sustainability screening by oekom research



Responsible investments – MEAG

Two direct investment programmes: Infrastructure and renewables (RENT)

Infrastructure

- Intended investment: €1.5bn
- Focus primarily on Europe and North America
- Launched in 2012
- Sustainability criterias to be incorporated

RENT

- Intended investment: €2.5bn
- Focus primarily on Europe and North America
- Launched in 2011

Responsible investments – MEAG

Infrastructure investments: Characteristics

Munich RE

Assets meet basic needs that are independent of economic conditions	Low correlation to other asset classes
Sustainable and stable long-term cash flows	Providing current yield
(Quasi-)monopolistic market position and high barriers for entry	Low risk of competition
Inflation protection	Real yields
Long lasting concessions/ Long-term horizon	Long duration with projectable yields But: Capital tied up over the long term
Regulation with various horizons	Creation of market-oriented framework But: Dependence on political parameters and changes

Responsible investments – MEAG

Infrastructure investments: Activity areas

Munich RE

Economic infrastructure

Transportation

- Airports
- Toll roads
- Ports
- Bridges/Tunnels
- Rail/Rolling stock
- Car parks

Utilities

- Energy production
- Energy transport
- Energy storage
- Water and waste management

Communications

- Cable network
- Cell towers
- Mobile communi-cations

Social infrastructure

- Hospitals
- Schools
- Universities
- Public transport

Responsible investments – MEAG

Renewable Energy and New Technologies (RENT)

Munich RE

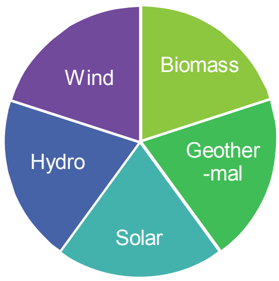
- Since 2010, Renewable Energy and New Technologies (RENT) has been part of Munich Re's new strategic investment orientation and an enlargement of its investment spectrum, considering sustainable investments with manageable risk and attractive returns.
- The emphasis lies on non-fossil power generation. RENT also takes into account issues such as energy efficiency, energy distribution and storage.
- RENT's investment focus currently lies primarily on the segments of photovoltaic, wind, solar thermal and geothermal.

Responsible investments – MEAG

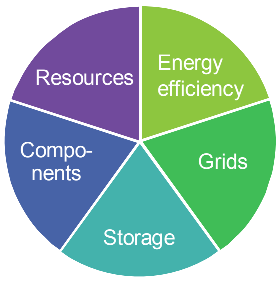
RENT offers a wide investment universe

Munich RE

Renewable energy



New technology



Excursus: Incentive systems for renewable energy

Munich RE

Feed-in tariff model

Power produced is sold and incentivised with a defined pricing mechanism

- Possibly adjusted for inflation
- Principle of legitimate expectations: Introduced and not changed for existing plants
- "German model"

Quota model

A given amount of (tradable) "green certificates" is allocated based on the quantity of power produced

- Higher market risk
- Amounts often adjusted by legislation (e.g. by setting lower price limits)
- "UK model"

Plus additional sale of power produced in the market

Opportunities with RENT investments

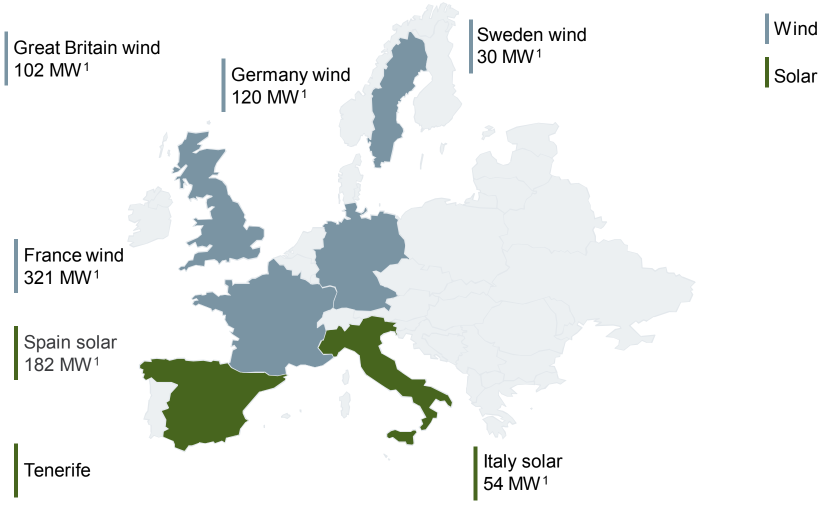
Munich RE

- RENT investments offer long-term, stable and projectable returns
- Attractive yields in the current low-yield environment, inflation protection
- Low correlation to other asset classes; hence diversification benefits
- Favourable regulatory framework in several countries
- Strategic partnerships with professional and fundamentally sound developers add value
- Preventing the formation of CO_2 will reduce insurance claims over the long term, and contributes to Munich Re's own CO_2-neutrality
- Competitive advantage thanks to close cooperation with Munich Re's technical experts
  - Deal sourcing
  - Know-how concerning technical risks and location
  - Development and other know-how for new insurance products

Responsible investments – MEAG

Portfolio map RENT

Munich RE



[1] Refers to total installed power irrespective of size of equity stake.

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Climate change – Risks and opportunities	Peter Höppe	Head of Geo Risk Research/Corporate Climate Centre

Climate change – Risks and opportunities

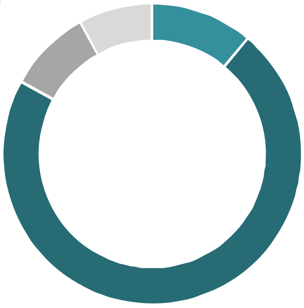
Natural catastrophes worldwide 1980–2012
89% of insured losses were weather related

Munich RE

Insured losses in 2012 values: US$ 970bn

Climatological events
8%
(extreme temperature, drought, forest fire)

Geophysical events
11%
(earthquake, tsunami, volcanic eruption)



Hydrological events
9%
(flood, mass movement)

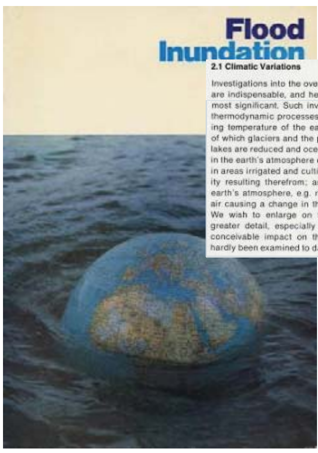
Meteorological events
72%
(storm)

Climate change – Risks and opportunities

Munich Re the first alerter to global warming

Munich RE

Munich Re publication,1973



2.1 Climatic Variations

Investigations into the overall trend of claims experience are indispensable, and here climatic variations become most significant. Such investigations involve a study of thermodynamic processes such as, for example, the rising temperature of the earth's atmosphere (as a result of which glaciers and the polar caps recede, surfaces of lakes are reduced and ocean temperatures rise); changes in the earth's atmosphere due to the large-scale increase in areas irrigated and cultivated and increases in humidity resulting therefrom; and lastly the pollution of the earth's atmosphere, e.g. rise of the CO_2 content of the air causing a change in the absorption of solar energy. We wish to enlarge on this complex of problems in greater detail, especially as—as far as we know—its conceivable impact on the long-range risk trend has hardly been examined to date.

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earth's atmosphere, e.g. rise of the CO_2 content of the air causing a change in the absorption of solar energy.

