

The GIZ magazine

# akzente

## Climate change

Living with the consequences

### OTHER TOPICS:

Triple win: New approaches to labour migration

Afghanistan: Not afraid of the police

**giz** Deutsche Gesellschaft  
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Zusammenarbeit (GIZ) GmbH





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COVER PICTURE: P. COLLA/SEATOPS.COM

Our cover photo shows the Weddell Sea, the largest of 14 or so semi-enclosed bodies of water in the Southern Ocean of Antarctica.

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The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH offers sustainable and effective solutions for political, economic and social change processes. GIZ is a federal enterprise and employs over 17,000 staff members and operates in over 130 countries worldwide.

[www.giz.de/en](http://www.giz.de/en)

PHOTOS: SARAH J. DUNCAN/ARCAID (TOP LEFT); GIZ BOLIVIEN (TOP MIDDLE); JÖRGG REUTHER (TOP RIGHT); GIZ (2 BOTTOM, 3 EDITORIAL)



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## DEAR READER,

Climate change features regularly on the political agenda – most recently at the Doha Climate Change Conference. The message about the need to ‘reduce greenhouse gas emissions and adapt to the unavoidable consequences of climate change’ may be a familiar refrain, but it remains very real. The roles and self-image of the key protagonists working to combat climate change have fundamentally changed in the space of a few years. Emerging markets, in particular, have now entered the equation. Where CO<sub>2</sub> emissions are concerned, the economic performance of these countries presents them with problems similar to those already faced by industrialised nations. But it also offers an opportunity for them to finance their own climate activities as donors. New national and international funding mechanisms have been established, and the private sector is becoming increasingly involved in climate issues. Last but not least, the renewable energy revolution in Germany – in particular the Government’s decision to phase out the use of nuclear power – throws up many climate-related issues. Time, then, to shed new light on the subject.



This issue of ‘akzente’ also takes you to Afghanistan, where GIZ is working on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) to introduce a justice system based on the rule of law. More tangibly, in an effort to improve the generally poor reputation of the police, regular meetings between citizens’ committees and the local police in the district of Baharak are already helping to address public grievances.

Other articles look at the planned eco label in Bolivia, cooperation between researchers and practitioners on the long-term use of groundwater resources in arid areas, and about the Triple Win Pilot Project to acquire experts from countries outside the European Union.

*Dorothee Hutter*

Dorothee Hutter  
Director of Corporate Communications



## GIZ expands its Head Office in Bonn



GIZ's planned new building in Bonn, dubbed the 'Meander Building' on account of its shape.

**NEW BUILDING** The first step has been taken: the purchase agreement for the site for GIZ's new office in Bonn was signed at the end of August. The building in Friedrich-Ebert-Allee in the government district will cost around €70 million and is scheduled for completion in 2015. 'This is the largest investment GIZ has ever made,' said Tanja Gönner, Chair of GIZ's Management Board, at the formal signing of the purchase agreement. Dubbed the 'Meander Building' (Mäanderbau) on account of its shape,

the new office will offer space for 500 employees. The current premises right next door will remain in use, providing workspace for 660 staff. With the combined complex, GIZ's employees – currently working from various buildings throughout the city – will be accommodated in closer proximity to one another, with scope for further expansion of GIZ's workforce as well. 'I am very pleased that, in this way, we are able to contribute to shaping not only the future of GIZ in Bonn, but also the

future of Bonn as an international city,' said Tanja Gönner. Managing Director Hans-Joachim Preuß emphasised that the new building's energy supply will be carbon-neutral. The sustainability of the building's design was a decisive argument in favour of purchasing the complex, 'because sustainability is at the heart of our work,' said Preuß. The building work will be carried out by project development and construction company Ten Brinke.

## German-Israeli Exchange Programme



The programme aims to develop participants' technical and intercultural skills.

**TRAINING** Fifteen trainee motor mechanics from Israel recently visited Germany, after a visit to Israel gave a group of 15 German automotive mechatronics trainees a skills boost back in May. The visits mark the start of a German-Israeli pilot project aimed at establishing an exchange of trainees from both countries. The project is a new component of the German-Israeli programme for cooperation in vocational education established more than 40 years ago. The trainee exchange is implemented by GIZ on behalf of the German Federal Ministry of Education and Research (BMBF). The Israeli programme partner is the Ministry of Industry, Trade and Labor (MOITAL).

# 5 MILLION

**IN FIGURES** More than 5 million small-holder farmers in Asia will in future be able to protect themselves against crop failures with insurance schemes. The policies were developed by GIZ, on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), and Allianz Re. State-of-the-art satellite technology and new growth models supply data which allow crop volumes and damage to be estimated accurately.

Around **30 MILLION** people will thus benefit from greater economic security.

## > INDIA

# HIGHLY DYNAMIC

India – a G20 country and emerging economy – is keen to cooperate with the German Government on sustainable development.



**COMMITMENT** In India, GIZ is working in areas in which demand for advisory services is particularly high due to the country's dynamic economic development, namely the environment, energy, and private sector promotion. The very successful cooperation between Germany and India not only benefits the partner countries themselves. Due to India's size and significance and its extensive international trade links, this bilateral cooperation also helps to protect the climate and supports the attainment of the Millennium Development Goals (MDGs) worldwide.

**COMMISSIONING PARTIES** GIZ works on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), the European Union and, increasingly, Indian public sector clients and German industry.

**IN-COUNTRY** GIZ currently has 250 staff working in India.

[www.giz.de/indien](http://www.giz.de/indien)

## > RECOGNITION

### Young people in action

**BIODIVERSITY** The International Youth Forum Go4BioDiv is now officially recognised as a UN Decade Project on Biological Diversity. The initiative gives young adults between 18 and 29 years of age the chance to engage in international policy dialogue. Initiated by GIZ on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), Go4BioDiv has taken place every two years since 2008, most recently in India in October.

[www.un-dekade-biologische-vielfalt.de](http://www.un-dekade-biologische-vielfalt.de)  
[www.go4biodiv.org/india-2012](http://www.go4biodiv.org/india-2012)

### Combating corruption

**PUBLIC SERVICE AWARD** The State Procurement Agency of Georgia has received a silver Public Service Award from the United Nations. Since 2010, the Private Sector Development Programme in Georgia, supported by GIZ on behalf of BMZ, has assisted the Agency in setting up an electronic government procurement system and establishing a Department of Economic Analysis and Policy.

### Risk Award 2012

**CLIMATE CHANGE** The €100,000 RISK Award 2012 has gone to a project which aims to protect the Mozambican coastal city of Beira from floods. On behalf of the German Government, GIZ has been working with local partners in Beira since 2007 and has set up an early warning system.

[www.risk-award.org](http://www.risk-award.org)

## Promoting integrity

**OMBUDSWOMAN** Ethical conduct is a fundamental principle which everyone who works for GIZ must uphold. GIZ's external ombudswoman, Annette Parsch, a solicitor specialising in tax

and commercial criminal law, complements the work of GIZ's two in-house integrity advisors, Detlev Böttcher and Hans-Joachim Gante. The team provides a contact point for members of GIZ's staff or external persons who spot signs of corruption or rule-breaking. All three contact persons deal with matters in confidence and can also respond to anonymous information. 'I only pass on information entrusted to me if the informant has given their express consent,' says Annette Parsch.



New ombudswoman Annette Parsch has 15 years' experience as a solicitor.

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## Sweet aspirations: forum supports sustainable cocoa growing



Cocoa from Sumaco Biosphere Reserve in Ecuador is fairly traded. Customers include a producer of fine Swiss chocolate.

**ESTABLISHMENT** The Sustainable Cocoa Forum was set up in June 2012 with the aim of promoting sustainable cocoa growing worldwide. The Forum is a joint initiative by the German Government, represented by the Federal Ministry for Economic Cooperation and Development (BMZ) and the Federal Ministry of Food, Agriculture and Consumer Protection (BMELV), civil society, and the Association of the German Confectionery Industry (BDSI) and the Federal Association of the German Retail Grocery Trade (BVL) and their members. The initiative's secretariat is provided by GIZ. It coordinates the Forum's activities and brings together stakeholders from Germany, the producer countries and various initiatives. GIZ has been supporting cocoa farmers for some time. As part of the Sustainable Management of Natural Resources (GESOREN) programme commissioned by BMZ, GIZ advisors are working in Sumaco Biosphere Reserve in Ecuador, for example. Besides improving the quality of the cocoa itself, the programme aims to optimise marketing strategies and develop access to new markets.

## The Shell contract

**INFRASTRUCTURE** As part of the project to build a new road linking the Ndougou département in south Gabon to the national road network, GIZ has been awarded a €26 million contract by the Government of Gabon and oil company Shell to carry out accompanying development measures. There are major oil deposits in the province of Ogooué-Maritime, 300 km south of the capital, and Shell has been involved in oil production here since the early 1960s. The province's 13,000 residents hope that the new 55-km stretch of road will improve their supply of essential goods, cut the cost of living, and create more opportunities to market their products. The plans for the road and the development measures, as well as an environmental impact assessment, have already been completed.

## Run for more time

**SPONSORSHIP** In early September, 110 GIZ employees lined up for a fun run in support of local AIDS charity Aids-Hilfe Frankfurt am Main. The runners could choose between a 5-km and a 10-km route through down-town Frankfurt. GIZ provided sponsorship, collected donations and covered its employees' entry fees. The 'Run for More Time' (Lauf für mehr Zeit) attracted 4,077 entrants and raised €130,000.

[www.lauf-fuer-mehr-zeit.de](http://www.lauf-fuer-mehr-zeit.de)





# Alumniportal Deutschland

**COOPERATION** The German chambers of commerce abroad are keen to step up their cooperation with the professional network Alumniportal Deutschland in future – and a declaration of intent recently signed by GIZ and the Association of German Chambers of Industry and Commerce aims to facilitate that process. With hundreds of thousands of people worldwide having previously lived in Germany on one or more occasions for the purpose of study, research or education, German companies abroad are keenly interested in these ‘Germany alumni’ as potential contact persons. The new venture will therefore focus among other things on hosting joint networking and professional events. Alumniportal Deutschland recently welcomed its 50,000th member.

[www.alumniportal-deutschland.org](http://www.alumniportal-deutschland.org)

## GIZ a popular choice

**JOB SEARCH** In 2012, GIZ was once again recognised by various organisations as one of the most popular employers. The Swedish employer branding consultancy Universum ranks GIZ among the top 100 employers in two categories: natural sciences (no. 66) and engineering (no. 86). The ranking is based on a survey of more than 23,500 students from 107 universities. In the Graduate Barometer 2012 produced by Berlin-based research institute trendence, GIZ is ranked 44th in the Business Edition – up 11 places from last year – and 20th in the Law Edition, the same position as last year. GIZ was ranked 16th in trendence’s current Young Professional Barometer, which surveys people with up to eight years’ work experience. The company is also one of the 500 top employers in Europe: 350,000 students voted for GIZ, putting it at 267th place in trendence’s European Graduate Barometer.



## RESERVE'S FUTURE IS SECURE

Park in the Central African Republic is now a natural World Heritage Site

- **Project:** Dzanga Sangha Reserve
- **Commissioned by:** German Federal Ministry for Economic Cooperation and Development (BMZ)
- **Overall term:** 1994 to 2009

**THEN** Until 2009, GIZ – on behalf of BMZ – assisted the Forestry Ministry of the Central African Republic with the designation of Dzanga Sangha nature reserve and the development of an administrative structure and management strategy for the site. A further aim was, if possible, to nominate Dzanga Sangha and two adjacent reserves in Cameroon and the Republic of the Congo (Brazzaville) for inscription on UNESCO’s World Heritage List as a natural site to be known as Sangha Trinational (TNS).

**NOW** At a UNESCO meeting in St. Petersburg in July 2012, the Sangha Trinational transboundary conservation complex was added to UNESCO’s World Heritage List as a natural site. This means that two-and-a-half years after the project officially ended, a further success has been achieved in the conservation of the reserve and its unique ecosystem.

24,595

foreign doctors work in Germany.

93,100

skilled workers from other countries were working in the German health system in 2011. That's six per cent of all employees in the sector.

16,000

doctors with a migration background come from Europe.

SOURCE: VERA ZYLKA-MENHORN, MANGEL AN GESUNDHEITSFACHKRÄFTEN: EIN GLOBALES PHÄNOMEN, PUBLISHED IN DEUTSCHES ARZTEBLATT, 19 OCTOBER 2012.

## A TRIPLE WIN FOR EVERYONE

In the recruitment of skilled workers from countries outside the European Union, the Triple Win Pilot Project focuses on the interests of German companies, foreign skilled workers, and the countries of origin – benefiting all three groups.

