

akzente

The GIZ Magazine

Digitalisation

Driving development



**‘Privacy
is a human right
that needs
defending now
more than ever
in our digital age.’**

CONSTANZE KURZ
CHAOS COMPUTER CLUB

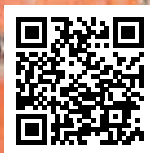
DIGITAL INNOVATOR **SHRADHA SHARMA** HEALTH IN BANGLADESH **NETWORKED MEDICAL SERVICES**
PEACE PROCESS IN MALI **LOOKING TO THE FUTURE** TEXTILE INDUSTRY IN ETHIOPIA **FAIR WORK**

**BETTER AIR, MORE INCOME –
ALL THANKS TO THE NEW STOVES!**

LYDIA KIMANI
STOVE INSTALLER IN KENYA

Many people in rural regions of Kenya use wood to fuel their cooking stoves – an expensive and increasingly scarce raw material. Lydia Kimani is spreading the word about stoves that use less wood and produce less smoke. On behalf of the German Federal Ministry for Economic Cooperation and Development, GIZ is making energy-efficient stoves available to seven million people in Kenya.

You can find more 'Faces and Stories' at
www.giz.de/stories



INTERNET FOR ALL

The debate about the opportunities and risks presented by digitalisation should be conducted worldwide – with as many voices as possible from the global South.

WHAT DO DIGITAL TECHNOLOGY and international cooperation have in common? If we look at internet access statistics, the answer would appear to be ‘very little’. The vast majority of the 3.9 billion people who are still offline are in what is known as the ‘global South’. Two billion women still have no internet access. Nine out of ten young people with no internet access live in Asia, Africa or the Pacific region. The inequality between North and South that we already see in areas such as health care, education and nutrition – and which we refuse to accept – is mirrored in the field of digital technology. People like Nanjira Sambuli are determined to change this. The Kenyan works for the World Wide Web Foundation, whose aim is to connect more people to the internet. In her article – starting on page 18 – Sambuli calls for internet access for all.

LOTS AND LOTS OF PEOPLE SHOULD BENEFIT from digitalisation. Nobody should be excluded because of a lack of technology or due to social factors. The United Nations shares this standpoint: in the 2030 Agenda for Sustainable Development, the UN sets the goal of achieving universal and affordable internet access by 2020. But this goal can no longer realistically be attained, as shown by the diagram illustrating the digital divide on page 26.

WOULD UNIVERSAL INTERNET ACCESS make everything better? It is obviously not a panacea. In the magazine ‘trendradar_2030’, pub-

lished in 2017 (trendradar.org/de/trendradar-2030), the scientist and expert in future technologies and trends Axel Zweck urges us to reflect on the impacts of every trend on humanity. Values play an important part in this. We must consider what we want a trend to be able to do, and what it might do to us. There can be no doubt that internet access initially brings more information and greater economic opportunities. But it is not only a blessing. Organisations like UNICEF have been warning us for some time of the downside of internet consumption. While parents in industrialised countries worry that their children are becoming isolated and depressive as a result of excessive internet use, that they are falling victim to bullying or abuse, parents in developing countries would do much to give their children the chance to access the internet.

THAT’S OUR WORLD FOR YOU. And that is why we need an in-depth debate about the opportunities offered by digitalisation – and the inherent risks. The debate should be global and should involve as many voices as possible from every country in the world. We hope that our akzente articles inspire you to reflect on your own position on the matter.



SABINE TONSCHIEDT,
Director of Corporate Communications
sabine.tonscheidt@giz.de

A handwritten signature in blue ink that reads 'Sabine Tonscheidt'. The signature is fluid and cursive, written over a white background.

IN BRIEF

6 Updates

Making the Congo River safer for shipping, renovating schools in Lebanon, improving care for mothers-to-be in Kyrgyzstan



- 3 Editorial
- 30 Through the lens
- 48 Info: Events and publications
- 51 Sustainability, preview



AKZENTE ONLINE

You can find the articles from this issue on our website along with digital editions of the full magazine and previous issues. akzente.giz.de/en

IN FOCUS



10 Digitalisation

12 Programmed for health

How hospitals in Bangladesh are undergoing a quiet revolution.