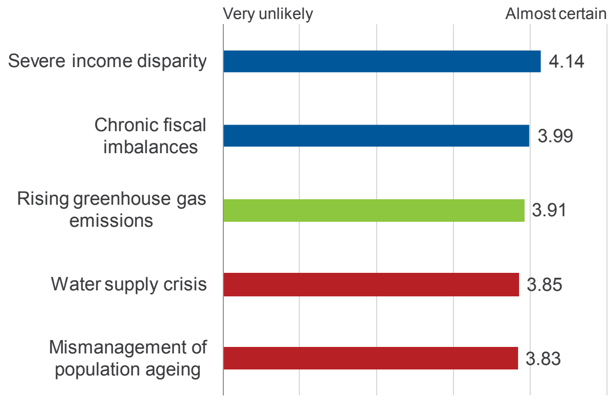
greater detail, especially as—as far as we know—its conceivable impact on the long-range risk trend has hardly been examined to date.

Climate change – Risks and opportunities

World Economic Forum – Global Risks

Munich RE

Top five risks by likelihood – 2013 report



Based on a survey of over 1,000 experts from industry, government, academia and civil society

that examines 50 global risks

- Economic
- Environmental
- Geopolitical
- Societal
- Technological

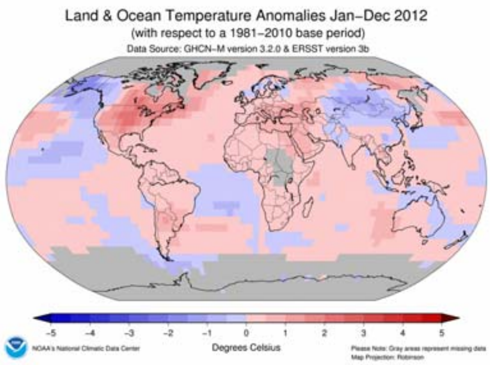
Source: World Economic Forum

Climate change – Risks and opportunities

State of the climate 2012/2013 (source NOAA)

Munich RE

- The year 2012 was the tenth-warmest year since records began in 1880. Including 2012, all 12 years to date in the 21st century (2001–2012) rank among the 14 warmest in the 133-year period of record
- 2012 was the warmest year in the 1895–2012 period of record for the USA
- The period January–August 2013 globally was the fifth-warmest on record

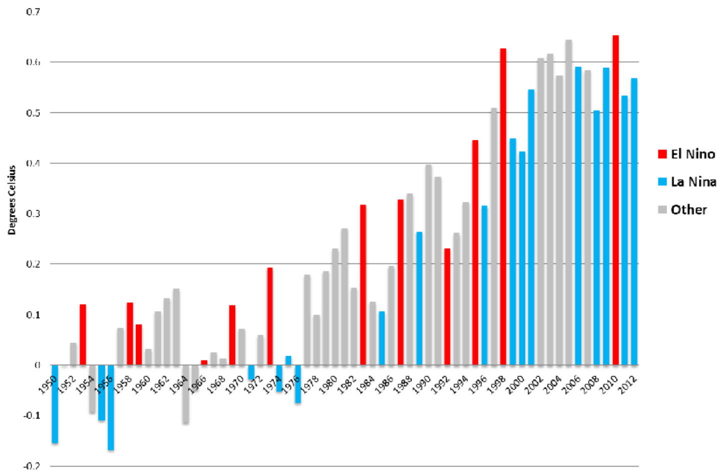


Climate change – Risks and opportunities

State of the climate 2012 (source NOAA)

Munich RE

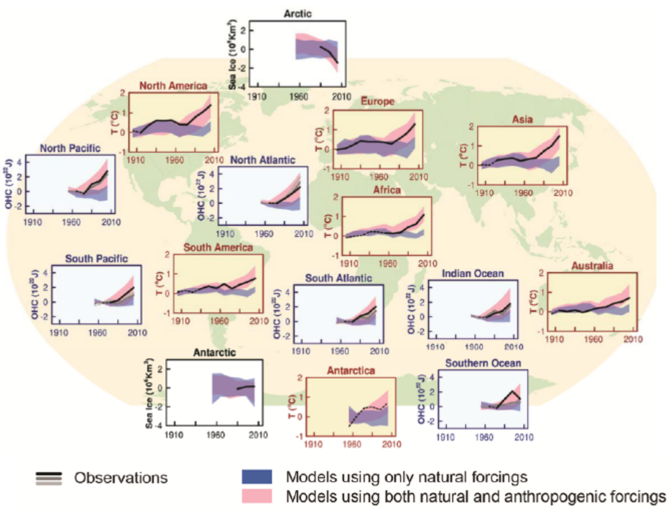
Annual Global Temperature Anomalies – 1950-2012



Climate change – Risks and opportunities

Global warming is real! Continental temperature changes (IPCC AR5, 2013)

Munich RE

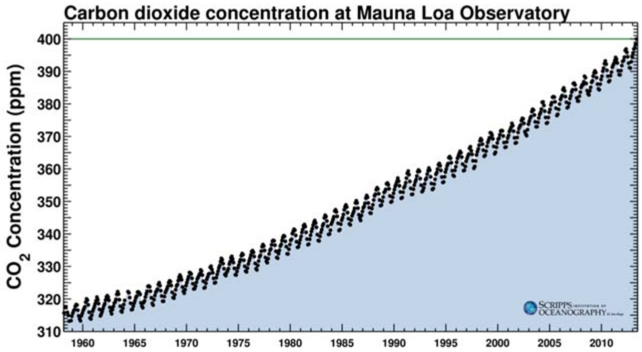


Climate change – Risks and opportunities

Temporal course of CO_2 concentration at Mauna Loa, Hawaii (1958–2011)

Munich RE

In March 2013, 400 ppm was reached for the first time!



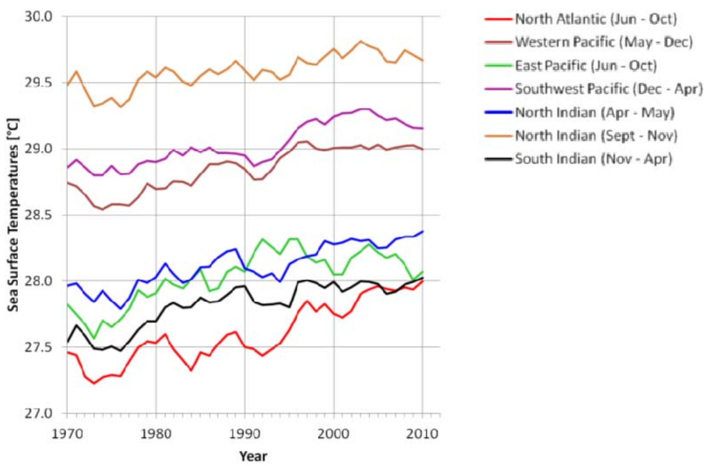
Source: http://keelingcurve.ucsd.edu/

Climate change – Risks and opportunities

Observed changes in sea surface temperature in tropical ocean basins with TC activity (1968–2012)

Munich RE

Five-year running mean



Source: Munich Re, May 2013.
Data source: HadISST, MetOffice, 2013

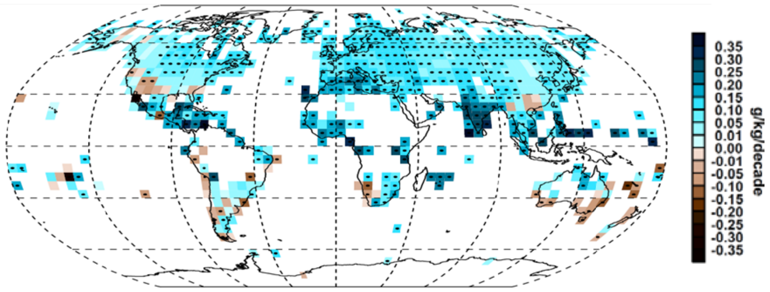
Climate change – Risks and opportunities

Specific humidity has risen in large parts of northern hemisphere

Munich RE

Change in near-surface specific humidity over time in the northern hemisphere 1973–2012

Black dots: trends significant at the 95% level



Climate model based studies: Increase has to be expected from anthropogenic climate change (Willett et al., 2010, Environ. Res. Letter, 5; Santer et al., 2007, PNAS, 104)