**Text** Gabriele Rzepka **Photos** Markus Kirchgessner

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It's 1 p.m. in Krankenhaus Nordwest (Northwest Hospital) in Frankfurt am Main, and the afternoon shift is just starting. Almir Dedic, Emir Kurahovic and Belkisa Trakic run through some patient data with Klaus Engel, the deputy head of nursing management. Then the three nurses hurry back to their wards. There's a lot to do: they have intravenous drips to prepare, blood pressure to check, lunch trays to clear away, patients to settle, and dressings to change. The three Bosnians have been working in this Frankfurt hospital for the past five months. They all qualified in nursing in their home country, where they undertook four years of training, including a six-month work placement. But there was no prospect of finding work in Bosnia: 'There are no jobs in Bosnia – none at all. It makes no difference whether you're young or old. I did some casual work as a tiler, and Almir was a storeman,' says Emir Kurahovic. With the unemployment rate in Bosnia hitting more than 40%, the three nurses were frequent visitors to the local job centre. It was there that they heard about the possibility of working in Germany. 'It was a once-in-a-lifetime opportunity, because when I was a child, I lived here in Germany for six years, during the Balkan war,' says Emir Kurahovic. Belkisa Trakic and Almir Dedic also spent part of their childhood in Germany. Dedic went to school in Wetzlar for seven years. 'Coming to Frankfurt was a bit like coming home,' he laughs.

The Bosnian job centre put the three nurses in contact with the Triple Win programme (see Box). They were invited to attend a selection interview, where they submitted their applications. Interviews with staff from the Centre for International Migration and Development (CIM) then followed. The headhunters put the candidates through their paces, checking their training, references, professional experience, background, German language skills and motivation – everything had to be right. 'We were never offered candidates who were anything less than outstanding,' says Klaus Engel from the nursing management team at Nordwest. 'We conducted our own telephone interviews as well, in order to form an impression of our future co-workers. After that, we went ahead and appointed them.'



Emir Kurahovic, Klaus Engel, Almir Dedic and Belkisa Trakic at a ward briefing.

Labour regulations mean that the nurses' employment period in Germany is initially limited to 18 months. For their Bosnian qualifications to be recognised in Germany, the young people have to sit a test and submit numerous docu-

ments. The hospital's support is invaluable here. Klaus Engel and his team deal with most of the red tape, ensuring that the relevant certificates and references are to hand, and arranging translations and authentication. The hospital also »

#### > AT A GLANCE

### Threefold benefits

With the Triple Win Pilot Project, the Federal Employment Agency's International Placement Services (ZAV) and GIZ have jointly developed new, sustainable and effective approaches to recruiting foreign skilled workers for the German labour market in response to German demographic trends. Under the pilot scheme, applicants from countries outside the EU are recruited to fill vacancies in German companies. This form of labour migration complements domestic labour market measures such as improving training, raising the retirement age, and increasing the percentage of women in employment.

The main purpose of the pilot project is to reconcile the divergent interests of the German labour market, the home countries and the workers themselves so that everyone benefits. For the skilled workers, labour migration is an opportunity for personal and professional development. Many of them take their new-found skills back home later, thus benefiting their country of origin. In home countries with high unemployment, the scheme helps to ease the pressure in the labour markets and boosts the economy, as labour migrants generally send money back home to support their families. And German employers gain access to well-qualified staff.

Transparent recruitment, selection and migration procedures which comply with the WHO Global Code of Practice on the International Recruitment of Health Personnel support the attainment of this triple win scenario and allow other gains to be made as well. The procedures, which are agreed with the relevant authorities and agencies in the home countries, are intended to prevent corruption in the recruitment process, irregular migration, human trafficking, wage dumping and excessive out-migration of skilled workers. The pilot scheme is therefore intended to test the parameters for responsible, long-term mobility of skilled workers in professions other than nursing as well.



Almir Dedic, Emir Kurahovic and Belkisa Trakic take a break in the staff room.



With her professional expertise and language skills, Belkisa Trakic has settled down well in Frankfurt.



Giving out food: a new task for Emir Kurahovic, and one which he enjoys.

organises induction courses to familiarise the Bosnians with German standards of care, hospital procedures and quality management. In Emir Kurahovic's view, this is very sensible: 'Our training focused more on medical aspects. The nursing requirements that are an integral part of German healthcare play less of a role in Bosnia: in Bosnian hospitals, it's up to the relatives to look after the patients.' But the highly motivated recruits quickly made up for their initial lack of knowledge in areas such as the correct positioning of patients, personal hygiene, and medication and treatment regimes, as Klaus Engel confirms: 'Within two or three months, our three new co-workers had acquired the skills they need to take charge of their own area of work and provide patient care unsupervised.'

The smooth transition was also partly due to the good working conditions in Nordwest – and to the attitude of their co-workers, who gave the Bosnians a warm welcome and intensive support during their first few weeks in Frankfurt. Outside work, too, Trakic, Dedic und Kurahovic have settled in quickly: old school friends with whom they had remained in

contact were looking forward to seeing them again, and they quickly made friends in the nurses' home where they live.

### An eye on the future

Almir Dedic works in the intensive care unit of the Department for Internal Medicine. Here, patients' cardiological and oxygen saturation data are monitored and displayed on a screen. As soon as he arrives on duty, he carefully checks the levels for the patients in his care. But the patients don't stay on this ward for long. As soon as their condition starts to improve, the doctors move them from intensive care to a regular ward. Dedic is delighted when his sick patients start to recover and no longer need him. Intensive care medicine is his chosen field for the future too. 'Once my qualifications have been recognised, I'd like to undertake further training and specialise in emergency and intensive care medicine,' he explains. He is already an ambulance service volunteer with the German Red Cross; the extra training would be useful here too.

Emir Kurahovic also hopes to undertake further training. He works in trauma surgery, a specialist field which was new to him when he arrived in Germany. He's settled into the job very quickly and would like to specialise in wound treatment, with a view to becoming a wound manager and expert in wound healing. 'I don't want to stay in general nursing for the rest of my life,' he explains. 'I want to progress; otherwise, every job gets boring after a while. Germany offers me the best prospects for that.' Belkisa Trakic is on a similar track. She works in Nordwest's Neurological Department and is keen to undertake further training in neuro-intensive care.

The three nurses' ambition and commitment are not only focused on advancing their own careers, however. They all want to go back to Bosnia some day and improve standards of nursing in their home country's hospitals and health centres. 'We have already learned so much and we want to continue to build our specialist skills. It would be nice if some day, we could share our knowledge with hospitals in Bosnia, through courses or training programmes.'





Almir Dedic is developing his professional skills.

## » INTERVIEW

# 'It takes everyone's interests into account'



Monika Varnhagen, Director of the Federal Employment Agency's International Placement Services (ZAV)

### How does cooperation with GIZ, via the Centre for International Migration and Development (CIM), benefit the Federal Employment Agency?

For three decades now, CIM – a joint venture between the Federal Employment Agency's International Placement Services (ZAV) and GIZ – has been the recruitment agency for German development cooperation. CIM complements the two partners' own service portfolios by placing specialist and management personnel with employers in partner countries with which the German Government engages in international cooperation. Up to now, this has taken place through the Integrated Experts and Returning Experts programmes. But there has been an ongoing debate at board level about possible ways of utilising the existing cooperation to jointly manage labour migration to Germany, thus creating synergies between the labour market and development policy. The starting point is the expected substantial shrinkage of the available workforce in the EU and Germany resulting from demographic change, the health sector being a particularly sensitive area. So we agreed to launch this joint pilot scheme. A strategy for temporary labour migration was developed, trialled and evaluated for specific occupations where there is a shortage of skilled workers. The project will end this year, and discussions about an extension are currently under way.

### What's the innovative feature of the Triple Win concept compared with CIM's recruitment of Integrated and Returning Experts?

First and foremost, of course, it's the direction of the recruitment process: instead of recruiting for other countries, we're placing staff in Germany. When we send experts abroad, the focus is on the needs of the developing and emerging countries, but here, the direction is reversed – it's about Germany's labour market needs. This is changing the roles of both partners in the joint venture. Of course – and this is where GIZ's contribution comes in – we take into account the interests of the countries of origin and the interests of the migrants themselves, hence the name 'Triple Win'.

## » CONTACT

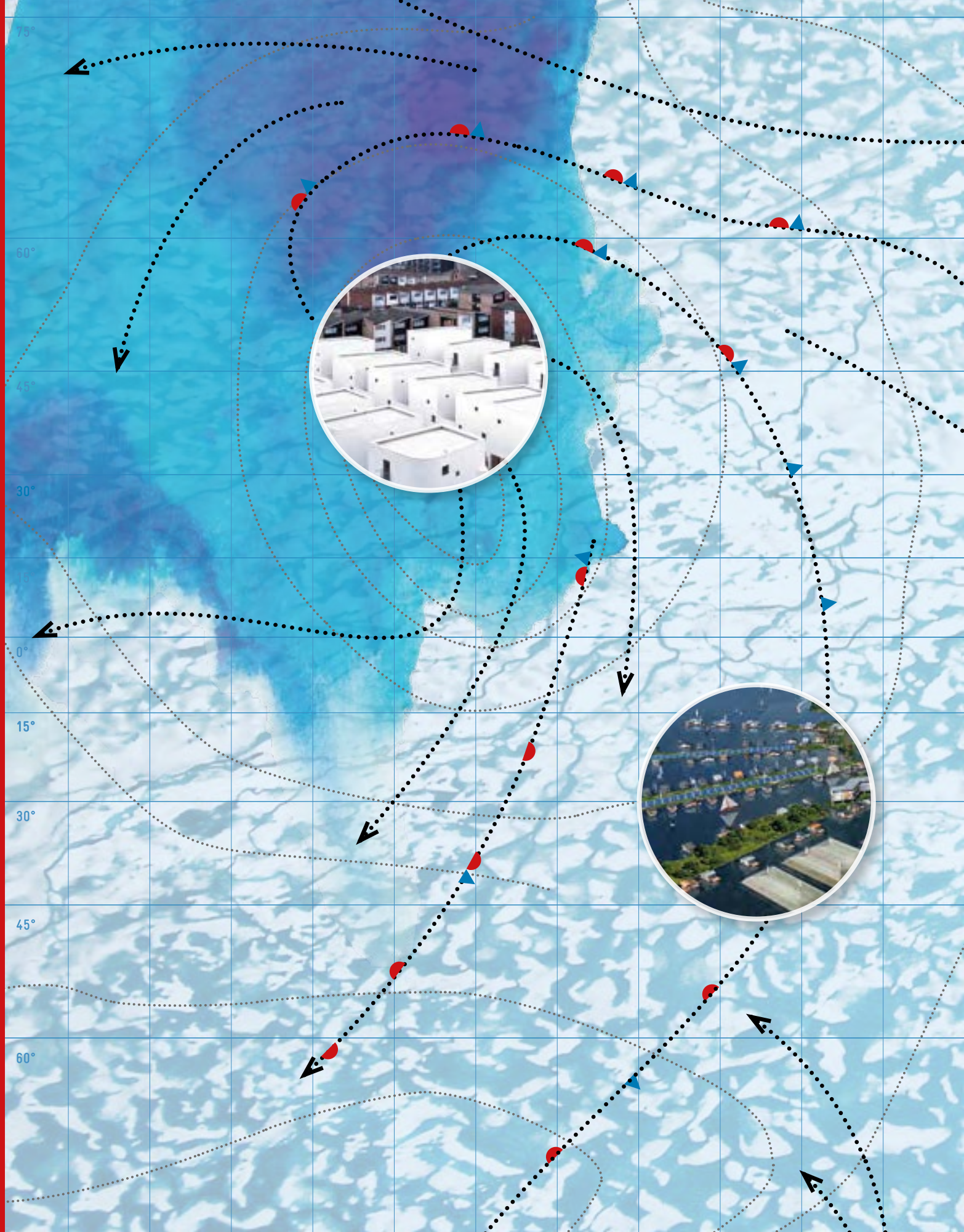
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Interview: akzente