18 Access for everyone

How can the World Wide Web actually be made accessible to everyone worldwide? An essay by Nanjira Sambuli from Kenya.

25 'A tool for development'

Interview with Shradha Sharma, one of India's most successful entrepreneurs.

26 In figures: The digital divide

Many people in developing countries still have no internet access.

29 The powerlessness of users

'Defend your right to privacy,' urges Constanze Kurz.

BACKGROUND

32 Climate change: an existential risk

'One third of our projects are climate relevant.' Lorenz Petersen, an expert in the field, explains how to reduce the risks, why people affected are still leaving their homes, and what can be done to help them.

COMMITMENT



34 The stuff that futures are made of

Why Ethiopia has become a location of choice for the textile industry, and how people like Etsegenet Mitiku are benefiting.

40 For peace in Mali

How the difficult process of reconciliation is progressing – and why some experiences can still never be forgotten.

44 Green miracle

The Abdallah family's land in Chad was bone dry. Water-spreading weirs revived their fields and their prospects.

INTRODUCING



50 Kadidja Dembele

One of her responsibilities as Administrative Manager in GIZ's Tunisia Office is human resources management. 'It's great to see how the young people I've recruited develop and grow.'

AUTHORS AND PHOTOGRAPHERS



Kenyan **NANJIRA SAMBULI (1)** is responsible for digital equality at the World Wide Web Foundation. In our cover story, she shares her thoughts on ensuring better internet access for everyone. **FREDERIC SPOHR (2)** reports from Asia as an independent correspondent for newspapers such as Handelsblatt and Süddeutsche Zeitung. For akzente, he and photographer **TAPASH PAUL (3)** attended a consultation at a hospital in Bangladesh's capital Dhaka and saw first-hand how digital patient files are improving health care. Illustrator **ANJA STIEHLER (4)** sketched out her take on digitalisation for us – her vivid drawings accompany this month's main section. Journalist **UTA RASCHE (5)**, who is responsible for akzente at GIZ, explored some of Ethiopia's big textile factories with photographer **MICHAEL TSEGAYE (6)**, where they met people with high hopes for what these new companies can do for their country. West Africa correspondent **KATRIN GÄNSLER (7)** joined the Abdallah family in Chad for their tomato harvest – an unusual experience in the arid Sahel region.

giz AT A GLANCE

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is a global service provider in the field of international cooperation for sustainable development and education work with 18,260 employees. GIZ has more than 50 years of experience in a wide variety of areas, including economic development and employment, energy and the environment, and peace and security. Our business volume is around EUR 2.4 billion. As a public-benefit federal enterprise, GIZ supports the German Government – in particular the Federal Ministry for Economic Cooperation and Development – and public and private sector clients in achieving their objectives in international cooperation in around 120 countries. With this aim, GIZ works with its partners to develop effective solutions that offer people better prospects and sustainably improve their living conditions. www.giz.de/en

IN FIGURES

10%

of young people worldwide are illiterate. Fifty years ago, the figure was much higher at 25 per cent. There are enormous differences between individual countries and regions: while the illiteracy rate in many European countries is close to zero, almost half of all young people in Afghanistan and several African countries such as South Sudan, Niger and Chad cannot read or write.

163

million women started a business in 2016 or were in charge of a relatively young company. The number of women starting a business is continuing to rise.

5.6

million children under the age of five died in 2016. Overall, child mortality rates are falling due to factors such as better prevention of malnutrition and the spread of infectious diseases. As recently as 2000, mortality rates were much higher, with 9.9 million children under the age of five dying.



Health on the timetable

MORE HYGIENE Many children in South-East Asia suffer from diarrhoea, coughs and tooth decay. On behalf of the German Federal Ministry for Economic Cooperation and Development, GIZ is implementing the Fit for School programme. Schools are being equipped with better sanitation facilities, and children are learning to brush their teeth and wash their hands regularly. In these schools, 20 per cent fewer children are now underweight, cases of tooth decay have fallen by 40 per cent and cases of serious worm infections have fallen by 50 per cent. The UN's World Food Programme is providing support in the form of school meals.

www.fitforschool.international

INVESTING IN YOUTH IS A PREREQUISITE FOR BUILDING A SUSTAINABLE FUTURE.