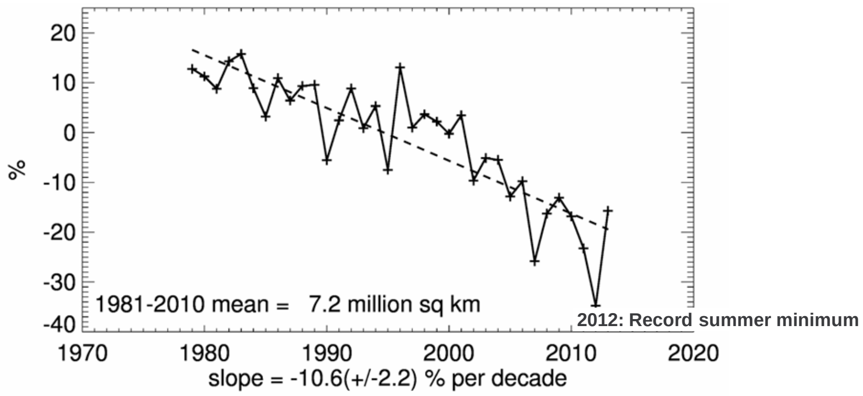
Source: Willett et. al. (2013), Clim. Past, 9, 657–677.

Climate change – Risks and opportunities

September 2012 – Record minimum arctic sea ice extent

Munich RE

Norther Hemispere Extenet Anomalies August 2013



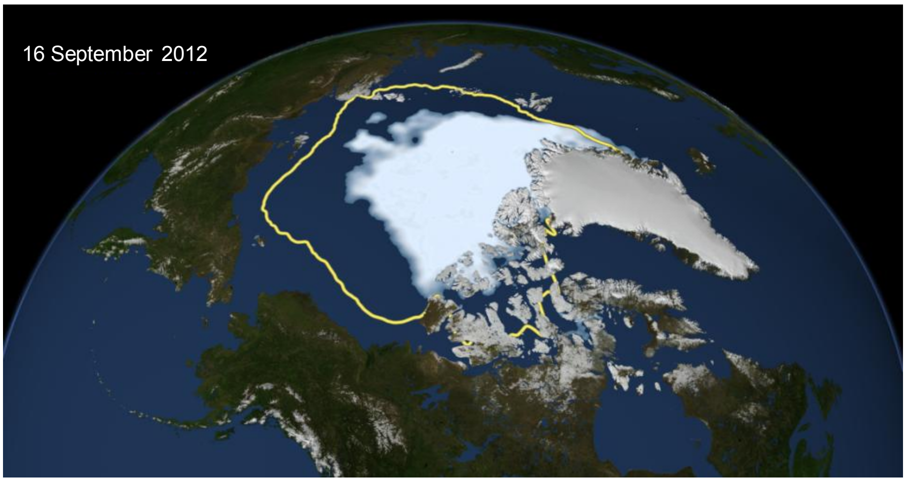
Source: National Snow & Ice Data Centre, 2013

Climate change – Risks and opportunities

Minimum of Arctic Sea ice cover

Munich RE

The yellow line shows the average minimum extent from the period covering 1979–2010



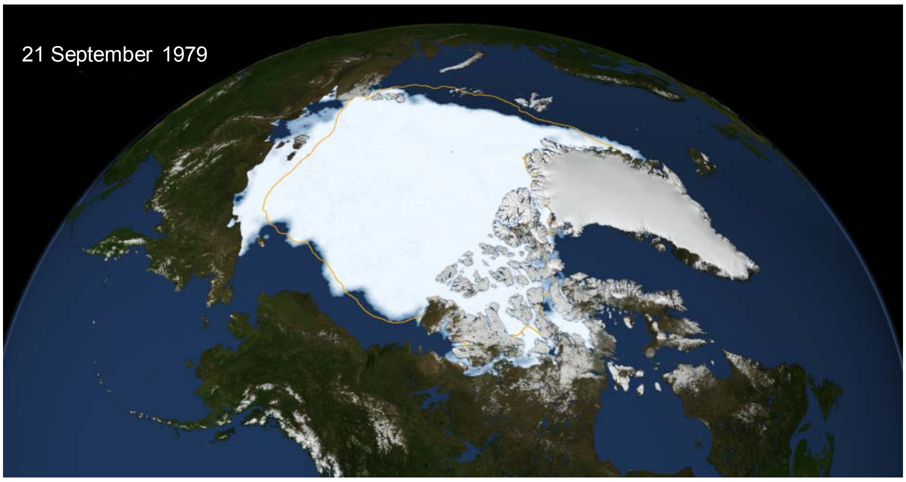
Source: NASA, Goddard Space Flight Center, 2013
http://svs.gsfc.nasa.gov/Gallery/ArcticSeaIceResources.html

Climate change – Risks and opportunities

Minimum of Arctic Sea ice cover

Munich RE

The yellow line shows the average minimum extent from the period covering 1979–2010



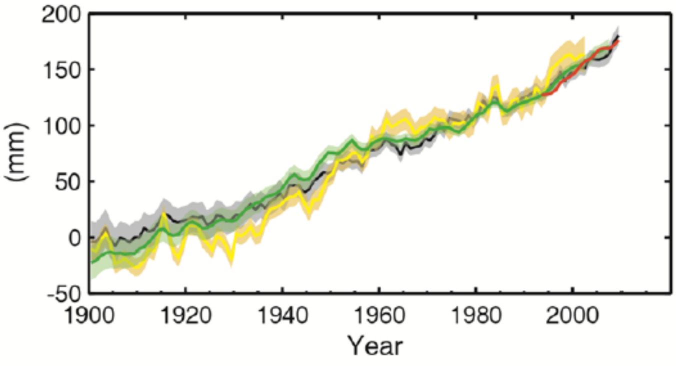
Source: NASA, Goddard Space Flight Center, 2013
http://svs.gsfc.nasa.gov/Gallery/ArcticSeaIceResources.html

Climate change – Risks and opportunities

Historic increase in sea level

Munich RE

Global average sea level change



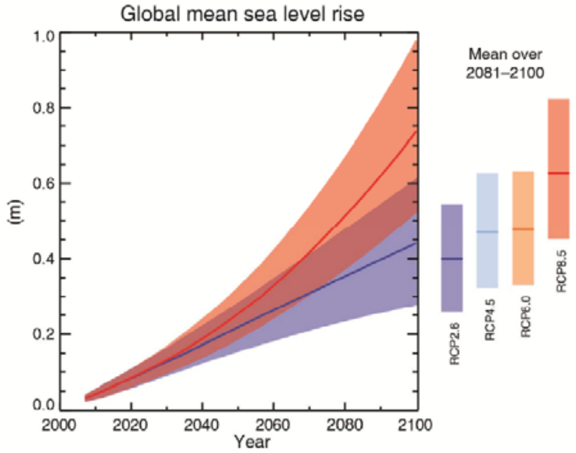
(IPCC, AR5, 2013)

Climate change – Risks and opportunities

Expected increase in sea level for different CO_2 scenarios

Munich RE

Global mean sea level rise



(IPCC, AR5, 2013)

Climate change – Risks and opportunities

Wildfires/Heat wave, Russia

Munich RE

June – August 2010

Study published in November 2011 by Rahmstorf et al. in PNAS concludes that there is a 80% probability that this heat wave has been caused by global warming!

Country affected	Overall losses	Insured losses	Fatalities
Russia	US$ >3,600m	US$ 22m	130 (wildfires) 56,000 (heat wave, smoke)

Source: Reuters

Climate change – Risks and opportunities

Summer 2012: Heat records and drought in the US July 2012 warmest month in US since start of measurements

Munich RE

July 2013

Region	Total losses	Insured losses	Fatalities
USA	US$ 20bn	US$ 16bn	100

Temperature records

Munich RE

Worldwide

The **number of local record-breaking monthly temperature extremes is now** on average **5 times larger than expected in a climate with no long-term warming**

Regional differences

Summertime records, which are associated with prolonged heatwaves, increased by more than **a factor of 10** in some continental regions **including parts of Europe, Africa, southern Asia and Amazonia**

Source: Coumou, D., et al. (2013): Global increase in record-breaking monthly-mean temperatures. Climatic Change.