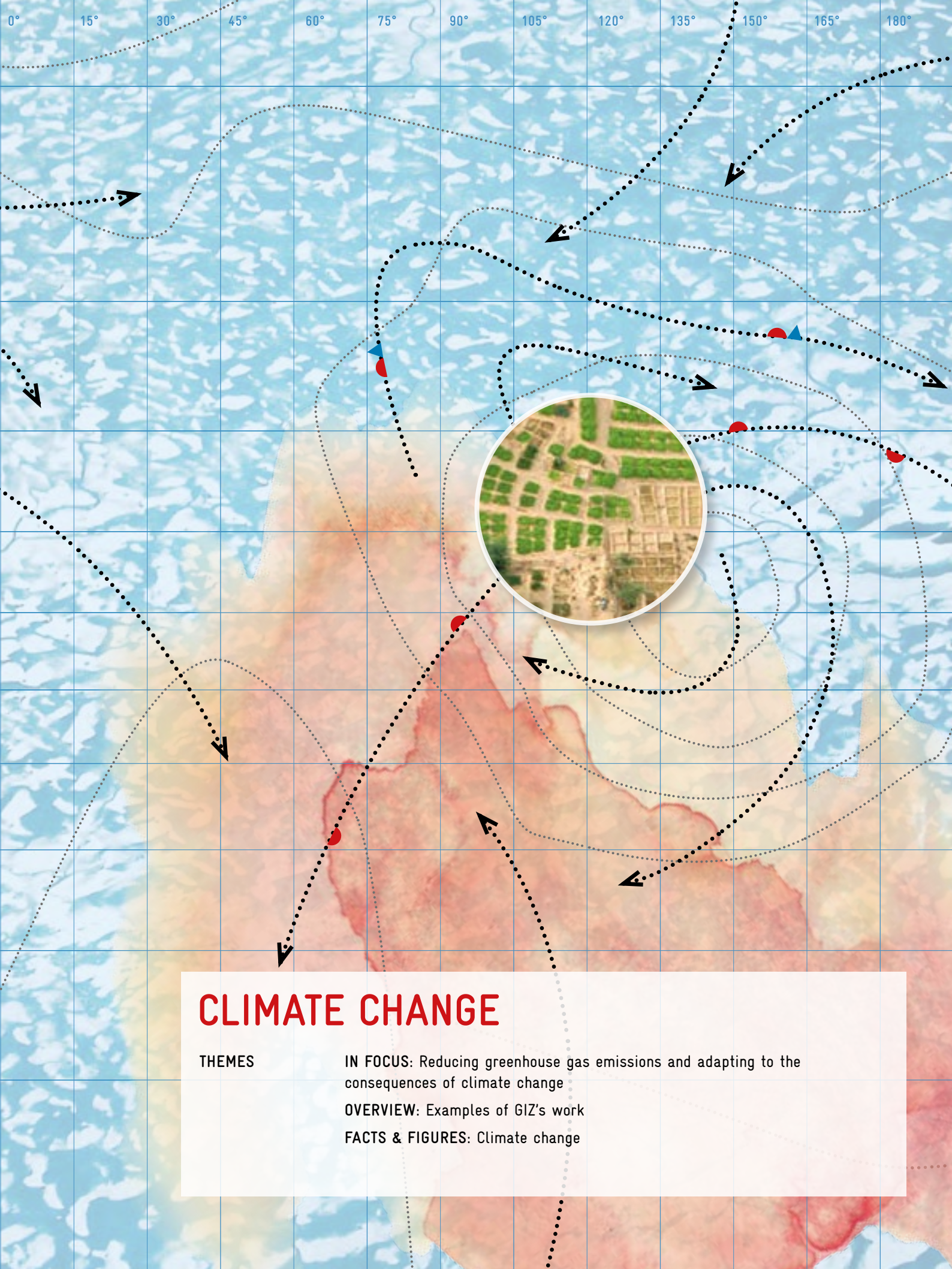


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IN FOCUS







# CLIMATE CHANGE

## THEMES

**IN FOCUS:** Reducing greenhouse gas emissions and adapting to the consequences of climate change

**OVERVIEW:** Examples of GIZ's work

**FACTS & FIGURES:** Climate change

# Living with climate change

The climate is changing – and with it the face of the earth. In many regions these developments are threatening human existence. We need to reduce greenhouse gas emissions and adapt our lifestyles and economies to the consequences of climate change.

**Text** Petra Hannen **Illustrations** Denise Gaertz, Sabine Schiemann

**P**eripheral regions of the earth rarely attract the media spotlight. But in late August, a new Arctic record pushed even the Euro crisis and turmoil in the Arab world off the headlines: the summer melt of Arctic ice was greater this year than ever before. The ice cap has always retreated a little each summer in line with seasonal circumstances, but this time according to US researchers it shrank to an area of 4.1 million square kilometres – around 70,000 square kilometres less than five years ago. And just half of what it was when satellites began measuring summer ice back in 1980.

The shrinking ice cap is not just a problem for polar bears. Researchers involved in the annual Sea Ice Outlook fear that such severe ice melt will increasingly result in extreme weather all over the world, including droughts, flooding and periods of extreme cold. In part, this is due to the warmer waters of the Arctic Ocean causing changes to wind patterns and air-sea exchange in the atmosphere. But observation data and studies also show that extreme weather events – particularly heat waves and rainfall – increase significantly in a warmer climate. And all over the world it is getting warmer. ‘Climate change is happening now and is not some distant future threat,’ says Michel Jarraud, Secretary-General of the World Meteorological Organization (WMO). His warning is based on the latest set of figures

available: the 13 warmest years since climate data recordings began have occurred in the past 15 years.

## Incontrovertible data

Some scientists dispute the links between greenhouse gas emissions and global warming, as well as the scenarios extrapolated by other researchers from changing weather patterns. But the more comprehensive and detailed the data, the more difficult it is to refute these hypotheses. A study carried out by the Max Planck Institute for Meteorology in late May provided clear evidence of the link between the increasing release of greenhouse gases and melting polar ice; other factors such as solar radiation, volcanic eruptions and changed wind patterns were ruled out as potential causes. ‘The world is heating up as a result of human activity,’ explains Michel Jarraud. According to the WMO, there were more greenhouse gas emissions in 2010 than ever before, and the trend is rising. Scientists at the Potsdam Institute for Climate Impact Research are confident that ‘many of the unparalleled extreme weather events of the past decade would not have occurred had it not been for global warming caused by humans.’

Although weather and climate are not synonymous, our weather is dependent on the climate. According to »





## WHITE ROOFS

Geoengineering, the science of using technology to influence climate, is a major talking point in the debate on climate change. White roofs, like those pictured here in the Donnybrook Quarter in East London, reflect sunlight so that buildings absorb less heat, air conditioning systems become redundant, and CO<sub>2</sub> emissions are cut.





## SECURING HARVESTS

Climate change is having a negative impact on agriculture. Yet as here in Mali, harvests can be safeguarded and even improved thanks to optimised farming and irrigation methods. Often the key to success involves a combination of conventional and innovative approaches – as well as intensive training for people locally.



the Potsdam scientists, there has been a dramatic rise in record-breaking meteorological events and extreme weather since 2000. In 2011 alone, authorities recorded heat records in Argentina, the USA, the Caucasus, India, New Zealand and at the South Pole. Highest rainfall measurements were recorded in Australia and Japan, Pakistan and India, southern Africa and large parts of Brazil, Colombia and Venezuela. The Yangtze river basin and East Africa, on the other hand, had far too little rainfall.

### Climate change as a global threat

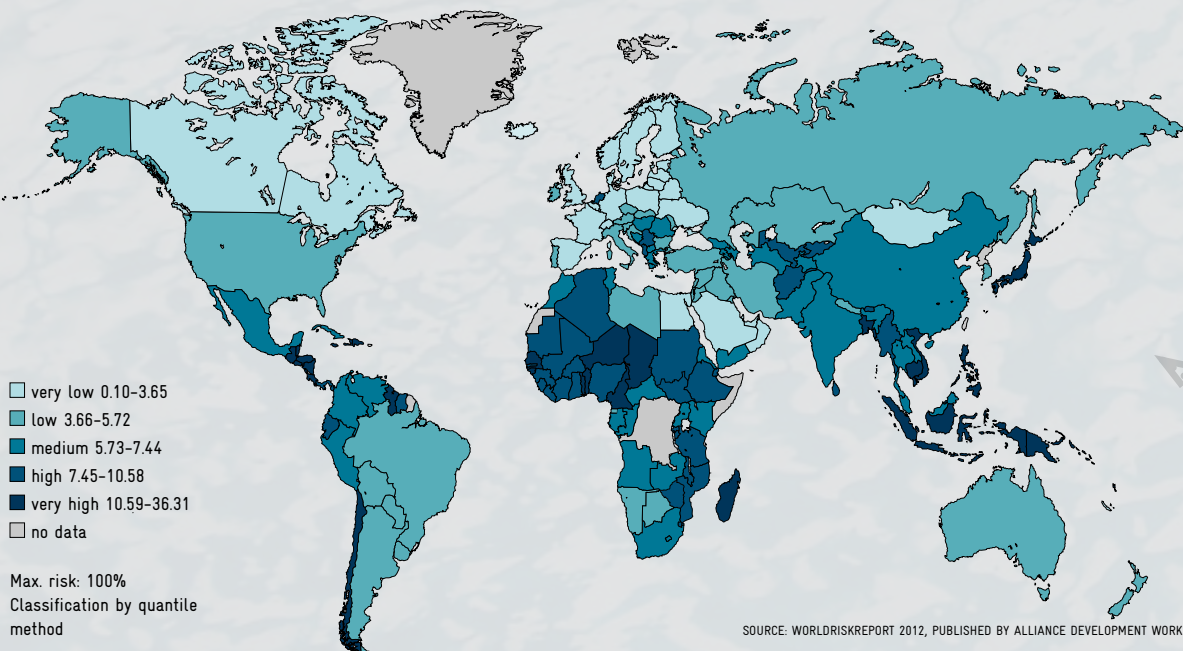
Such extremes bring consequences: according to the WMO, over 700,000 people have died as a result of extreme weather events over the past 20 years. But many more have been affected by changes in weather and climate – and in particular by more insidious processes such as gradual desertification, changes in the animal and plant world, failed harvests, diminishing freshwater reservoirs, rising sea levels. ‘Climate change is not just an environmental issue, as too many people still believe,’ said former UN Secretary-General Kofi Annan,

at the 2006 Climate Change Conference in Nairobi. He described global climate change as an all-encompassing threat – to health and world food, to habitats in many coastal regions, and to peace and security.

This new perspective brought about a paradigm shift at the 2007 UN Climate Change Conference in Bali. Here, discussions on adapting human lifestyles to climate change were for the first time placed on an equal footing with ongoing negotiations on climate protection, in other words the reduction of greenhouse gas emissions. After all, the effects of climate change can no longer be ignored. Particularly as their distribution is anything but just. First and foremost, they affect the world’s poorest countries, even though these have contributed least to global warming. ‘Adaptation to climate change is increasingly important in developing countries,’ says Christoph Feldkötter, director of the Climate Protection Programme for Developing Countries implemented by GIZ on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ). Where problems are obvious, he explains, it is relatively easy to establish what needs to be done: ‘In regions that are now »

### AFRICA AND ISLAND STATES MOST AT RISK

**WORLD RISK INDEX** The World Risk Index measures the likelihood of states being struck by a natural disaster. It correlates the threat of natural disaster with social factors such as poverty, inequality and mechanisms for adapting to changed environmental circumstances or coping with natural events.





already very dry, we obviously have to invest in water management. Islands and low-lying coastal regions need improved coastal defences to protect against rising sea levels. But our most effective levers come from vulnerability analyses, which identify those areas within specific regions that are most at risk from major difficulties or the most serious consequences.’

Vulnerability analyses take into account more than just meteorological factors, as is shown by the WorldRiskReport produced by the Institute for Environment and Human Security at the United Nations University (UNU-EHS) in Bonn. As the report shows, disaster risk is always made up of two components: the threat posed by natural events and climate change on the one hand, and by social structures and processes on the other. Social make-up – the level of education, the extent of poverty, the food situation, the way state institutions function – determines whether an event of nature turns into a natural disaster. It is an interrelationship well illustrated by the earthquakes in Haiti and Japan. Whereas the 2011 earthquake in Japan measured 9.0 on the Richter scale and caused the deaths of 16,000 people, the

much weaker earthquake measuring 7.0 that hit Haiti in 2010 resulted in 320,000 victims. The fact that fewer people lost their lives in Japan was down to better prevention and coping strategies that ranged from building legislation to disaster relief.

### International talks, national action

If we are not only to stop global warming but also provide countries at risk with better means to defend themselves, it makes sense for international climate policy to take a twin-track approach – with UN-led global climate change negotiations on the one hand, and initiatives by individual countries and regions on the other. Both tracks offer many different approaches, particularly as political results lag some way behind the actual need for action. Germany, one of the pioneers and driving forces in the field of climate change mitigation, has already ushered in its ‘Energiewende’ or renewable energy revolution. It has set lofty targets for national emissions reduction, promoted ambitious climate mitigation targets in the EU and at climate change summits has

## EXAMPLES OF GIZ'S WORK > CLIMATE CHANGE

### Preparing for adaptation



**Programme:** Climate Protection Programme for Developing Countries  
**Commissioned by:** German Federal Ministry for Economic Cooperation and Development (BMZ)  
**Overall term:** 2009 to 2010

**VIET NAM** In Viet Nam, GIZ has developed a model for advisory services geared to ensuring that adaptation to climate change among the population is given systematic consideration in municipal and regional development planning. The model looks not only at current and future requirements for such adaptation, but also potential opportunities arising from changes. In view of the expected rise in sea level, the major challenges facing Viet Nam revolve around adaptation of agriculture and infrastructure.