Excerpt from the joint declaration of the African Union –
European Union Summit in Abidjan in November 2017

Circumnavigating risk



trading route is accessible to ships. At other points, the water is too shallow or there are dangerous rapids. Fatal shipping accidents are almost a daily occurrence. Up to now, most traders have avoided difficult sections by transporting goods by rail for certain parts of the journey. Now, GIZ International Services is surveying the Congo riverbed on behalf of the European Union. A small team of experts in two boats is collecting data with a view to producing maps that will enable ship captains to safely navigate danger-

MORE SAFETY The Congo River stretches over 4,374 kilometres and is Africa's second longest river. It carries more water through the region than any other river: at some points, it can be up to 200 metres deep. Nonetheless, only around 3,000 kilometres of this key

ous sections of the river in future. The plans also take into account existing knowledge: the experts have already evaluated maps from the Belgian colonial period.

www.giz.de/congo

THREE QUESTIONS FOR



ABDELKADER SASSI

Recycling entrepreneur in Matmata, Tunisia. He started his own business thanks to a start-up competition organised by GIZ on behalf of the German Federal Ministry for Economic Cooperation and Development.

Mr Sassi, what was your business idea?

I read a market analysis that said that recycling waste can be profitable in my region. I was able to capitalise on this and create three jobs. We use the stones from dates to produce food pellets for cattle. I collect the stones from farmers in the local area.

How is the economic situation in your region?

Matmata is in southern Tunisia. We have been suffering from a severe drought for some years. There has also been a sharp decline in tourism in recent years – and many jobs in the region are dependent on this sector.

What role did GIZ play in helping you start a business?

After I won the competition, the support provided by GIZ enabled me to buy two shredding machines and a mixing machine. They arranged for an expert to help me prepare a business plan. I was also able to establish a network of contacts through GIZ – for example, with suppliers.

www.giz.de/tunisia

School at last

FOR REFUGEES Relative to its 4.8 million inhabitants, Lebanon has taken in more refugees than any other country in the world. Some 1.5 million Syrians alone have found refuge there. This presents a variety of challenges, including in schools, where pupil numbers have tripled in some places. In 2013, the Lebanese Government therefore decided to introduce afternoon shifts to provide lessons for Syrian children. As part of the German Federal Ministry for Economic Cooperation and Development's special initiative on displacement, GIZ organised the renovation of 21 schools in

conjunction with Lebanese architects and construction companies. In one school in Beirut, for example, the cellar was completely flooded. Today, it can once again be used as a sports and assembly hall. A school in Bekaa near the Syrian border has been renovated to accommodate children with war injuries. All schools now have more toilets and washing facilities. The new equipment also includes energy-saving lamps, smoke detectors and fire extinguishers.

www.giz.de/displacement



Children without a childhood

IN COMPARISON The good news is that child labour is on the decline. However, 168 million children are still victims of this exploitation. The graphic shows how many hours a week they work. GIZ is committed to eradicating child labour through awareness-raising campaigns and the introduction of codes of conduct.



Opportunities in Morocco

FOR MIGRANTS The German-Moroccan migration advice centre opened in Casablanca in September 2017. Established on behalf of the German Federal Ministry for Economic Cooperation and Development, it offers support for returnees and for people who wish to leave the country due to a lack of prospects. Staff at the centre provide information on work and training opportunities in Morocco. They match suitable candidates with training opportunities in German development cooperation projects, for example, and also provide information on the dangers of illegal migration and the requirements for legal immigration to Germany. A migration advice centre was opened in Tunisia in March 2017, and another in Ghana in December. Two more are set to follow in Nigeria and Senegal.

www.giz.de/morocco

Source: WHO 2017

PHOTO: UTE GRABOWSKY/PHOTOTEK.NET (PAGE 8)