New study by Potsdam Institute for Climate Impact Research on future heatwaves

Munich RE

Multifold increase in heat extremes by 2040

08/15/2013 – Extremes such as the severe heat wave last year in the US or the one 2010 in Russia are likely to be seen much more often in the near future. A few decades ago, they were practically absent. Today, due to man-made climate change monthly heat extremes in summer are already observed on 5 percent of the land area. This is projected to double by 2020 and quadruple by 2040, according to a study by scientists of the Potsdam Institute for Climate Impact Research (PIK) and the Universidad Complutense de Madrid (UCM). A further increase of Heat extremes in the second half of our century could be stopped if global greenhouse-gas emissions would be reduced substantially.

Article: Coumou, D., Robinson, A. (2013): Historic and future increase in the global land area affected by monthly heat extremes.
Environmental Research Letters 8 034018. [doi:10.1088/1748-9326/8/3/034018]

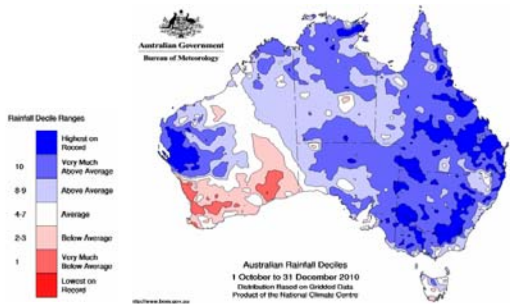
Climate change – Risks and opportunities

Floods, Queensland, Australia

Munich RE

December 2010 to January 2011

Australia rainfall anomalies (Oct-Dec 2010)



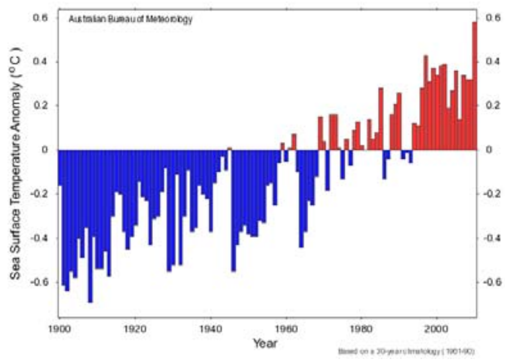
Region	Total losses	Insured losses	Fatalities
Queensland, Australia	US$ 7.3bn	US$ 2.4bn	35

Climate change – Risks and opportunities

Queensland floods – Is there a link to climate change?

Munich RE

December Sea Surface Temperature Anomaly – Australian Region



Source: Bureau of Meteorology (Australia)

- December sea surface temperature in the Australian region has been the highest on record
- There is a relation between precipitation and the sea surface temperature in Australia

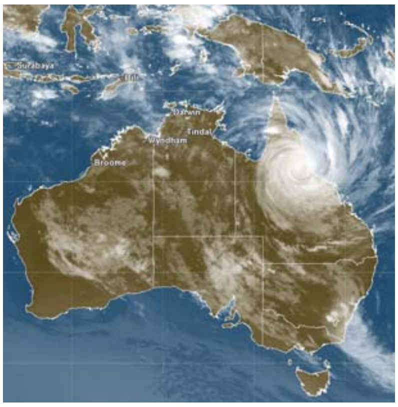
Sea surface temperature is rising due to climate change

Source: RAHMSTORF, S. (2011): Überschwemmungen in Queensland. WISSENSlogs.de

Climate change – Risks and opportunities

Cyclone Yasi (Cat 5), Queensland, Australia February 2011

Munich RE



Region	Total losses	Insured losses	Fatalities
Queensland/Australia	US$ 3,500m	US$ 500m	2

Climate change – Risks and opportunities

Floods, Thailand, September to October, 2011 The most expensive flood disaster in history!

Munich RE

July 2012

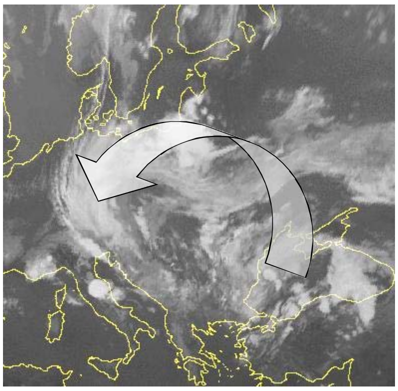
Region	Total losses	Insured losses	Fatalities
Thailand	US$ 43bn	US$ 10bn	813

Climate change – Risks and opportunities

Floods in Europe in May/June 2013
The second most expensive nat cat in Germany

Munich RE

May/June 2013



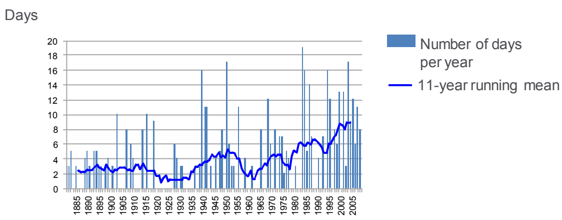
Region	Total losses	Insured losses	Fatalities
Germany, Austria, Czech Republic	>US$ 16bn	≈US$ 3.9bn	22

Climate change – Risks and opportunities

Weather pattern trough over central Europe

Munich RE

Weather pattern trough over central Europe in June–August



- The number of days with the weather pattern trough over central Europe has increased

Duration of weather patterns (10-year running mean)

- One reason is that weather patterns in general are moving more slowly from west to east, leading to a longer persistence
- Scientific findings indicate that climate-change-driven Arctic warming is responsible for the reduced propagation
(Francis and Vavrus 2012)

Data source: Katalog der Grosswetterlagen Europas (1881-2009). PIK Report No. 119.

Climate change – Risks and opportunities

New studies show causal associations between climate change and weather extremes

Munich RE

Published online 16 February 2011 | *Nature* **470**, 316 (2011) | doi:10.1038/470316a

News

Increased flood risk linked to global warming

Likelihood of extreme rainfall may have been doubled by rising greenhouse-gas levels.

Quirin Schiermeier

The effects of severe weather — such as these floods in Albania — take a huge human and financial toll. *REUTERS/A. CELI*

Climate change may be hitting home. Rises in global average temperature are remote from most people's experience, but two studies in this week's *Nature*[1,2] conclude that climate warming is already causing extreme weather events that affect the lives of millions. The research directly links rising greenhouse-gas levels with the growing intensity of rain and snow in the Northern Hemisphere, and the increased risk of flooding in the United Kingdom.

Human contribution to more-intense precipitation extremes

Seung-Ki Min, Xuebin Zhang, Francis W. Zwiers & Gabriele C. Hegerl

Affiliations | Contributions | Corresponding authors

Nature **470**, 378–381 (17 February 2011) | doi:10.1038/nature09763
Received 15 March 2010 | Accepted 17 December 2010 | Published online 16 February 2011

"… Here we show that human-induced increases in greenhouse gases have contributed to the observed intensification of heavy precipitation events found over approximately two-thirds of data-covered parts of Northern Hemisphere land areas. … Changes in extreme precipitation projected by models and thus the impacts of future changes in extreme precipitation, may be underestimated because models seem to underestimate the observed increase in heavy precipitation with warming."