### Reducing greenhouse gases

**Project:** Nationally Appropriate Mitigation Actions  
**Commissioned by:** German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)  
**Overall term:** 2011 to 2015

**MEXICO** Nationally Appropriate Mitigation Actions (NAMAs) are voluntary national climate protection measures by developing and emerging countries which are not subject to any obligations to reduce greenhouse gas emissions under the United Nations Framework Convention on Climate Change. NAMA measures are implemented independently or with support from industrialised countries through funding, technology transfer or capacity building, thereby enabling these countries to meet their own obligations. In Mexico, BMU supports the building and renovation of residential housing with low greenhouse gas emissions, the development of appropriately tailored financial systems and monitoring and reporting procedures to provide evidence and documentation of the results achieved.

championed the advancement of international climate negotiations. Adaptation to climate change has also become a key aspect of GIZ activities since 2007. GIZ's climate expertise is increasingly in demand by German public-sector commissioning parties other than BMZ, including the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) as part of its International Climate Initiative (ICI). Since 2008, the initiative has been financing climate projects in developing and emerging countries, as well as in the transition states of Central and Eastern Europe. Funding for these projects comes from emissions trading revenues. Here, too, the focus is on emissions reduction and adaptation to climate change, as well as the transfer of know-how and policy advice.

But for the German Government, sustainability is not just a guiding principle for its own national and international policy-making. There is also an obligation under the UN Framework Convention on Climate Change to support developing and emerging countries with climate change mitigation and adaptation to climate change. This has an impact on all areas of German development cooperation: agriculture and for-

estry, resource conservation, energy and water supply, transport and urban planning, technology transfer, economic development, disaster prevention. 'It is important to establish a link with climate change across all these areas, in other words, to achieve mainstreaming,' explains Christoph Feldkötter. 'Put simply: the climate issue has to come out of the environmental corner, where for many countries it still resides today.'

What is required, for example, is the know-how of experts capable of developing strategies to combat desertification. According to estimates put forward by researchers at the UN University, around two billion people are potential victims of desertification. At least some of these will lose their livelihood as a result of the progressive destruction of fertile land and be forced to leave their homes. The term 'climate refugee' is still contentious, since it is never possible to establish with absolute certainty whether people migrate solely as a consequence of climate change. The figures therefore fluctuate. But members of the Climate Change, Environment and Migration Alliance (CCEMA) – a non-governmental organisation whose members include the International Organization for Migration (IOM) supported by »

## Raising awareness



**Project:** Internet-based climate information platform  
**Commissioned by:** German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)

**GLOBAL** The English-language internet platform Climate Impacts: Global and Regional Adaptation Support Platform (ci:grasp) provides detailed knowledge and facts on current and projected factors that have a bearing on the climate and on the impact of climate change. GIZ's partner in collecting, processing and publishing data is the Potsdam Institute for Climate Impact Research.

🖱️ [www.ci-grasp.org](http://www.ci-grasp.org)

## Promoting hydropower



**Project:** Dialogue Forums on Green Hydropower  
**Commissioned by:** Bavarian State Ministry of the Environment and Public Health  
**Overall term:** from early 2012

**GERMANY** Bavaria aims to increase the portion of its electricity needs that is generated by hydroelectric power from 15% to 17% by 2021. The purpose of the Dialogue Forums on Green Hydropower is to increase approval among the Bavarian population and stakeholders for hydroelectricity and the renewable energy revolution and to reconcile the various interests. GIZ moderates discussions with citizens and specialised working groups and organises training for planning authority staff.



146 countries worldwide, a number of UN organisations, the Munich Re Foundation and the World Wide Fund for Nature – agree that there will be more environmental refugees in the years ahead, mostly as a result of climate-related changes. No one knows as yet what this ‘climigration’ will mean either for the countries of origin or the destination countries. Germany is one of the biggest donors in the fight against desertification, directly or indirectly funding over 1,000 projects worldwide, for example by supporting the UN Convention to Combat Desertification (UNCCD).

**‘By 2050, nearly 80% of the world’s energy could come from renewable sources. This is not science fiction, but smart energy and climate policy that also creates jobs, exports and economic growth.’**

Jennifer Morgan, Director, Climate and Energy Program, World Resources Institute

Forestry experts are also in demand: intact forests control the hydrologic balance, protect against soil erosion, provide vital resources such as timber, food and medicines and are a vital habitat for countless animal and plant species. But deforestation does not just result in the loss of biodiversity and economic potential for poorer sectors of the population; it is also harmful to the climate. Forests store large volumes of carbon dioxide, which are released into the atmosphere when they are destroyed. Global deforestation therefore makes the forestry sector the second-largest cause of greenhouse gas emissions – ranking just behind the energy sector. The UN REDD+ programme (Reducing Emissions from Deforestation and Forest Degradation) was set up as a result of international climate talks to halt global deforestation and promote sustainable forest management and afforestation. It is one of the tropical forest protection programmes to which the German Government has committed under the International Climate Initiative.

However, international cooperation goes beyond the framework of broad-based international environmental agreements – and not just in relation to deforestation and desertification. These agreements are often reached bilaterally

and increasingly within a new global governance structure in which large emerging economies have a greater say. ‘In the multipolar world, we are seeing new configurations and cooperation opportunities – especially in the global south,’ observes Colin Gleichmann of GIZ’s Business Unit for Global Partnerships, Emerging Economies. Emerging economies are involved in development cooperation as strategic partners and are no longer purely recipients in the classic sense. They are important donors in the own right, says Gleichmann. That’s why stepping up cooperation with these new global development partners is essential. Climate and the environment is one field in which there are many points of entry. ‘In this way, Germany wants to work with strategic partners to set the global agenda.’

The number of climate projects implemented by GIZ on behalf of the German Government has risen proportionally. ‘20% of our project portfolio is now directly related to climate issues,’ says Vera Scholz, director of the GIZ Competence Centre for Climate Change. ‘The 2011 Climate Change Conference in Durban, South Africa, agreed to negotiate a climate change protocol by 2015 in which all member states would commit to carbon reduction targets. But we can and must take an active lead now, if we are to support developing countries and emerging economies in adapting to climate change and reducing greenhouse gas emissions.’

Many developing countries are dependent on industrial sectors that are particularly susceptible to the consequences of climate change, such as agriculture. Often they are at an additional geographical disadvantage, because rainfall is subject to severe fluctuations, and dry periods with drought and water shortages are not uncommon. The shift in climatic zones and rainfall patterns destroys any balance there once was in this barely functioning ecological and economic system. Dry periods, which decimate livestock and cause harvests to fail, endanger not only future development activities, but also threaten successes already achieved in poverty reduction and other areas of development cooperation, such as the Millennium Development Goals. ‘Tools and resources for adaptation to climate change – such as appropriate seed and improved irrigation methods – are needed now, not just after 2015,’ says Scholz. At the same time, there must be economic growth in developing and emerging countries if we are to reduce poverty. For climate change mitigation, however, it is important to sever the link between growth and CO<sub>2</sub> emissions. To this end, the 2007 Climate Change Conference in Bali adopted Nationally Appropriate Mitigation Actions (NAMAs), a climate-policy instrument designed to help developing »



## FLOATING CITIES

Rising sea levels pose a threat to coastal regions and the people that live there. One solution may be to construct floating cities built on pontoon-like structures. Possible approaches currently being developed and tested in the Netherlands, for example, may in future serve as models for other regions throughout the world.

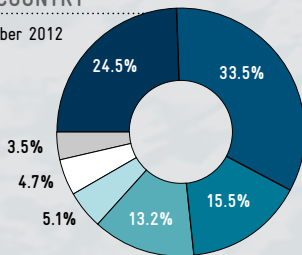
## THE COST OF ADAPTATION

**CLIMATE FUND** The cost of adaptation to climate change in developing countries represents a major challenge for the international community. According to UN estimates, the figure could reach US\$67 billion each year by 2030. Costs are financed by various multilateral funds.

### APPROVED FUNDING BY COUNTRY

Total: US\$2.419 billion as at October 2012

- United Kingdom
- Other
- USA
- Germany
- Canada
- Japan
- Spain

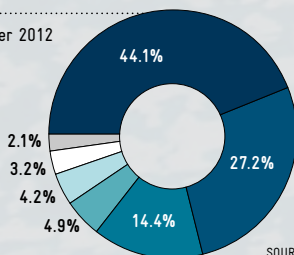


The diagram shows approved funding by donor country and payments by region in respect of the following climate funds: Special Climate Change Fund, Adaptation Fund, Pilot Program for Climate Resilience, Least Developed Countries Fund.

### RECIPIENT BY REGION

Total: US\$1.389 billion as at October 2012

- Sub-Saharan Africa
- Asia and Pacific
- Latin America and the Caribbean
- Europe and Central Asia
- Middle East and North Africa
- Global
- unknown



SOURCE: CLIMATE FUNDS UPDATE

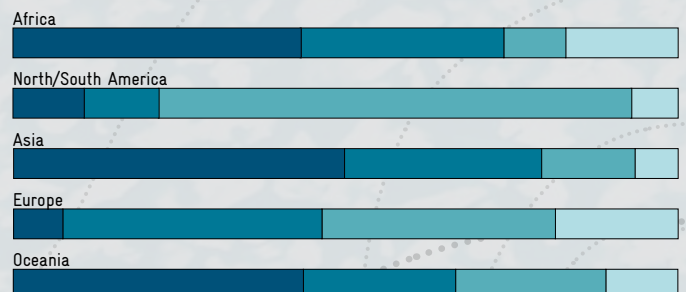
## MAJOR RAIN AND STORM DAMAGE

**CAUSES** EM-DAT, the International Disaster Database of the Centre for Research on the Epidemiology of Disaster, classifies natural disaster by cause: epidemics, for example, are biological; earthquakes or volcanic eruptions are geophysical. Disasters classified as hydrological include flooding or landslides after rain, and meteorological disasters include storms and climate-related extremes of temperature, drought and forest fires.

### DAMAGE AND ITS CAUSES

From 1990 to 2011

- Geophysical causes
- Hydrological causes
- Meteorological causes
- Climatological causes



SOURCE: EM-DAT, NATURAL DISASTER TRENDS, 2011



and emerging countries reduce their emissions, where necessary with financial and technical support from industrialised countries.

Financial support is currently acquiring an international basis. From 2020, in line with a resolution of the 2009 UN Conference on Climate Change, US\$100 billion will be pumped into activities geared to the mitigation of and adaptation to climate change. This new 'Green Climate Fund', which will have its headquarters in South Korea, will then mobilise the majority of these funds from public and private sources.

### Germany as a sustainability market

Another key location for climate issues is Bonn, home to the Secretariat of the Framework Convention on Climate Change of the United Nations and the Secretariat of the UN Convention to Combat Desertification. And in another area, too, Germany is setting new benchmarks in matters of sustainability and climate change: the renewable energy revolution. 'Climate change and its consequences are the most obvious topic for international cooperation, and the energy sector has a major role to play,' says Andrea Joras, the GIZ officer responsible for developing the sustainability market in Germany. 'When a major economy like Germany decides to abandon nuclear energy in favour of energy efficiencies and renewable forms of energy, it is seen by other countries as an exemplary model – and one we are keen to export.' At the same time, GIZ's experience with the renewable energy revolution could prove to be a valuable starting point for national debate in countries with rather different funding systems for renewable energies. Joras cites the lively discussions that triggered certain aspects of the renewable energy revolution in Germany, including the promotion of solar and wind energy, the building of networks and the evolution of electricity prices. 'Projects like the renewable energy revolution can only succeed if all interested and affected parties are given a voice in the discussion.' GIZ has a great deal of experience in moderating such dialogue in addition to shaping and implementing reform, innovation and mediation processes – experience which the company can now invest in projects in Germany and with neighbouring countries.

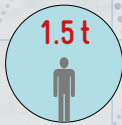
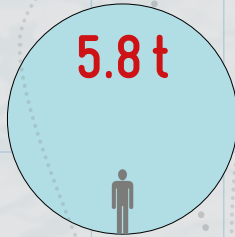
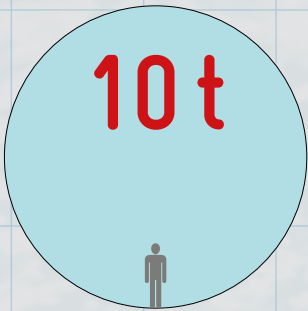
Preliminary examples already exist: GIZ moderates the Dialogue Forums on Green Hydropower on behalf of the Bavarian State Ministry of the Environment and Public Health. The background to this is Bavaria's declared objective of increasing the portion of its electricity needs that are met through hydroelectric power meeting from 15% to 17% by 2021. Achieving this will require broad social consensus.