Better care for mothers-to-be

FOR MOTHERS AND CHILDREN Infant mortality in Kyrgyzstan is high, but this is set to change. On behalf of the German Federal Ministry for Economic Cooperation and Development, GIZ has introduced a distribution system in one district of Kyrgyzstan that assigns pregnant women to specific hospitals: women with high-risk pregnancies, or those who are expected to give birth prematurely, are immediately assigned to a specialist hospital. Women with uncomplicated pregnancies are assigned to municipal hospitals. The specialist hospitals are then able to concentrate exclusively on difficult cases. The infant mortality rate has already fallen: per 1,000 infants, 10.7 died in 2016 compared with 6.6 in 2017. The distribution system could be used as a model for other districts.

www.giz.de/kyrgyzstan

KYRGYZSTAN WIKI

OFFICIAL LANGUAGES KYRGYZ (NATIONAL LANGUAGE) AND RUSSIAN ('OFFICIAL LANGUAGE') / CAPITAL BISHKEK / FORM OF GOVERNMENT PARLIAMENTARY-PRESIDENTIAL DEMOCRACY / HEAD OF STATE AND GOVERNMENT SOORONBAY JEENBEKOV / SIZE 198,500 KM² / POPULATION APPROX. 6 MILLION [1] / POPULATION DENSITY 31.5 INHABITANTS PER KM² [2] / GROSS DOMESTIC PRODUCT PER CAPITA USD 6,870 [3] / CURRENCY SOM

Sources: [1] UN Data 2016, [2] [3] World Bank 2016

NEW PROJECTS



Digital security

SOUTH KOREA How can I prevent my mobile phone from passing on data I don't want it to? What preinstalled apps can I use safely? What does a transparent, fair app market look like? To better protect smartphone users, Germany and South Korea plan to engage in dialogue. The German Federal Ministry of Justice and Consumer Protection has therefore tasked GIZ with developing new approaches together with policy-makers, private sector representatives and consumer associations. South Korea is a pioneer in the field of digital consumer protection.



Sustainable chemistry

GERMANY The German Federal Environment Agency has commissioned GIZ with setting up an international competence centre for sustainable chemistry in Germany. This is intended to help developing countries and emerging economies to achieve the UN Sustainable Development Goals. It develops environmentally friendly technologies, processes and business models for sectors such as construction, food and energy. In addition to the main office in Bonn, further branches will be set up at the University of Lüneburg and the industry association DECHEMA in Frankfurt am Main.



Young returnees

CENTRAL AMERICA Up to 40,000 minors flee from Guatemala, Honduras and El Salvador to the USA every year. The route is dangerous and very few of them actually make it into the country. Many end up returning, traumatised by their experience. As part of the German Federal Ministry for Economic Cooperation and Development's special initiative on displacement, GIZ is organising psychological and pedagogical support for young returnees. It is also offering training courses and helping young people to complete their schooling in their home country.

PHOTOS: GETTY IMAGES ASIAPAC (PAGE 9 LEFT), GETTY IMAGES/DIGITAL VISION (PAGE 9 CENTRE), THOMAS IMO/PHOTOTHEK.NET (PAGE 9 RIGHT)



IN FOCUS

DIGITALISATION

PROGRAMMED FOR HEALTH

How Bangladesh's hospitals are undergoing a quiet revolution. Page 12

ACCESS FOR EVERYONE

How can the World Wide Web actually be made accessible to everyone worldwide? An essay by Nanjira Sambuli from Kenya. Page 18

'A TOOL FOR DEVELOPMENT'

Interview with Indian entrepreneur Shradha Sharma. Page 25

THE DIGITAL DIVIDE

Many people are still offline, particularly in developing countries. An infographic. Page 26

THE POWERLESSNESS OF USERS

Guest article by Constanze Kurz, spokesperson for Chaos Computer Club. Page 29





Programmed for health

Bangladesh's health system is undergoing a quiet revolution: digitalisation is making working life easier for doctors and saving money. The quality of patient care is improving, and epidemics are being detected earlier.

TEXT FREDERIC SPOHR PHOTOS TAPASH PAUL

It is still early in the morning, but a long queue has already formed in front of Sarkari Karmachari Hospital (SKH) in Bangladesh's sprawling capital Dhaka. Mothers and their coughing children, elderly people on crutches and young men swathed in bandages all wait impatiently. A few metres away, traffic thunders past.