Climate change – Risks and opportunities

2011, a record year for tornadoes in the US

Munich RE

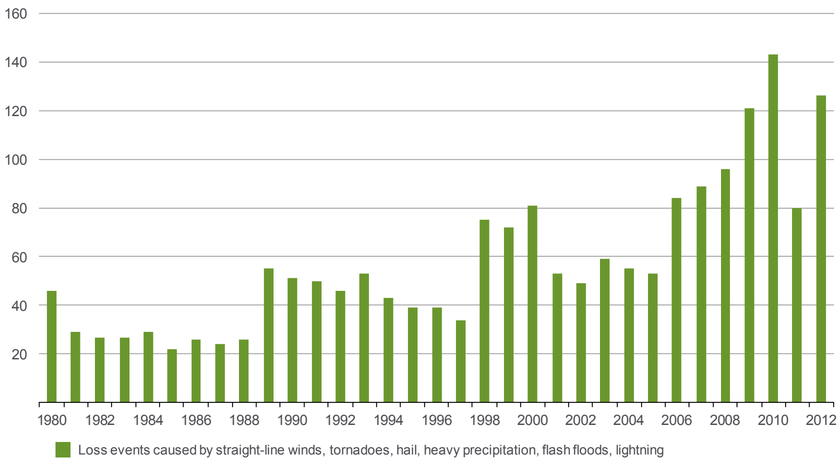
- Most observed tornadoes in a month: 748, April
- Largest number of tornadoes in a day: 226, 27 April
- Most EF5 tornados in a year: 6 (tied for first with 1974)
- Late April (Alabama) and May (Joplin) outbreaks each caused insured losses in excess of $6 billion, and are among the top 10 largest natural catastrophe losses in US history.

Climate change – Risks and opportunities

Convective loss events in the US

Munich RE

Number of events 1980–2012 – As at April 2013

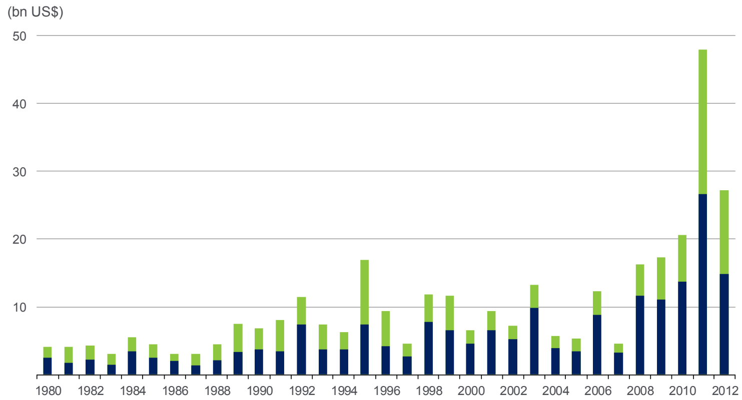


Climate change – Risks and opportunities

Convective loss events in the US
Overall and insured losses 1980–2012

Munich RE

Average insured convective losses have increased sevenfold since 1980 – As at April 2013



Analysis contains: straight-line winds, tornadoes, hail, heavy precipitation, flash floods, lightning.

Overall losses (in 2012 values) Insured losses (in 2012 values)

Climate change – Risks and opportunities

New Munich Re scientific paper on US thunderstorm trends

Munich RE

Weather, Climate, and Society 2013 ; e-View
doi: http://dx.doi.org/10.1175/WCAS-D-12-00023.1

Rising variability in thunderstorm-related U.S. losses as a reflection of changes in large-scale thunderstorm forcing

J. Sander,[a,b] J. F. Eichner,[b] E. Faust,[b,*] and M. Steuer[b]

[a] *German Aerospace Centre, Institute of Atmospheric Physics, 82234 Oberpfaffenhofen-Wessling, Germany*

[b] *Munich Reinsurance Company, Königinstr. 107, 80802 Munich, Germany*

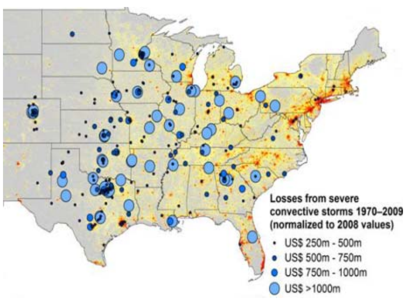
Published online on 18 March 2013

Climate change – Risks and opportunities

Major results of new Munich Re convective storm study

Munich RE

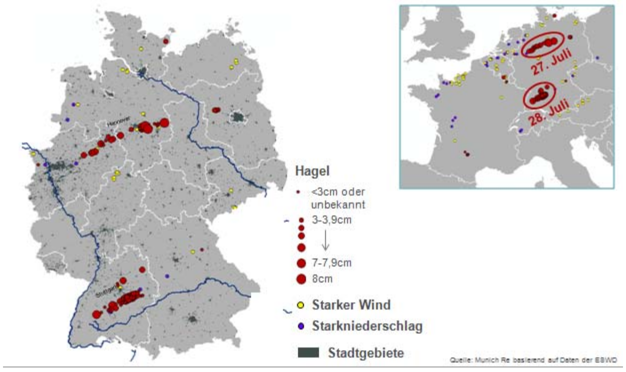
- Study examines convective (hail, tornado, thundersquall and heavy rainfall) events in the US with normalised losses exceeding US$ 250m in the period 1970–2009 (80% of all losses)
- Past losses are normalised to currently exposed values
- After normalisation there are still increases in losses
- Increases are correlated with the increase in the meteorological potential for severe thunderstorms and its variability
- For the first time, it could be shown that climatic changes have already influenced US thunderstorm losses!



Hail event on 27/28 July 2013 in Germany

Munich RE

Most expensive hail event in Germany, 4th expensive nat cat



Region	Total losses	Insured losses	Fatalities
Baden-Württemberg, NRW, Lower Saxony	€2.3bn[1]	€1.5bn[1]	1

[1] Loss assesments still ongoing.

Hurricane Sandy – October 22-30, 2012

Munich RE

2nd most expensive hurricane in US history

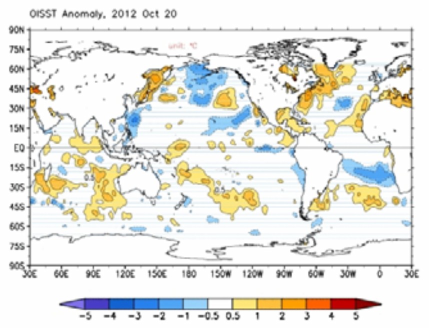
Region	Total losses	Insured losses	Fatalities
USA	US$ 69 bn	US$ 30 bn	110

Climate change – Risks and opportunities

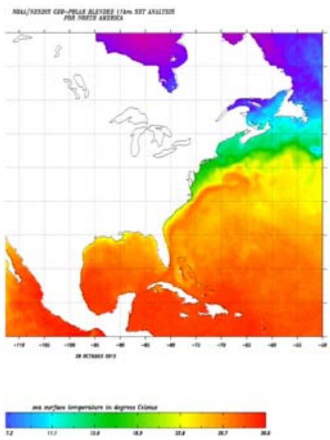
Sea surface temperatures

Munich RE

Sea surface temperature anomalies (20 October)



Sea surface temperatures (28 October)

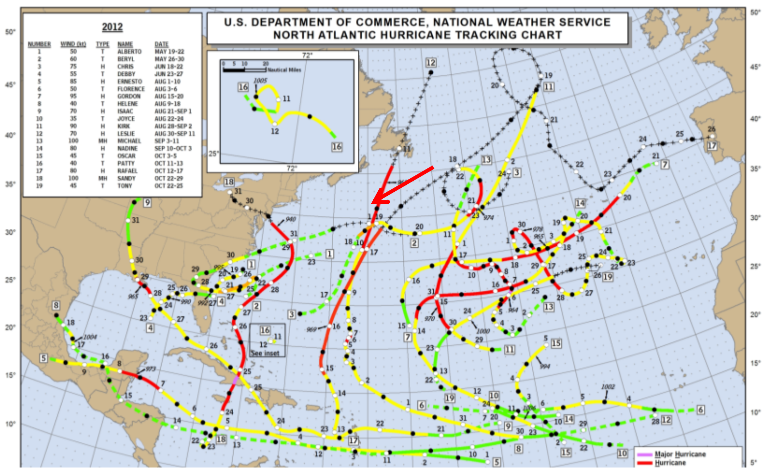


Climate change – Risks and opportunities

Hurricane Sandy, the 18th tropical storm of the 2012 season

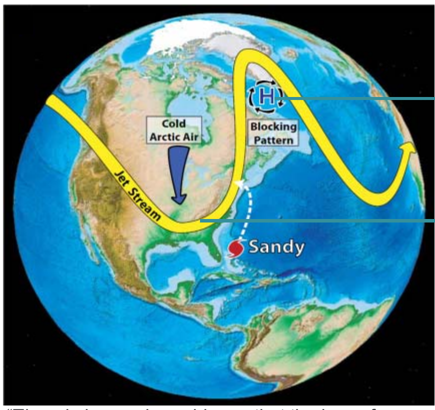
Munich RE

Formation on 22 October in the Caribbean Sea



Sandy – Is there a connection to climate change?