The Dialogue Forums are designed to help reconcile the disparate interests of municipalities and the Bavarian Gemeindegatag, nature conservation associations and citizens, hydropower companies and Bavarian ministries. Andrea Joras can also imagine other areas in which GIZ will play an active role in sustainable development, both internationally and in Germany itself: business development for companies in the 'green economy', sustainability strategies for companies and institutions, scientific cooperation, and further training.

### Know-how and technology made in Germany

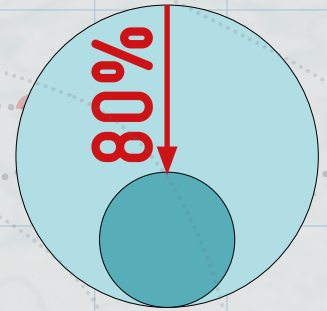
Green economy companies are also being targeted by the German Climate Technology Initiative (DKTI), which as part of international cooperation is focusing on the transfer of innovative technology – 'a new and very exciting development,' explains Brigitte Heuel-Rolf, director of the Berlin-based GIZ office which liaises closely with various German federal ministries. The DKTI resulted from a joint proposal by GIZ and KfW and was commissioned by both the German Federal Ministry for Economic Cooperation and Development (BMZ) and the Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU). 'Partners in the projects funded by the initiative are not just states and their governments, but also include the private sector at both the local level and in Germany,' says Heuel-Rolf. The DKTI helps advance the introduction of state-of-the-art environmental and climate technologies in developing and emerging countries. 'The German private sector offers particularly innovative and climate-friendly technologies and products in this regard and can help partner countries to access advanced solutions,' Heuel-Rolf goes on. 'This ensures they take a more direct route towards development, helps them avoid making the same mistakes as industrialised countries, creates green jobs locally and opens up market opportunities for German companies.' For if projects are found to benefit the local value chains, there is a chance they will succeed in bringing about a sustainable shift towards a low-carbon economy. That is why projects of this kind are ideal measures for combining market opportunities with entrepreneurial responsibility. 'What's more,' Heuel-Rolf explains, 'climate projects promote innovation: we will always be in need of new solutions.' ■

# CLIMATE CHANGE IN FIGURES



In 2010, **10 tonnes** of CO<sub>2</sub> per capita were released in OECD countries compared with **5.8 tonnes** in China and **1.5 tonnes** in India.

SOURCE: INTERNATIONAL ENERGY AGENCY



Germany aims to reduce greenhouse gas emissions by **80%** between 1990 and 2050. It is also seeking to raise the proportion of renewable energies in final energy consumption to 80% by 2050.

SOURCE: GERMAN FEDERAL MINISTRY FOR THE ENVIRONMENT, NATURE CONSERVATION AND NUCLEAR SAFETY

**20,000 kilometres** is the distance travelled by an apple shipped from New Zealand to Germany. And yet its carbon footprint is not significantly worse than that of an apple kept in a German cold storage facility for five months. The additional volume of CO<sub>2</sub> for the apple shipped from overseas is roughly equivalent to a three-kilometre journey by car.



SOURCE: N-TV, MEDIATHEK, WISSEN: 'IST BIO-OBST AUS ÜBERSEE EINE ÖKO-SÜNDE?' ('IS ORGANIC FRUIT FROM OVERSEAS AN ECO SIN?'), STUDY BY MICHAEL BLANKE, UNIVERSITY OF BONN

**1st**

Costa Rica is aiming to become **the world's first carbon-neutral country** by 2021.

SOURCE: GERMAN FEDERAL FOREIGN OFFICE

**15,000 litres of water** are required to produce one kilogram of beef. Over 283 tonnes of meat are consumed globally each year. Consumption has risen by a factor of four over the last 50 years. Meat production releases more CO<sub>2</sub> than the entire global transport sector.

SOURCES: VEGETARIERBUND DEUTSCHLAND; BUNDESVERBAND DER DEUTSCHEN FLEISCHWAREN-INDUSTRIE E.V.

**24%**

**24%** of all greenhouse gases emitted globally are caused by electricity generation, 18% by land use such as logging.

SOURCE: WWW.WELT.DE, REPORT FROM 12.2.2012, REF: MAX PLANCK INSTITUTE FOR DEMOGRAPHIC RESEARCH







# » Outside view

## HOPE FOR MEGACITIES

Mobility in megacities is a problem – both from the logistical and environmental perspective. The automotive industry is working on solutions.

**F**or me there is no doubt that cities hold the key to the future of humanity. Today over 280 million people worldwide live in what we now call megacities. If we study these metropolises more closely, we see that they have specific problems in terms of mobility and environmental pollution. Shanghai, for example, with a population of 19 million inhabitants and exhaust emissions from 2.5 million cars, buses and motorcycles, is already cultivating a microclimate that presents a health risk to its citizens. It is estimated that the proportion of people living in cities will rise to over two thirds of the global population by the middle of the century. That is why we on the BMW Group Board of Management have for some years been discussing the question of how mobility will work in these rapidly expanding metropolitan areas and how it can be achieved in line with sustainable criteria. Put simply: what contribution can our company make?

This was also why in 2007 we set ourselves the ambitious goal of gearing our entire value

chain to sustainability as part of our Number ONE strategy – from advance development to vehicle recycling, and not forgetting our suppliers.

And we have set our sights extremely high. For some years now, the BMW Group has been subject to sustainability evaluation by external ratings. Findings have repeatedly shown us to be the most sustainable company in the global automotive industry.

As part of 'project i', our pioneering project geared to sustainable mobility, our engineers, strategists, designers and coachbuilders all work together on new concepts of sustainable mobility. The fruits of this collaboration, dubbed the megacity vehicle, will be launched in 2013: the BMW Group's first electric car in serial production, the BMW i3. This vehicle's major contribution to emission-free mobility lies in the fact that it started out as a new project developed from scratch.

With a range of 150 kilometres, the electric car is CO<sub>2</sub>-free – assuming it is recharged using electricity generated from renewable

### > PROFILE

Dr Herbert Diess has been responsible for Development on the Board of Management of BMW AG since April 2012. He was previously in charge of Purchasing and the Supplier Network.



sources – and brings the BMW Group a major step closer to its goal of entirely emission-free mobility. This is partly because we no longer view the environmental impact of a car quite as narrowly and consider issues other than pure road use. For years, the company has been integrating key sustainability aspects from across the entire product life cycle.

Production is another area in which we must look for opportunities to innovate. In the past year we realised one such opportunity, when SGL Automotive Carbon Fibers – a joint venture between the SGL Group and BMW Group – started up production at Mo-

ses Lake (USA). Since then it has been manufacturing carbon fibres, the key component in the ultra-light carbon-fibre reinforced plastic (CFRP) used in the passenger cell of the BMW i3. CFRP is flexible and easily moulded – and has a strength-to-weight ratio more than twice that of steel. The BMW i3 has shed up to 350 kilograms compared with conventional electric cars – since the lower the weight, the greater the range.

## CFRP is less than half the weight of steel. The lighter you can build an electric car, the greater its range.

ses Lake (USA). Since then it has been manufacturing carbon fibres, the key component in the ultra-light carbon-fibre reinforced plastic (CFRP) used in the passenger cell of the BMW i3. CFRP is flexible and easily moulded – and has a strength-to-weight ratio more than twice that of steel. The BMW i3 has shed up to 350 kilograms compared with conventional electric cars – since the lower the weight, the greater the range.

CFRP is therefore a key innovation in the automotive industry's initial exploration of the field of electric mobility: measured over the entire lifecycle, emissions from the BMW i3 are at least one third less than those of a conventional vehicle with a petrol engine. And

they can be cut by as much as 50%, if renewable energies are used to generate the electricity for charging. The key to this significant reduction is not only the car's emission-free electric drive system, but also the complete sustainability of the value chain – from development and production through to sales and service.

We are also working on new, integrated mobility services for metropolitan areas. In addition to supplying our own range of in-house services, we are also setting up joint ventures with partner companies and investing in strategic acquisitions. We founded BMW i Ventures, for example, an investment company with venture capital of up to US\$100 million, which has already signed a strategic partnership with MyCityWay. This mobile app provides traffic users with information about public transport, parking availability and entertainment in major cities – and is just one of many promising routes towards sustainable mobility for the future. We are also the only manufacturer to integrate 'vehicle-independent suppliers' such as the iPhone app MyCityWay into our range of services.

Our goal is to continue setting new standards in the worldwide automotive industry, and in the field of production in particular. Our new joint venture plant at Tiexi, a district in the Chinese city of Shenyang, demonstrates

just what can be achieved in terms of resource-efficient vehicle production.

The Tiexi plant is now one of the three most sustainable plants in the global production network. Built in collaboration with our Chinese joint venture partner Brilliance at a total investment of €560 million, the plant covers an area of around two million square metres and draws on a wealth of experience and innovations from other plants in the global BMW Group production network. At the same time, it employs and further explores a series of groundbreaking technologies in both its production lines and building architecture, which in turn will benefit other locations in the plant network.

Energy consumption at the Tiexi plant, where temperatures vary from –35 °C in winter to +40 °C in summer, is set to reach record low levels. Naturally ventilated cooling towers and a groundwater cooling plant offset any extreme heat during the summer months. Thermal wheels, a district heating system and waste heat from welding tongs – otherwise disposed of via the cooling towers – supply energy-efficient heat in winter.

I am convinced that the revolutionary new standards set by the BMW i3 and its production in Tiexi will give rise to many new ideas. Our objective is to inspire and develop as many best practice models for sustainable mobility as possible – both for highly industrialised countries and for other regions of the world. ■







# WATER IN THE DESERT

IN THE DESERT OF RUB AL-KHALI in Saudi Arabia, exploratory boreholes are being drilled to investigate groundwater conditions. At 900 metres below the surface, the heavily mineralised groundwater is under such pressure that the well must be sealed once testing is complete to avoid any uncontrolled escape of water. Reliable data on groundwater reserves provide an indispensable basis for future policy-making decisions. GIZ advises governments worldwide on the exploration and sustainable use of groundwater in arid environments.

**Photographer:** Michael Martin



Carlos Rainaga Vargas pulls aside a thick wooden plank. The water bubbles out along the narrow channel to irrigate his field. The 64-year-old surveys his land. 'I grow all my own lettuce, carrots, potatoes and onions from seed,' the farmer explains, a dark hat shielding him from the midday sun. 'I use garlic or chilli juice to protect my crops from pests. And it works, my yields are just as good as those of my neighbours.'

For eight years, Rainaga Vargas has been a pioneer of organic farming in the administrative district of Sipe Sipe. Situated about 25 kilometres from Bolivia's fourth-largest city, Cochabamba, this is a region inhabited predominantly by small farmers. Carlos grows his organic vegetables on just 1.5 hectares and sells them at the village market in Itapaya or in Sipe Sipe, the

## ORGANICS ON THE RISE

Organic farming is currently a niche market in Bolivia. But the introduction of a national eco label and expected rise in demand is about to change all that.

Text Knut Henkel

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nearest sizeable town. 'Although demand is rising, we currently get only the same price for our produce as for conventional products,' he explains.

Conditions for selling organic products in Bolivia remain difficult at present, even though the government is introducing specific measures to promote sustainable agriculture. These measures are a direct response to climate change, as water resources in the country's dry rural areas are steadily diminishing. The situation is now being addressed by a programme geared to sustainable agricultural development in Bolivia, jointly financed by the governments of Sweden and Germany, and implemented in Bolivia with the assistance of GIZ, on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ). The programme's objective is to improve the management of water catchment areas, make water available for agricul-

ture and increase agricultural production and the sale of produce. Advisory services are provided not only to national ministries and associations, but also to public and private institutions across the country's nine departamentos, as well as to local administrations and non-governmental organisations at the municipal level. Where possible, activities are coordinated with those of other national and international organisations working on related topics, and the programme also seeks opportunities for direct cooperation.

For example, it supports the Bolivian Government's Consejo Nacional de Producción Ecológica (CNAPE), the National Council for Ecological Production, which enables indigenous agricultural producers in the country's Andean regions to exploit national and international value chains. In particular, CNAPE promotes the farming, processing and sale of

ecological agricultural produce, as well as the establishment of producer committees and needs-oriented financial products for small farmers.