Amid all the hustle and bustle, 57-year-old dermatologist Dr Mohammed Ali Chowdhury radiates a sense of calm as he ushers one patient after another into his compact consulting room on the first floor. Although pressed for time, he wants to do the best he can for every patient. 'There are not enough doctors to treat so many sick people,' he explains, his voice calm. 'But we are coping much better than we used to.' He points to what has become one of his most important items of equipment: the computer.

Dr Chowdhury's demanding working day is better organised than before because of the quiet revolution taking place in Bangladesh's hospitals. The country's national health system is being computerised, with GIZ's support. 'Digitalisation is making patient care quicker, cheaper and better,' says Kelvin Hui, a GIZ expert who was responsible for introducing the digital systems that are transforming health care in Bangladesh. From 2012 to 2016, GIZ provided support for Bangladesh's Ministry of Health in implementing the reforms. The project was commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ). The authorities in this South-East Asian country have now assumed ownership of the process and are driving it forward on an independent basis. GIZ's experts have moved on to Nepal, where they are now setting up a country-wide health information platform designed on similar lines.

||
 Previously,
 I would have had
 to spend time
 and effort finding
 out about the
 patient's medical
 history. Now all
 it takes is a click
 of the mouse.
 ||

So what has improved? Watch Dr Chowdhury at work for a while and it all becomes clear. His next patient is 56-year-old police officer Ali Hossain. A member of an elite unit, he is in uniform and greets the doctor with a click of his heels. He seems to be in good shape, but he has a skin irritation all over his body and is not fully fit for service.

Officer Hossain has brought along a temporary patient identification card which was issued to him on previous visits to the hospital. Dr Chowdhury scans in the barcode and opens the patient's digital file. A glance at the records tells him that a dermatologist is not the right specialist to be treating this patient: Hossain has diabetes. 'Previously, I would have had to spend time and effort asking the right questions,' says Dr Chowdhury. 'Now all it takes is a click of the mouse.'

An experienced medical practitioner, he knows that diabetes is probably the cause of the problem. He sends Officer Hossain along the corridor to another specialist and then calls the next patient. 'I see up to 30 patients a day,' he says. 'So every saved minute counts.' And the patients are happy if they don't have to wait for too long. 'Today, I was seen after 20 minutes,' says Ali Hossain. 'On previous visits, I often had a much longer wait.'

Next door, there is more evidence that the electronic patient records are proving useful. Dr Jesmin Akhter is treating a young man with a skin rash on his scalp, which he is constantly scratching. With the aid of the database, it takes no time at all for her to check which drugs have already been prescribed. They are clearly not working, so she decides to try a different one. The electronic patient records also help to ensure that the patient is not prescribed the same medication by several different doctors. »

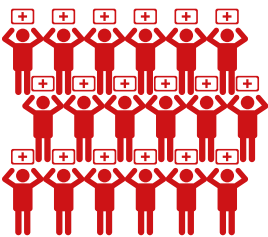


Left: Dr Jesmin Akhter knows which drugs were previously prescribed for her patient – thanks to his digital file.

Right: Dermatologist Mohammed Ali Chowdhury soon realises that police officer Ali Hossain needs to consult another specialist. The database tells him that the patient has diabetes – probably the cause of his symptoms.

INSURED AT LAST

LITTLE CARD – BIG IMPACT



On the face of it, it's just a little plastic card – but it has so much to offer. The health insurance schemes now being set up in many countries around the world ensure that illness or incapacity is no longer a poverty risk. In Nepal, for example, GIZ spent many years advising the Government on setting up a scheme and has also helped to establish similar systems in India, Indonesia, Rwanda and Kenya. Between 2010 and 2015, GIZ and its partners enabled more than 302 million people worldwide to gain improved access to insurance.

Examples of GIZ's work – more facts and figures: www.giz.de/projectdata

Bangladesh is still one of the world's poorest countries. Despite a sharp increase in average life expectancy to 72 years and a fall in child and maternal mortality, health care provision is still very basic. According to the World Bank, annual total health spending per capita is around USD 30 in Bangladesh. In Germany, it is more than USD 5,000.