Munich RE



A strong high-pressure blocking pattern prevented Sandy from steering northeast and out to sea.

Sandy was supercharged with energy derived from a southward dip in the jet stream

“There is increasing evidence that the loss of summertime Arctic Sea ice due to greenhouse warming stacks the deck in favor of
(1) larger amplitude meanders in the jet stream,
(2) more frequent invasions of Arctic air masses into the middle latitudes,
(3) more frequent blocking events of the kind that steered Sandy to the west.“

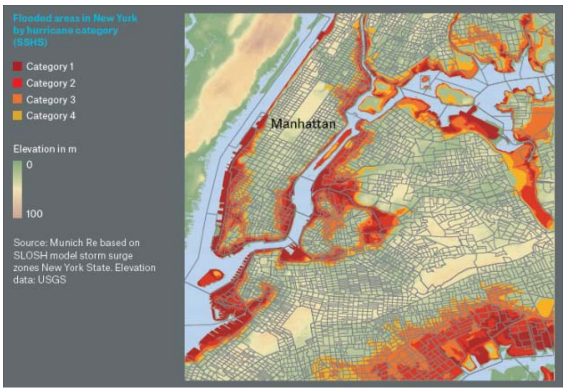
Source: Greene, C.H., et al. 2013: Superstorm Sandy: A series of unfortunate events? Oceanography; Vol. 26 (1).

The Sandy scenario was described in the Munich Re book published several weeks before the event

Munich RE

Hurricane US: East coast scenario

A stronger hurricane, like the 1938 Great New England Hurricane, would easily cause more extensive wind damage throughout the region and generate a storm surge that could devastate coastal communities, and the financial hub of the United States, causing losses several times higher than Irene‘s. Irene should serve as a wake-up call for the region, and lessons learned should be used to help protect against losses from bigger storms in the future.



Peter Miesen, Munich Re.

Climate change – Risks and opportunities

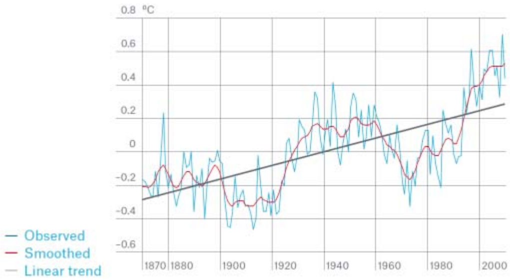
Hurricanes and tropical storms in North America Observed and projected changes

Munich RE

Observed changes

- Year-to-year variability in the number of hurricane landfalls is linked to the ENSO phenomenon: Landfalls are more frequent during La Niña phases
- On a time scale of decades, tropical cyclone frequency is dependent on AMO (Atlantic Multidecadal Oscillation) phases
- AMO phases represent the long-term variation of the North Atlantic sea surface temperature

Multidecadal swing of the North Atlantic sea surface temperature anomalies 1870–2011, indicative of the AMO



Source: Munich Re – Severe weather in North America, 2012

Climate change – Risks and opportunities

Global warming will intensify hurricanes

Munich RE

Science 22 January 2010:
Vol. 327. no. 5964, pp. 454 - 458
DOI: 10.1126/science.1180568

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REPORTS

Modeled Impact of Anthropogenic Warming on the Frequency of Intense Atlantic Hurricanes

Morris A. Bender,[1,*] Thomas R. Knutson,[1] Robert E. Tuleya,[2] Joseph J. Sirutis,[1] Gabriel A. Vecchi,[1] Stephen T. Garner,[1] Isaac M. Held[1]

Several recent models suggest that the frequency of Atlantic tropical cyclones could decrease as the climate warms. However, these models are unable to reproduce storms of category 3 or higher intensity. We explored the influence of future global warming on Atlantic hurricanes with a downscaling strategy by using an operational hurricane-prediction model that produces a realistic distribution of intense hurricane activity for present-day conditions. The model projects nearly a doubling of the frequency of category 4 and 5 storms by the end of the 21st century, despite a decrease in the overall frequency of tropical cyclones, when the downscaling is based on the ensemble mean of 18 global climate-change projections. The largest increase is projected to occur in the Western Atlantic, north of 20°N.

[1] National Oceanic and Atmospheric Administration/Geophysical Fluid Dynamics Laboratory, 201 Forrestal Road, Princeton, NJ, 08540, USA.
[2] Center for Coastal Physical Oceanography, Old Dominion University, 4111 Monarch Way, Norfolk, VA 23508, USA.

Reasons for globally increasing losses caused by natural disasters

Munich RE

- Rise in population
- Better standard of living
- Increasing insurance density

In general, no problem for insurance, as premiums rise proportionally with the risk!

- Settlement in extremely exposed regions
- Increased vulnerability of modern societies and technologies to natural hazards
- Change in environmental conditions – climate change

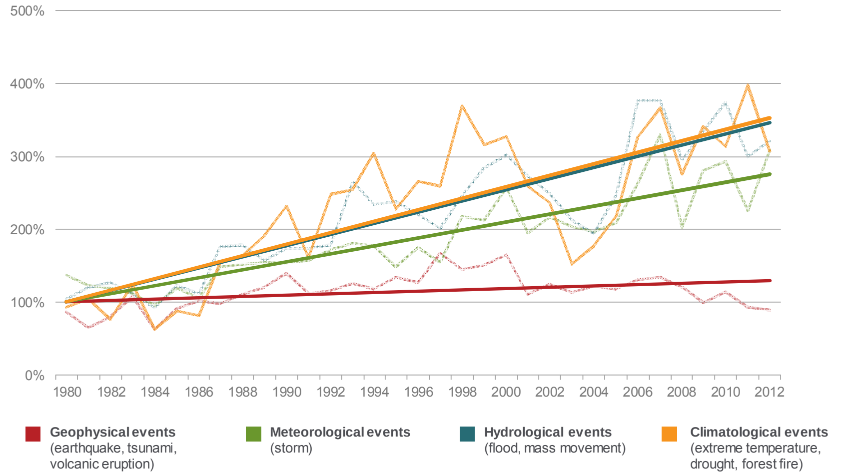
Problem for insurance if risk models are not adapted to the changes!