### Many farmers are cautious about switching over

By way of support, GIZ has seconded the German development advisor and agricultural expert Helmut Jacob to advise CNAPE. Today, Helmut Jacob and his colleague Ricardo Torres have arrived in Sipe Sipe. The two are keen to learn from Carlos Rainaga Vargas how organic farming is progressing in the region. 'All my neighbours farm conventionally. They don't want to take the



#### GIZ DEVELOPMENT SERVICE

Helmut Jacob and Verena Batlogg are GIZ development advisors. These are experienced and highly committed experts who spend between two and five years supporting projects in developing countries and emerging economies. They are drawn from a variety of sectors and provide advisory services to state and civil society organisations. Areas of intervention may include economic and rural development, the promotion of employment and democracy, and support for efficient health systems and conflict resolution.

[www.giz.de/entwicklungsdienst](http://www.giz.de/entwicklungsdienst)



risk of converting to organic farming,' explains Rainaga Vargas, a note of disappointment clearly audible in his voice. A few years ago he passed his knowledge on to a group of young farmers, but one by one they all gave up the organic approach, for a variety of reasons. 'There was a lack of know-how, seed and mar-

ket access,' explains Ricardo Torres. Rosmeri Albali Holguín, who also owns plots of land in Sipe Sipe district, was more successful in winning over enthusiasts to the cause. A sturdy figure in her early 50s, Albali Holguín lives in the small village of Itapaya and works with ten other women, organically farming

vegetables and corn and rearing a few cattle. She farms 4.5 hectares with her family and would love to be able to increase her yields and sell produce directly and under more acceptable conditions. 'I often sell to middlemen, who don't pay any supplement for organic products,' she complains.

Torres gives the farmer tips on how to increase soil fertility, diversify production, improve crop protection and use fertilisers. 'A classic problem is that soils don't get sufficient nutrients and organic materials to replace what is used in the growing process or to improve yields,' explains Jacob, who has had success in converting farmers to the organic approach in other parts of Bolivia, particularly in the coffee sector. Now his task is to translate these successes to the small farm holdings that predominate in the Bolivian uplands.

The government in La Paz took a first step towards this objective in November 2006 with the adoption of a law to promote organic farming, which simultaneously resulted in the establishment of CNAPE, the body which Jacob is advising. CNAPE brings together public and private organisations and institutions with the aim of developing strategies and new standards to promote organic farming. 'These range from the marketing of organic produce for school meals to the introduction of a national standard for certification systems as both a complement and alternative to the international eco standards applied to the export of goods such as coffee, cocoa, quinoa and Brazil nuts,' explains Ricardo Torres. It is hoped this national eco label will boost acceptance among domestic consumers for organically produced goods and at the same time remove a key obstacle to conversion to organic farming – the cost of certification in line with international criteria. 'For many farmers, these costs are simply unaffordable,' says Rosmeri Albali Holguín. 'I would have to pay over 3,000 bolivianos for my 4.5 hectares.' That is equivalent to around €340, or three minimum wages in Bolivia. Too much for the country's small farmers, most of whom have only little land for crops and produce food under difficult circumstances. The national certification

> BOLIVIA



> VITAL STATISTICS

- Capital:** Sucre
- Population:** 10.3 million
- GDP per capita 2011:** US\$4,800
- Percentage of population living below national poverty line:** 64%
- Jobs in agriculture/percentage of GDP:** 32%/10%
- Human Development Index ranking:** 108 (out of 187)

Sources: Human Development Index, CIA – The World Factbook

## Sustainable support for organic farming

**Programme:** Agricultural development programme

**Commissioned by:** German Federal Ministry for Economic Cooperation and Development (BMZ); Swedish International Development Cooperation Agency (SIDA)

**Lead executing agency:** Ministerio de Planificación del Desarrollo, Viceministerio de Inversión Pública y Financiamiento Externo

**Overall term:** 2005 to 2017

Promoting the farming and sale of organically produced food is just one of many objectives of the programme to promote sustainable agricultural development, financed jointly by the Governments of Germany and Sweden. Work in the three priority areas – watershed management, availability of water for use in agriculture and the production and sale of agricultural produce – ranges from providing the national government with advisory services on policy-making and the legal framework to advising small farmers in the villages.

The objectives are to boost the resilience of small-scale farming production to threats posed by climate change, to increase the degree to which watershed management focuses on securing the availability and more equitable distribution of water resources, and to increase the yields of agricultural production in the long term.

👉 [www.proagro-bolivia.org](http://www.proagro-bolivia.org)



1



2

1 Cereal crops such as corn (photo), tea and chocolate are farmed organically. 2 Organically farmed fruit and vegetables can be bought at local markets and a limited number of supermarkets.

system is based in part on the concept of reciprocal checks and balances carried out by farmers instead of on expensive laboratory testing and inspections by international experts.

### First wave of organic supermarkets

Helmut Jacob and Ricardo Torres have also come to Sipe Sipe to run a workshop for over 70 organic farmers, farm technicians and local leaders from the region. The purpose of the workshop is to explain the opportunities offered by the new eco label and the standards that need to be met. But it also addresses a second key topic: improved marketing of produce. 'Selling directly to an organic supermarket is the ideal scenario,' says Vicente Velasco, who grows peaches and vegetables and would prefer to be able to sell his produce directly in Cochabamba. This is already possible in La Paz, where several small supermarkets are run by the Asociación de Organizaciones de Productores Ecológicos de Bolivia, the umbrella organisation for organic producers. Verena

Batlogg is a GIZ development advisor who works closely with the organisation. 'Organically produced fruit and vegetables, chocolate, tea and coffee are proving very successful in the markets,' she says. Carmen Sotomayor, the association's managing director, has been a long-time campaigner for a national eco label and for the purchase of organic produce for school meals. She is also campaigning for a change in consumer habits in Bolivia. The market for the many traditional food products derived from tuber crops and Andean cereals such as quinoa and amaranth is diminishing, notably as a result of the growth in consumption of chicken, rice and noodles in urban areas.

Experts warn that this trend is set to have a negative impact on farming practices and biodiversity. They advocate more effective marketing of traditional products instead, as well as a public awareness campaign to help bring about a change in consumer habits. They also see partnerships with restaurants in La Paz as a means of reintroducing traditional foods

into upmarket hotels and restaurants. It is a recipe that might also work in Cochabamba. Farmers like Carlos Rainaga Vargas would be delighted to supply restaurants directly and even grow produce to meet their specific requirements.

The idea may well bear fruit in the years ahead. But for GIZ development advisor Verena Batlogg, it is one of the longer-term goals. 'We first have to bring farmers up to speed with the exact requirements of the eco label. That is our current priority.' ■

### CONTACT

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Water scarcity in Saudi Arabia and other arid and semi-arid regions means that sound management of this precious resource is essential.



# A BOOST FOR SCIENCE

In the Earth's drylands, a growing population and rising living standards are driving up water consumption. Drawing on the wealth of experience gained through its advisory work, GIZ is cooperating with the research community and contributing to the international scientific debate.

**Text** Norbert Glaser

Whether it's strawberries, peppers or tomatoes – we are accustomed to most types of fruit and vegetable being available all year round, even in winter. These crops come from countries warm enough to grow them when temperatures plummet in Europe. But many of the growing areas suffer from chronic water shortages. Fields are irrigated with groundwater – in many drylands, the only source of drinking water for local communities. But unless the abstraction and use of water resources are properly managed and regulated, groundwater reserves can become depleted with alarming speed.

With water demand in an increasingly thirsty global farm sector expected to rise by a further 20% by 2050, a 'business as usual' approach means that four billion people out of a projected world population of nine billion will face extreme water scarcity. To avert this scenario, science and research must develop new and sustainable models for the management of groundwater resources.

The interdisciplinary conference on 'Hydrogeology of Arid Environments' in Hanover in early 2012 brought together some 200 scientists and experts from more than 30 countries to discuss groundwater management issues in the world's drylands, with a particular focus on the Middle East and North Africa but also Chile, Namibia and India. The conference was convened by the Hydrogeology Working Group of the German Society for Geosciences (DGG), the Federal Institute for Geosciences and Natural Resources (BGR) and Technische Universität Darmstadt. Urgent action is needed, as the example of Mo-

rocco shows: 'Twenty years ago, enough water could still be found at a depth of 30 to 40 metres in the Plain of Souss-Chtouka,' Younes Fakir from the Cadi Ayyad University of Marrakech (UCAM) told the conference. Extensive vegetable fields and fruit plantations cover much of the plain. However, the situation is becoming increasingly critical. 'The surface waters are being exploited to their limits, and groundwater resources are almost exhausted. The water table has now sunk to a depth of 270 metres.'

## Better technology protects reserves

Better technology and more stringent regulations are intended to alleviate the situation. On behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) and in cooperation with the German Federal Institute for Geosciences and Natural Resources, GIZ is advising public authorities and local water agencies on ways of establishing integrated water resources management (IWRM) regimes. Besides mathematical modelling programmes to monitor groundwater resources and predict future trends, GIZ is assisting local water agencies to conclude groundwater contracts with users, especially farmers, in order to regulate water extraction on a long-term basis. These are key building blocks which will determine the success of Morocco's national water sector development strategy. Morocco is one of the countries which will be particularly impacted by climate change, so here and elsewhere, GIZ is working with academic

and private-sector partners to produce detailed studies of water resources, the aim being to make good the widespread lack of accurate and reliable data which form the essential basis for policy-making and the development of water management strategies. In Saudi Arabia, »

## RESEARCH AND ADVICE

Since 2003, GIZ International Services and Dornier Consulting have been conducting detailed studies of water resources on behalf of the Ministry of Water and Electricity and the Ministry of Economy and Planning of the Kingdom of Saudi Arabia. The purpose of the studies is to assess the water budget and determine the extent and availability of groundwater reserves. The findings of the studies form the basis for the development of Saudi Arabia's national water strategy. Scientific support is provided by the Helmholtz Centre for Environmental Research and Technische Universität Darmstadt. The cooperation between the consulting industry and the research community makes it possible to deploy state-of-the-art methodologies and harness the know-how that is vital for 'smart' water resources management nowadays. The expertise acquired by GIZ and Dornier Consulting in Saudi Arabia can also be used to develop best practice in other dryland regions of the world.



» INTERVIEW

## Working together for progress



Professor Stephen Foster spoke in Hanover about the complex relationship between irrigated agriculture and groundwater resources in arid regions. Foster is a Senior Adviser at the Global Water Partnership\* and Past President of the International Association of Hydrogeologists. akzente took the opportunity to speak to him about collaboration between scientists and development practitioners.

### How can international cooperation programmes contribute to the scientific debate?

The international debate about groundwater issues greatly benefits from the knowledge gained in development programmes. It would be impossible for us, otherwise, to obtain sound scientific data from certain regions of the world.

### Are there any other synergies?

Water researchers and development practitioners can have somewhat divergent concerns and their day-to-day work can lead in different directions – for example the former often put greater emphasis on long-term resource sustainability and the latter on immediate development goals. Interdisciplinary dialogue provides important impetus for developing the ‘state of the art’ in both fields. So there are good reasons why Germany supports scientific analysis as well as practical advisory programmes.

### How important is the exchange between scientists and practitioners?

In my work in Botswana back in the 1970s, I saw an especially clear example of how important it is to achieve an integrated vision. At that time, various development agencies were taking diverse approaches to improving the health and welfare of a town of around 40,000 people. Some were digging shallow wells to improve water-supply access, and others were providing in-situ sanitation, while a third group had provided doctors to improve health care. After a few years the doctors started to wonder why there was such a high level of antibiotic resistance exhibited by fecal pathogens in the community, and it was only when an integrated scientific study was undertaken that the interlinkages were revealed, and the need for an adequately protected groundwater supply was identified.

### Interview: Norbert Glaser

\* The GWP is a network of developed and developing country government institutions, United Nations agencies, development banks, research institutions, professional associations and the private sector. Germany provides financial support to the GWP, and GIZ is represented on their Board.

GIZ International Services works with partners Dornier Consulting, Technische Universität Darmstadt and the Helmholtz Centre for Environmental Research.

The Kingdom of Saudi Arabia is one of the water-poorest countries in the world, so water supply is a highly significant issue here. ‘The

key prerequisite for optimised management is to survey and assess the existing resources,’ GIZ expert Randolph Rausch told the conference. ‘The groundwater resources have been well-developed since the 1970s, with an extensive network of wells. But we want to know exactly what inflows and outflows exist in the ground-

water system and how much water is still available underground.’

The results of GIZ’s work in Saudi Arabia flowed into the debate at the Hanover conference in a variety of ways. A wide range of results were presented, including mathematical models simulating groundwater flows and studies on groundwater quality.