Digitalisation is helping to improve the allocation of scarce resources. So far, 15,000 hospitals and smaller treatment centres have joined the Health Ministry network. They share data, including information on diagnoses and hospital bed occupancy. Previously, this information would have been collected using a pen and paper and would have taken weeks to reach the Ministry. And not only that: there were often gaps or inaccuracies in the datasets.

With the new system, the civil servants now have much faster access to information, which is also useful when epidemics threaten to strike. In Bangladesh, dengue fever – a highly contagious viral infection spread by mosquitoes – comes in waves. A vaccine did not become available until 2015. According to the World Health Organization (WHO), dengue fever kills about 20,000 people a year. With the new system in place, doctors can quickly iden-

tify the regions where high numbers of people are infected, thus enabling a rapid response. The entire public health system, with its 105 million patients, benefits as a result.

The costs of the new technology are relatively low. At GIZ's suggestion, it uses open source software – programs which are usually available free of charge. The source codes are made available to the public, allowing ongoing development of the software by universities, non-governmental organisations and volunteers. For hospitals, this cuts the costs of setting up an IT system by up to two thirds, according to Muhammad Abdul Hannan Khan, who previously worked on the project for GIZ and now manages it in his role as team leader for HISP Bangladesh, a non-governmental organisation.

Training for 20,000 doctors and nurses

Increasingly, hospitals are now using OpenMRS (Open Medical Record System) – developed by the University of Indiana and the US aid organisation Partners In Health – to manage their electronic patient records. DHIS 2 (District Health Information System), for which core development activities are coordi-

nated by the University of Oslo, is used to connect the hospitals with the Ministry. The software is now in use in more than 30 countries, including India. In Nepal, GIZ is working with partners to replicate the digital success achieved in Bangladesh (see Interview, page 17).

But it is not enough simply to download and install the software. GIZ's experts and partners must first modify the programmes to meet the needs of the individual hospitals and health systems. In Bangladesh, for example, double occupancy of beds is common due to lack of capacity, and the programmers

must adapt the basic software to take such aspects into account. The next step is to train the thousands of health workers to use the programmes. In Bangladesh, more than 20,000 doctors and nurses now have the skills they need to navigate the system.

Inspired by these successes, Bangladesh is pressing ahead with digitalisation. Another aim is to improve inter-hospital communication. 'Over the long term, we want to set up a national patient information database,' says IT expert Muhammad Abdul Hannan Khan. 'It will take years, though, so we're just at the beginning.' »



Also available on the akzente website: video clips of the Dhaka hospital's routine
akzente.giz.de/en



Top: Information and diagnoses are no longer hand-written but are entered into a database.

Bottom: Not doctors but system engineers: the hospital's IT department now plays a key role.



“
Over the long
term, we want
to set up a
national patient
information
database.”

Sarkari Karmachari Hospital sees itself as a pioneer in this process. Dr Chowdhury pulls out a patient ID card. It's roughly the same size as a credit card. This one is just a prototype but soon, every patient will be given a card like this. It has a barcode that will enable other hospitals to access the patient's records – a great help when someone is referred to a specialist at another clinic.

There are plans to computerise further areas within the hospital. The nurses at Sarkari Karmachari Hospital are not working with the electronic patient records yet, but that's about to change, says Dr Chowdhury. And many of them won't need training to use the system: working with the computer programmes is already part of the national curriculum for nursing education in Bangladesh.

www.giz.de/health

'Privacy is the priority'

Mr Rückert, you are assisting Nepal to switch to electronic patient records. But the hospital in Nuwakot, where you began, was completely destroyed in the 2015 earthquake. How did you start over?

To begin with, we worked with local construction firms to put up a temporary building so that the hospital could continue to provide patient care. Nepal's Ministry of Health is digitising all the work processes here, and we provide support on behalf of the German Federal Ministry for Economic Cooperation and Development. The Korea International Cooperation Agency (KOICA) and the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) are covering a share of the costs. Patient registration and accounting have already switched to the new system. By mid-2018, Nuwakot will be the first fully computerised public hospital in Nepal. Nepal's Ministry of Health is installing this management system in a further 100 public hospitals across the country with advice from our team.

You previously managed digitalisation projects in Indonesia, Pakistan and Bangladesh. What's different about Nepal?