Natural catastrophes worldwide 1980–2012

Munich RE

Number of events with relative trend – As at January 2013

Number



Evaluating the economics of climate risks and opportunities in the insurance sector

Munich RE

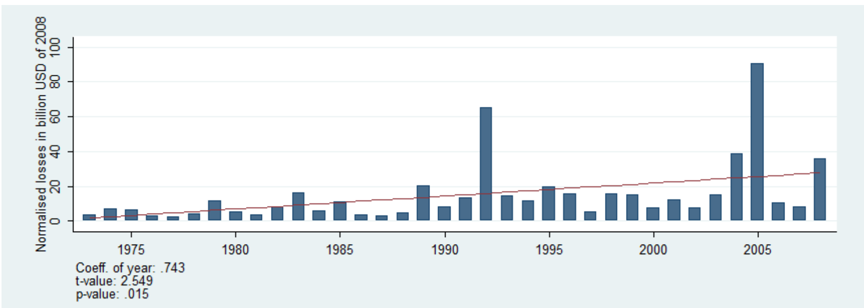
Collaboration between Munich Re and the London School of Economics

Trend analysis of normalised insured damage from natural disasters
First study of this kind!
Paper by Barthel and Neumayer (*Climatic Change, 2012)*
LSE, London

Normalisation by insurance premiums
Insurance premiums used: subset of property and engineering premiums plus motor physical damage, which are affected by natural disasters

Normalised insured losses of non-geophysical disasters in the US

Munich RE



Climate change is a strategic topic for Munich Re
The three pillars of Munich Re's climate change strategy

Munich RE

Risk assessment
- Research of natural hazards and climate change impacts
- Climate liability issues
- Prospective risk management (also considering weather oscillations such as El Niño)

Business opportunities
- Growing demand for risk transfer solutions such as renewable energy covers
- Performance covers for solar modules
- "Delivery guarantees" for wind and sun

Asset management
- Integration of sustainability criteria into investment strategies
- Significant expansion of renewable energy investments where frameworks are appropriate (target €2.5bn)

Becoming carbon-neutral (Munich: since 2009, reinsurance worldwide: 2012, Group: 2015)

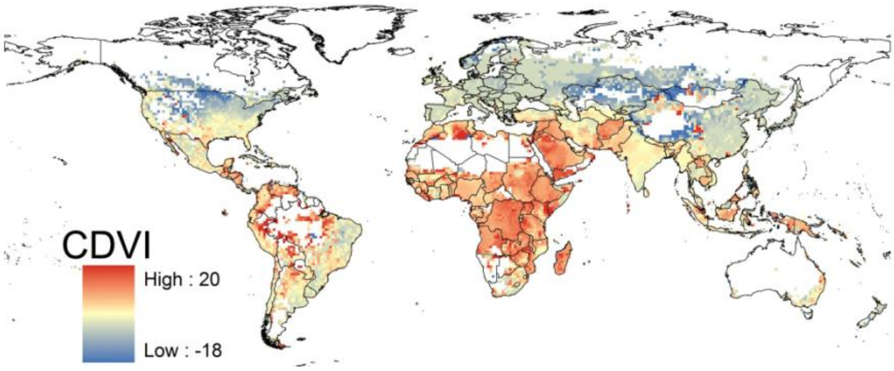
Supporting several climate initiatives (GCF, UNEP FI, …)

Initiating flagship projects such as the Dii GmbH and MCII

Future regional vulnerability of human populations to climate change

Munich RE

Global climate-demography vulnerability index (CDVI)



Regions with a high CDVI are expected to be most negatively impacted by climate change.
The CDVI is based on ecological and demographic models

© McGill University

Source: Samson, J. et al. (2011) Geographic disparities and moral hazards in the predicted impacts of climate change on human populations. Global Ecology and Biogeography.

Climate change – Risks and opportunities

The insured and non-insured world

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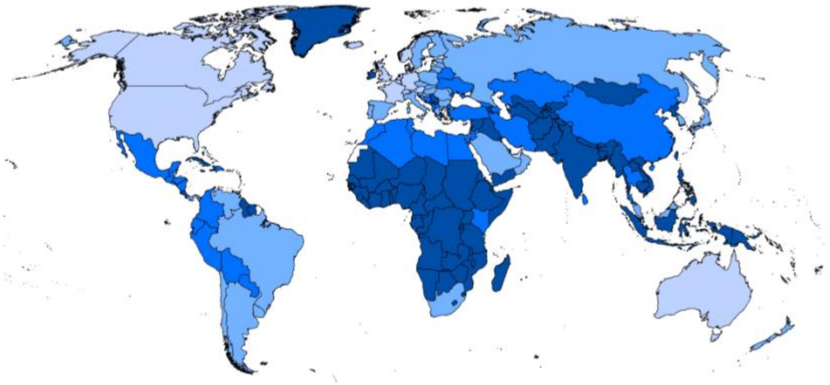
Property insurance premium per capita – Overview



Insurance groups

- Highly insured countries (>US$ 1,000)
- Well insured countries (US$ 101-1,000)
- Basically insured countries (US$ 11-100)
- Inadequately insured countries (<US$ 10)
- No data

As at May 2011. Source: Munich Re, Property insurance premium (non-life including health), per capita in 2008

Climate change – Risks and opportunities

Insurability of global warming effects in developing countries

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Munich Climate Insurance Initiative (MCII)

MCII

Objectives of MCII:

Development of risk transfer solutions to support adaptation mechanisms to global warming in developing countries within the framework of the UNFCCC process.

MCII was founded in 2005 on the initiative of Munich Re together with Germanwatch, International Institute for Applied Systems Analysis (IIASA), Munich Re Foundation, Potsdam Institute for Climate Impact Research (PIK), Tyndall Centre, World Bank and independent experts.

Recent successes of MCII

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- Essentials of MCII proposal have made it into the UNFCCC negotiation texts
- Agreement in Cancun on two-year "Loss and Damage" programme, including insurance solutions
- MCII partnering with UNFCCC in organisation of this programme; (2013) binding decisions on results expected at COP19
- MCII has received funding from the German Environmental Ministry (€2m) for pilot projects in the Caribbean (project partners CCRIF, MicroEnsure). Development of Livelihood Protection (launched in St. Lucia in May 2013) and Lender Portfolio Protection covers in Jamaica, Grenada and St. Lucia

MCII submission for COP18 in Doha

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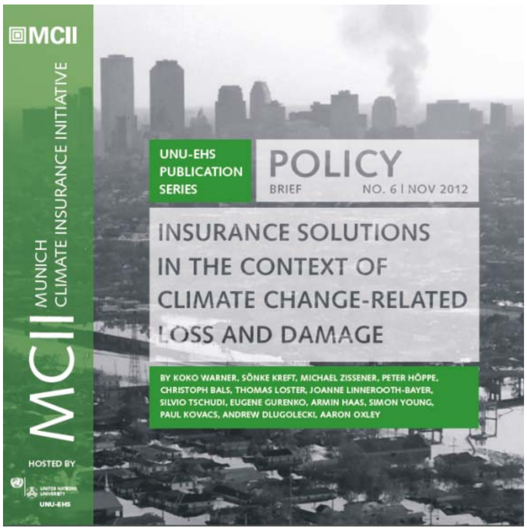

In 2009, together with the Desertec Foundation, Munich Re initiated the foundation of the Desertec industrial initiative (Dii GmbH)

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Vision

Vision:
Providing Europe (EU), the Middle East and North Africa (MENA) with a sustainable supply of renewable energy by the year 2050

"Within six hours, deserts receive more energy from the sun than humankind consumes within a year."
(Dr. Gerhard Knies)

Dii shareholders and Associated Partners

Munich RE

19 Dii Shareholders

ABB
ABENGOA SOLAR
ACWA POWER
cevital
Deutsche Bank
Enel Green Power
e.on
First Solar
FLAGSOL
HSH NORDBANK
Munich RE
NAREVA
RED ELECTRICA DE ESPAÑA
VORWEG GEHEN
SAINT-GOBAIN SOLAR
SCHOTT solar
Terna
TERNA ENERGY SA
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17 Dii Associated Partners

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BearingPoint
BILFINGER
FLABEG
ifmia
ILF CONSULTING ENGINEERS
INTESA SANPAOLO
Italgen Italcementi Group
LAHMEYER INTERNATIONAL
LEONI
MAURI SOLAIRE
SMA
Soitec
TÜV

As at September 2013

Climate change – Risks and opportunities

The first and second milestones were reached in June 2012 and June 2013

Climate change – Risks and opportunities

"Desert Power 2050" addresses the target picture, "Getting Started" the pathways to implementation

Target picture (summer 2012)	Pathways to implementation "Getting Started" (June 2013)

"Desert Power 2050: *Perspectives on a sustainable power system for EUMENA"*

Which technological and geographical mix of RE is best suited to provide the EUMENA region with a sustainable, reliable and affordable power system?