The conference also aimed to identify research gaps and areas where there is an acute need for action – for whereas the world’s population has quadrupled in size over the last 100 years, its water requirements have increased tenfold. Climate change is exacerbating the situation in arid and semi-arid regions. Now more than ever, these regions need viable and sustainable strategies for the future development and management of their groundwater resources.

## Accepting natural limits

The first step is to recognise the value of water. As Saudi Arabia’s Deputy Minister of Water and Electricity, Mohammed Al-Saud, emphasised: ‘We must look at our water resources in the same way as our oil. Most of our water resources are finite and non-renewable. So it’s completely uneconomical to waste them on agricultural mass production.’ In this Arab country, this insight has already had far-reaching consequences: the King issued a decrease prohibiting the cultivation of water-intensive crops, resulting in a strong decrease in areas under irrigation, and wheat-growing is to be phased out by 2016. Only a few years ago, Saudi Arabia was still exporting its surplus wheat.

‘Today, we’re importing foods instead of producing them ourselves and consuming our limited water resources,’ says Al-Saud. ‘As a wealthy country, we have had to accept that we have natural limits.’ Admittedly, Saudi Arabia has it easy in some ways: in many cases, the state provides the necessary investment and the change of course is relatively straightforward. In many other dryland regions, the transition is likely to present more of a challenge. ■

### » CONTACT

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Police chief Mohammed (left) regularly talks with townspeople to find ways to improve police work locally.



## NOT AFRAID OF THE POLICE

Speeding police cars, officious law enforcement and 'transportation charges': all such grievances in the small Afghan town of Baharak are dealt with by a citizens' committee.

Text Agnes Tandler

No, there's no serious crime here,' Mohammed says with an almost dismissive gesture. With over 20 years of service in the force, the bearded 43-year-old police chief from Baharak, a remote outpost in north-eastern Afghanistan, has had no stabbings or murders to deal with on his watch. In any case, he adds, the district prison only has beds for five prisoners. Baharak is clearly no crime hotspot. The district, which shares its

name with the town, has around 30,000 inhabitants. It is a poor region, mountainous, sparsely populated and strictly conservative. Generally the police are called out only to deal with disputes between family members or neighbours.

The trust enjoyed by Baharak's law enforcement officers is not what one has come to expect in other parts of Afghanistan. Security forces here are generally seen as poorly trained,

corrupt and incapable of maintaining law and order. For many years Baharak also faced similar problems: 'At one time people were afraid of the police,' admits Mohammed. 'But it's a different story today.' Relations improved when a committee of townspeople began meeting regularly with the police. The support for developing such community policing has been provided by GIZ: as part of the Community Policing project, neighbourhood »





At one time, traders at Baharak's bazaar faced arbitrary harassment from the police. Today they feel safe.

groups have been set up in over 20 districts of northern Afghanistan, enabling local people to work hand-in-hand with the police. This involvement is part of a programme to promote the rule of law, assisted by GIZ on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ). 'We're helping the Afghan Government to develop a judicial system based on the rule of law,' says Malte Kirchner, responsible for the project at the local level. 'It will oblige the police and judiciary to apply constitutional legislation and guarantee legal security to all citizens of Afghanistan.' As part of the programme, GIZ is providing advisory services on reform of the justice sector to state agencies in Kabul and the six north-eastern provinces of Badakhshan, Baghlan, Balkh, Kunduz, Samangan and Takhar.

Back in Baharak, the next meeting of the citizens' committee is about to take place. Police chief Mohammed is the liaison officer and forwards any points raised at the meeting to his superiors. Today the meeting is to be held

at the home of the Islamic cleric, Sayed Mohammed Wali. Eighteen men and women are seated on a circle of cushions at the spiritual leader's home.

### The police listen and act

'Two years ago we had many problems,' says Roshana. Now aged 21, her ambition is to become a teacher. Everyone was afraid of the police; people did not know their rights or obligations. If the forces of law and order arrested someone – usually for a trivial offence – and brought them in for questioning, the officials demanded a 'transportation charge'. Those who refused to pay or didn't have the money were given a hard time. Suspects were often kicked or beaten with the barrel of a Kalashnikov. 'Yes, the transportation charge was a real cause of annoyance,' agrees Haji Fahradin, who runs a clothing stall in the bazaar. But now there is a forum to follow matters up and investigate complaints. 'We no longer tolerate police abuse of authority.'

The committee has also taken up other residents' complaints besides the transportation charge. Now, for example, police cars are no longer allowed to race recklessly through the streets like extras in a gangster movie. And the women of Baharak have also benefited from the committee. Roshana explains how when they were out in town they would often attract derogatory or harassing remarks from policemen – and had no choice but to tolerate them. 'We simply kept quiet and walked on,' says Roshana. But then members of the committee raised the problem, which helped change people's mindset.

Harassment is also a problem for the girls who attend school in Baharak. The school's headmistress, Fariba Hilali, also sits on the committee and knows all about that. At the end of class, boys and young men would gather at the entrance to the school to harass the 750 schoolgirls. Since the police used to take no action, many parents chose to keep their daughters at home. Now, though, Fariba can ring the police and get immediate support.



> AFGHANISTAN



> VITAL STATISTICS

**Capital:** Kabul  
**Population:** 30.4 million  
**Economic growth 2011:** 8.2%  
**GDP per capita 2011:** US\$900  
**Unemployment rate:** 35%  
**Human Development Index ranking:** 172 (out of 187)

Source: Human Development Index 2012

All in all, much has changed in Baharak – and these are not just isolated cases. Indeed, the town has experienced a paradigm shift: the authorities now face up to public criticism and are accountable. ‘The police has a keen interest in maintaining good relations with the population. In building a community-oriented police force, the authorities responsible for law and order now work with the townspeople for peace and justice,’ says Malte Kirchner. The image of the police is changing, a fact illustrated by surveys carried out in August 2010 and May 2011 in the provinces of Balkh and Samangan. In these districts, public satisfaction with the police rose from 59% to 73%. ■

## Making the law effective

**Project:** Promotion of the rule of law

**Commissioned by:** German Federal Ministry for Economic Cooperation and Development (BMZ)

**Partner:** Ministry of Justice of the Islamic Republic of Afghanistan

**Overall term:** 2002 to 2014

GIZ is supporting the Afghan Government in its objective to build a justice system based on the rule of law. The police and judiciary apply the laws in accordance with the constitution and provide all citizens with legal security. The judiciary is being provided with handbooks, training materials and specialist training. Since 2009, a network of state-run legal advice centres has been established in northern Afghanistan in order to safeguard guaranteed legal aid for the poor. Training measures are available to members of the bar association, and an office infrastructure is being developed. A team of mentors will familiarise public prosecutors and the criminal police with the Code of Criminal Procedure with a view to ensuring that criminal trials are fair. In addition, the judicial system is always in need of qualified lawyers. For the first time, an equal number of men and women will commence studies at the faculty in Balkh in 2012.

GIZ works closely with civil society actors to support the development of community policing in northern Afghanistan: neighbourhood groups, committees, citizens’ representatives and police are learning how to work together in the name of peace and justice.

> CONTACT

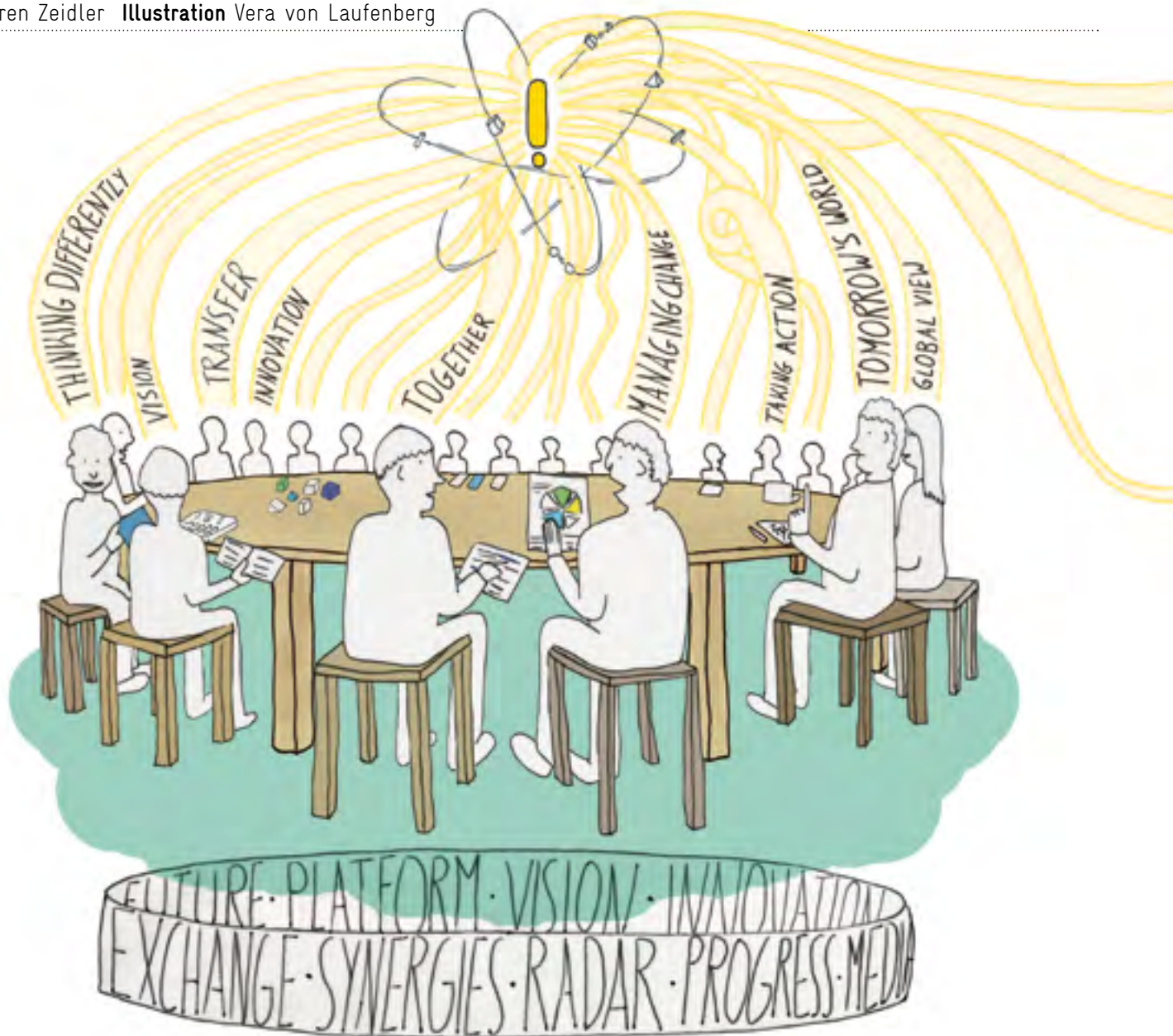
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# THE FUTURE-THINKERS

Which issues will development policy need to address in years to come? GIZ's Development Policy Forum is tasked with providing answers to this question. For the past 30 years and more, its dialogue events have sharpened the focus on tomorrow's topics.

**Text** Maren Zeidler **Illustration** Vera von Laufenberg



Far-sighted thinkers, unconventional decision-makers, development practitioners, policy experts, figures from the world of business, civil society and academia – GIZ's Development Policy Forum brings all of them together. The German Federal Ministry for Economic Cooperation and Development (BMZ), on whose behalf GIZ organises national and international dialogue events, is convinced that a dynamic international discourse on global challenges such as poverty, financial crises and climate change is the only way to shape new development policy strategies. BMZ therefore draws on the findings of these forums when setting its thematic priorities.

But there are no 'off the peg' events here. Some 20 staff, gifted with a keen awareness of politics and great skill and sensitivity, develop a range of conference formats that are tailor-made for the personalities involved. The events are often held in unconventional settings, such as the Bahn Tower or Café Moskau in Berlin, and in many cases the chairpersons and workshop leaders are themselves experts in specific

**'When the Germans invite you to a conference and tell that you don't need to prepare anything, you simply need to give your thoughts free rein, you know the world really is changing!'**

Yael Ronen, director, Habimah National Theatre of Israel, at the Future Forum in November 2011

areas of development policy. A systematic approach to media relations ensures that the results of the discussions are then shared with the general public. The Future Forum 'Minds for Change – Future of Global Development', which marked BMZ's 50th anniversary in late 2011, is a good example of how the Development Policy Forum can promote professional and personal dialogue between international actors. Some 70 high-level future-thinkers, key figures and innovators from all over the world were invited to attend the Forum. For two days, they debated, challenged, reflected and worked in teams to develop perspectives for sustainable global development. The second 'Future Forum' is already in preparation. This time, acting on the recommendations made by the first Forum, BMZ has decided that the focus will shift to Africa and youth.