Internet access is poor in many regions of Nepal. Some sites have no computers, so those have to be sorted out first. The electricity supply is also a problem. But our experience of working in these other countries is still very helpful. By mid-2018, 1,500 out of 4,000 health centres that are part of the national system will have joined the network. It's all part of the Nepalese Government's reform agenda to improve health care provision. Training is also being provided for IT specialists and hospital staff to ensure that the systems are used regularly in future.



PAUL RÜCKERT manages GIZ's Health Sector Programme in Nepal.

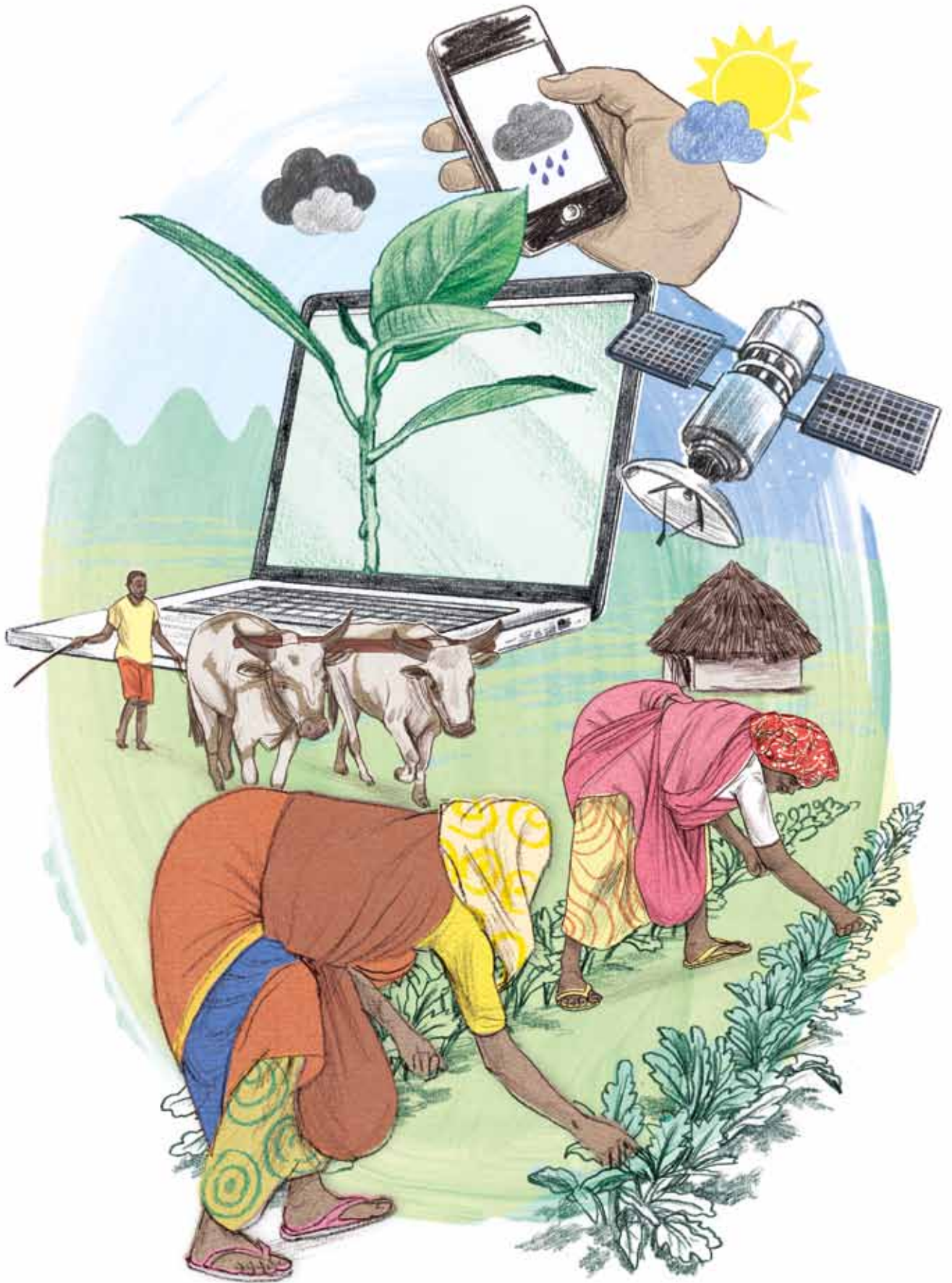
You also advised Nepal on the introduction of the national health insurance scheme in 2016.