"Desert Power 2050: *Getting Started"*

Actionable recommendations on all key aspects of implementing a fully integrated EUMENA power system based on RE

- Ramp-up of MENA RE
- Grid infrastructure/electricity highways connecting MENA and Europe
- Public support (design, phase-out)
- Institutional framework
- Socio-economic effects

DP2050 electricity mix: Sun in the south, wind across EUMENA

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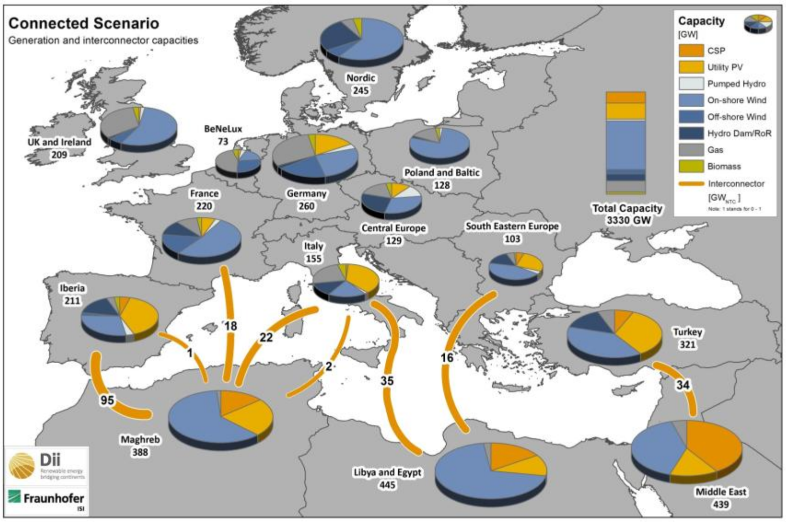

Munich Re publication "Energy Situation, Problems with Commodities and Insurance" dated 1978

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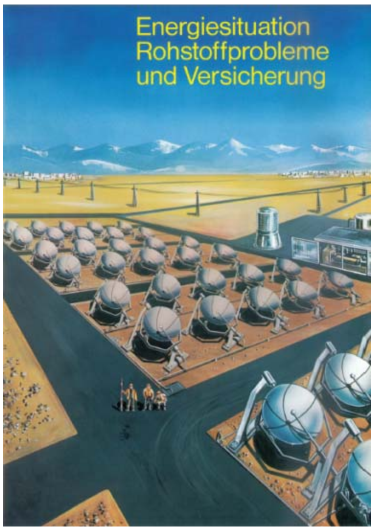

Das Titelbild zeigt eine Sonnen- oder Solarfarm, wie sie für Afrika und die südlichen Gegenden Europas konzipiert wird. Mehrere zusammengeschaltete Parabolspiegel sorgen für Wassererhitzung im Paraboloidbrennpunkt. Der Wasserdampf wird zu einer Dampfturbine geleitet, die einen Stromgenerator antreibt. Vor dem Rücklauf zu den Spiegeln durchläuft das Wasser noch einen Kühlturm (neben dem Generator-Container sichtbar). Die hier gezeigte Anlage, deren kleinste Einheit auf 50 kW ausgelegt ist, wurde vom Luft- und Raumfahrtkonzern Messerschmitt-Bölkow-Blöm entwickelt.

Druck: Carl Gerber Grafische Betriebe GmbH,
Muthmannstraße 4, D-8000 München 45

Business opportunities: New technologies – role of the insurance industry

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Risks of renewable energies

Technology/ Regulatory risk

- Market perspective: Many technologies with short commercial experience; warranty/performance risks for manufacturers
- Investor perspective: New risks = investment barrier

The role of the insurance industry in the implementation of new technologies

Enabling/acceleration of the commercialization of new technologies

- Helping to commercialize new technologies via risk transfer solutions (e.g. commercial satellite)
- Covering the long-term technology risk of renewable energy manufacturers via performance and delivery guarantees → increasing project bankability

Business opportunities

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Increase in demand for nat cat covers, new groups of clients

- Increasing frequencies and intensities of extreme weather events and corresponding rise of risk awareness will trigger increasing demand for nat cat covers (e.g. flood cover penetration in Germany has increased significantly)
- More and more countries are insuring their sovereign risks (e.g. CCRIF, Fonden)
- Pool solutions and PPP mechansims open up chances for innovative nat cat insurance products

Climate change: Munich Re positions (1)

Science

Climate change is real. Drivers are both natural (e.g. cyclic) and anthropogenic (increasing greenhouse gas emissions). On a decadal to centennial timescale, anthropogenic drivers are most relevant.

Climate science is best represented by IPCC reports ("state of knowledge"). Munich Re is engaged in dialogues with sceptical scientists, but so far basically no critisism of the concept of anthropogenic climate change has stood up to the challenges of peer reviewing.

The vast majority of scientific studies on climate change and nat cat indicate that during the coming decades both frequency and intensity of nat cat will increase in many regions.

Climate change: Munich Re positions (2)

Insurance/risk management

The frequency of weather-related catastrophes worldwide has increased much faster than those of geophysical events during last 30+ years. On a regional/peril basis, significant differences have been observed

Increase in financial losses (economic and insured) can in part be explained by socio-economic factors; however, recent scientific studies indicate that loss trends in some regions are already being adversely influenced by climate change

Wherever there are risks, there are opportunities for the insurance industry. Munich Re has the experience and expertise to find solutions for these risks and is willing to provide significant capacity

Appendix

Financial calendar

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FINANCIAL CALENDAR

7 November 2013	Interim report as at 30 September 2013
4 February 2014	Preliminary key figures 2013 and renewals
20 March 2014	Balance sheet press conference for 2013 financial statements
21 March 2014	Analysts' conference with videocast
30 April 2014	Annual General Meeting, ICM – International Congress Centre Munich, exhibition center, München-Riem
8 May 2014	Interim report as at 31 March 2014
7 August 2014	Interim report as at 30 June 2014, Half-year press conference
6 November 2014	Interim report as at 30 September 2014

Appendix

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Appendix

Disclaimer

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Figures up to 2010 are shown on a partly consolidated basis. "Partly consolidated" means before elimination of intra-Group transactions across segments.

Appendix

Disclaimer: MEAG (I)

Note on the MEAG FairReturn: Extended investment limits
Securities and money market instruments from the following issuers may account for more than 35 % of the fund assets: The Federal Republic of Germany; The German federal states: Baden-Württemberg, Bavaria, Berlin, Brandenburg, Bremen, Hamburg, Hesse, Mecklenburg-Vorpommern, Lower Saxony, North-Rhine Westphalia, Rhineland Palatinate, Saarland, Saxony, Saxony-Anhalt, Schleswig-Holstein, Thuringia; European communities: European Coal and Steel Community, EURATOM, European economic communities, European Community; Other member states of the European Union: France, Greece, Great Britain and Northern Ireland, Ireland, Italy, Holland, Austria, Portugal, Sweden, Spain; other member states of the OECD, that are not members of the European Economic Area: Japan, Switzerland, United States of America.

Note on the MEAG Nachhaltigkeit:
Due to its composition and the techniques used by its management, the fund is highly volatile, i.e. the unit prices can be subject to significant upward and downward fluctuations, even within short periods of time.

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The current Key Investor Document and full sales prospectus (together with the terms of contract) supplemented with the latest annual report and/or semi-annual report are the sole binding legal basis for the purchase of fund units. The aforementioned sales documentation is available free of charge from:

MEAG MUNICH ERGO Kapitalanlagegesellschaft mbH
Oskar-von-Miller-Ring 18
80333 Munich
Germany

Internet www.meag.com

Appendix

Disclaimer: MEAG (II)

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