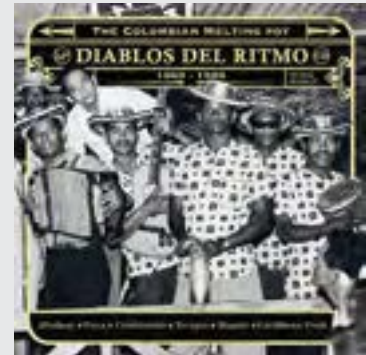
A key priority for the Development Policy Forum is to ensure that the ideas generated at the events are developed further, so stakeholders are invited to continue the dialogue, for example via the internet platform [www.digital-development-debates.org](http://www.digital-development-debates.org). 'If our events have created space for open, constructive and results-driven dialogue, all the effort has been worthwhile,' says Henriette Strothmann, Head of the Development Policy Forum. ■

.....  
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## THE DEVELOPMENT POLICY FORUM

The Development Policy Forum provides advice and delivers services on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), and is responsible for shaping dialogue processes on key development policy issues. It is structured as a GIZ work unit and is based at GIZ's offices in Berlin and Bonn. It stages events all over the world. In the political arena, its partners for multi-stakeholder dialogue include the World Bank, the OECD and the German Development Institute.





> EXHIBITION

## Art from Latin America

Each year at its Eschborn office, GIZ puts on an exhibition of works by contemporary artists from various regions around the world. These exhibitions turn countries and regions into a tangible experience and give insights into foreign cultures. They ignite discussions and facilitate dialogue with the artists. They also provide artists with a platform – often for the first time – to present their works to an audience outside their native country.

This year the focus is on Latin America. Twelve artists will be showing around 90 works of art, including paintings, drawings, graphic art and sculptures. The selection of artists and their work gives an insight into the diversity and complexity of contemporary Latin American art. The works showcase various artistic traditions and an enormous diversity of colours and shapes: still life, surreal images, abstract compo-

sitions, lyrical graphics, works that reference indigenous traditions, graffiti-like drawings, social critiques, embroidery, stylised compositions and works that carry on the tradition of Caribbean folk art. A representative of this last genre is Luis Muñoz from the Dominican Republic. The photograph above shows his painting *Toy of my memory*.

.....  
**Exhibition runs from:** 20 November 2012 to 22 February 2013

**Venue:** GIZ in Eschborn, Dag-Hammarskjöld-Weg 1-5, Building 1, foyer and 1<sup>st</sup> floor

**Opening times:** Monday to Friday, 9.00 a.m. to 7.00 p.m.

> RECOMMENDED LISTENING

## Diablos del Ritmo

The Colombian port of Barranquilla is considered the mecca of Afro-Caribbean music. It was here that a particular style was developed in the 1970s, fusing the tropical rhythms of Afrobeat, Afrofunk and Psychedelia to create danceable music. Now the Analog Africa label has issued the best from this Colombian ‘melting pot’ on CD and vinyl: *The Colombian Melting Pot – Diablos del Ritmo* is an anthology that has been lovingly and knowledgeably put together to showcase a cross-section of the Colombian music scene from 1960 to 1985. Rediscover your favourites, unearth some new gems.

.....  
**Listen to a sample at:**

👉 <http://soundcloud.com/analog-africa>

## GIZ PUBLICATIONS

These publications can be downloaded or ordered free of charge from [www.giz.de/publications](http://www.giz.de/publications)



**Green Economy – The Economy of the Future**  
 English. Corinna Küsel, Detlef Schreiber

Economic development is key to reducing poverty and generally improving living conditions for people worldwide. But economic growth and industrialisation also lead to increased consumption of natural resources, which has a negative impact on both climate and the envi-

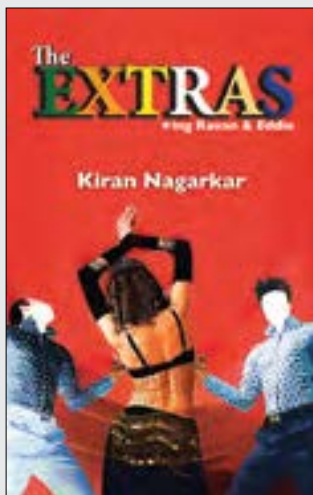
ronment. What kind of business model could people use that will not have an adverse impact on their own livelihood?



**A Decade of German Support for Workplace Health**  
 English. Ute Papkalla, Angelika Pochanke-Alff

Since the late 1990s, German development cooperation has initiated many projects and programmes on a wide range of workplace health and safety issues, with funding from the German Federal Ministry for Economic Cooperation and Development (BMZ). It has supported

their implementation with partners in many countries. This publication highlights various measures and their outcomes.



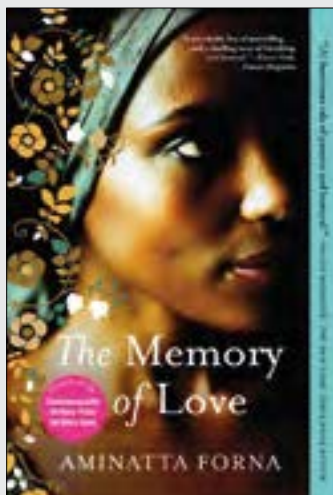
> RECOMMENDED READING\*

## The Extras [India]

**Kiran Nagarkar**  
HarperCollins India, 488 pages,  
ISBN: 9789350292044

Bombay in the 1960/70s: Ravan and Eddie, one a taxi driver, the other a bouncer-cum-bar-tender, both dream of a better life. Ravan wants to be a Bollywood star, Eddie longs for America. Despite many setbacks and failed attempts, their eternal optimism is heart-warming. Fast-paced and wonderfully funny, the novel asks whether we are not all ultimately just extras in the screenplay of life.

*Claudia Kramatschek, literary critic and cultural journalist*



> RECOMMENDED READING\*

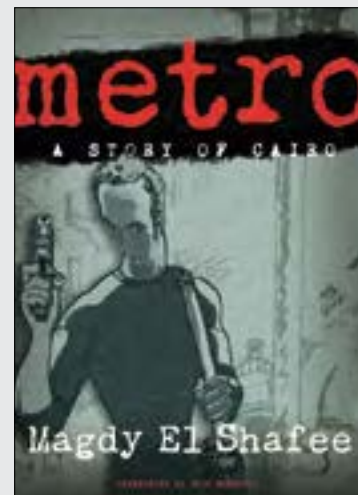
## The Memory of Love

[Sierra Leone]

**Aminatta Forna**  
Bloomsbury Publishing, 445 pages,  
ISBN: 978-0802145680

The lives of English psychologist Adrian, the young surgeon Kai and Elias, a dying man with a debt to clear, coincide at a hospital in Sierra Leone, a country recovering from years of civil war. All three are fatefully bound up with one and the same woman. Written in precise and vivid prose, Forna's novel tells of love and betrayal and the healing power of reconciliation.

*Anita Djafari, literary critic*



> RECOMMENDED READING\*

## Metro. A Story of Cairo

[Egypt]

**Magdy El Shafee**  
Translated from Arabic by Chip Rossetti.  
Henry Holt, 95 pages,  
ISBN: 978-0805094886

A comic book from Egypt with universal appeal, which accurately describes the situation prior to the Arab Spring. Shebab, a young software designer, sees bank robbery as an entirely plausible option in a society in upheaval. Best read from back to front!

*Thomas Wörtche, literary critic*

\* litprom – the Society for the Promotion of African, Asian and Latin American Literature – provided the reviews for akzente. The titles were selected from litprom's 'Weltempfänger' list of best new novels.

[www.litprom.de](http://www.litprom.de)

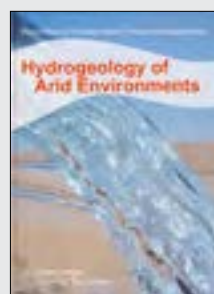
## SPECIALIST PUBLICATION



**Securing the resource supply – promoting development** German and English. Gabriele Rzepka

It is often assumed that countries with abundant natural resources – gold, diamonds, rare earths, oil and other minerals – are wealthy. In many cases, however, the opposite is true. Corruption, bad governance, violent conflict,

ecological damage and social problems are issues all closely linked to mineral wealth. How do we break the 'resource curse'?



**Hydrogeology of Arid Environments** English. Edited by Randolph Rausch, Christoph Schüth, Thomas Himmelsbach. Schweizerbart, 283 pages. ISBN: 978-3-443-01070-6

Groundwater is the only natural source of water in many arid regions. This book summarises the findings of the interdisciplinary conference 'Hydrogeology of Arid Environments' and presents an overview of the latest research in this

field. Around 200 scientists from over 30 countries took part in the conference held in Hanover in March (see article on p. 33). The book is intended for engineers, scientists and political decision-makers.



CLAUDIA MAYER,  
ECO EXPERT

'BIODIVERSITY is the sum of life on earth. It forms the basis of human existence and activity,' says Claudia Mayer, 42. From her office at GIZ in Germany and in her work with international stakeholders, the economic geographer is working to raise people's awareness of the cultural and economic value of biodiversity. Using resources sustainably was initially an issue that concerned Claudia Mayer during her academic career. In Costa Rica and Colombia, South Africa and Nicaragua she conducted research into social and environmental standards in the production of coffee and bananas. 'It gave me an appetite for international cooperation,' she says. After completing her PhD, Claudia Mayer faced a major decision: academic life or international cooperation? She applied to GIZ and then spent seven years in Ecuador and Brazil, working on projects geared to the conservation and sustainable use of tropical forests in the Amazon region. 'Through contact with a wide range of people – negotiating partners, indigenous peoples, small farmers and colleagues in the field – you are often forced to change your perspectives. I am now able to apply the strategies we developed and the experience I gained to other situations.' Mayer sees her work as meaningful: 'We help our partners to contribute to the preservation of biodiversity.'

Photographer: Dirk Ostermeier

☞ GIZ is always looking for environmental experts. For more information, see GIZ's job opportunities page: [http://www.giz.de/en/jobs/giz\\_job\\_opportunities.html](http://www.giz.de/en/jobs/giz_job_opportunities.html)





## AUTHORS AND PHOTOGRAPHERS FEATURED IN THIS ISSUE



**NORBERT GLASER** is a journalist specialising in development policy. He reported on potential solutions to water scarcity (p. 32). [www.nglaser.de](http://www.nglaser.de)



**DENISE GRAETZ**, a communications designer, illustrated the article about climate change (p. 12). [www.denisegraetz.de](http://www.denisegraetz.de)



**PETRA HANNEN** focused on strategies to mitigate climate change and its impacts (p. 12). [www.satzblei.de](http://www.satzblei.de)



**KNUT HENKEL** is a political scientist. For this issue, he visited Bolivia and reported on measures to promote sustainable farming there (p. 28).



**MARKUS KIRCHGESSNER**, a freelance photographer, compiled a report on Bosnian nurses in Frankfurt (p. 8). [www.markus-kirchgessner.de](http://www.markus-kirchgessner.de)



**VERA VON LAUFENBERG**, a communications designer, illustrated the article about the work of GIZ's Development Policy Forum (p. 38).



**MICHAEL MARTIN** specialises in photographing deserts. He took the photo that appears on pages 26 and 27. [www.michael-martin.de](http://www.michael-martin.de)



**DIRK OSTERMEIER** is a freelance photographer. He took the photos of Dr Herbert Diess (p. 24) and Claudia Mayer (p. 42).



**JÖRG REUTHER** is a freelance travel and sports photographer. He travelled through the deserts with Michael Martin (p. 32). [www.reuther-fotografie.de](http://www.reuther-fotografie.de)



**GABRIELE RZEPKA** is a specialist in development policy and technology. She profiled the Triple Win project for this issue of *akzente* (p. 8).



**AGNES TANDLER** lives in New Delhi. She reported on efforts to make legal security a reality in Afghanistan (p. 35).



**MAREN ZEIDLER** is responsible for communications and marketing at the Development Policy Forum. She profiled the Forum's work for this issue (p. 38).

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## PREVIEW

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**DEMOGRAPHIC CHANGE** Very few issues are as potentially explosive as population forecasting and changing demographic structures. In some parts of the world, entire societies are ageing, whereas elsewhere, the proportion of children and young people in the population is dramati-

cally increasing. What are the prospects for these young people? Where are the positive examples which could serve as models for societies in demographic transition? These topics will be explored in the next issue of *akzente*.



PHOTO: GIZ/FLORIAN KOPP





In summer 2012, the Arctic sea ice melted to its lowest level since records began – just one of the effects of climate change. The loss of sea ice reinforces the warming of the atmosphere, as solar radiation is no longer reflected but is instead absorbed by the water. This results in disproportionately high warming of the entire Arctic region – a phenomenon which will affect weather patterns all over the world.