We helped to set up the IT system. When we were looking for suitable software, we came across a system that the Swiss Agency for Development and Cooperation (SDC) is using in Tanzania and Cameroon. We took the software development a step further. It is the first open source software for health insurance management and we are making it available to other countries free of charge.

How important is patient data protection in Nepal?

Nepal does not yet have any data protection legislation, so we are advising several ministries on this issue. With the IT systems that we introduce, users can only view personal data if they have a legitimate reason to do so. Our solutions are fully compliant with future legal standards, and data privacy is our priority.

paul.rueckert@giz.de
www.giz.de/en/worldwide/17887.html



Access for everyone

Digitalisation is global. It affects every part of our lives. And yet some people are being left behind. Although new technologies offer a wealth of opportunities, most of the world's people are still excluded. How can digitalisation become a driver of development? Kenyan researcher Nanjira Sambuli works for the World Wide Web Foundation and is investigating how internet access can be improved in developing countries.

In developed and developing countries alike, modern communications technology is not just a convenience: it is a necessity. It is an indispensable part of modern life, used for a wealth of applications: sending quick messages via services like WhatsApp and Viber, accessing and sharing the latest world news, or obtaining valuable information, for example on the stock markets – vital for taking decisions on finance or the agricultural markets. The internet is not only a marketplace for goods and services; it also helps us to exercise our social, economic, civic and political rights, and to participate successfully in the changing world of work, whether by working from home, or by setting up and running a new business.

In a resolution adopted in 2016, the United Nations Human Rights Council therefore declared internet access to be a human right. The Sustainable Development Goals (SDGs), adopted by the United Nations in 2015, also draw attention to the great importance of information and communications technology for realising the ambition of the 2030 Agenda to 'leave no one behind'. Access

to technology is addressed in Target 9c, for example, which states that the international community should 'significantly increase access to information and communications technology and strive to provide universal and affordable access to the internet in least developed countries by 2020'. That is only two years away.

But there are still wide disparities in access worldwide. While internet rollout in the developed world mainly relied on landlines and home computers, this 'traditional' pathway is being bypassed in many developing countries: here, mobile phones are the main driver of digitalisation.

It's mainly young people who are online

Today, around half the world's people have access to the internet. According to the International Telecommunication Union (ITU), a United Nations agency, some seven billion people – 95 per cent of the world population – »

71%

of all 15 to 24-year-olds use the internet.



live in regions with mobile network coverage, with mobile broadband (at least third generation) now reaching roughly 84 per cent. Young people are at the forefront of internet use worldwide: around 70 per cent of them are online and they account for almost 25 per cent of internet users.

Mobile communications are a driver of digitalisation – and this is confirmed by the global association of mobile network operators, GSMA. It projects that around three quarters of the world's population – 5.7 billion people – will be using mobile services by 2020. According to GSMA, 55 per cent of connections ran on mobile broadband in 2016, and this is predicted to rise to almost 75 per cent by 2020.

Despite all the progress on internet access, there are striking disparities, which are linked to region, gender and income. So while mobile phone networks now span the globe – more or less – they reach only 67 per cent of the rural population, creating an urban-rural divide. What's more, the majority of the 3.9 billion people who are still offline live in the 'global South'. Two billion women still have no access to the internet. Nine out of ten young people without internet access live in Asia, Africa and the Pacific region.

Still unaffordable for many people

The Alliance for Affordable Internet, an international technology coalition of private sector, public sector and civil society organisations whose membership includes global corporations such as Google, Facebook, Cisco, Ericsson and Microsoft, is committed to cutting the costs of broadband. According to the Alliance, the world will miss the 2020 universal internet access target by 22 years. On current trends, only 16 per cent of the world's least developed countries and 53 per cent of the world's population will be connected by the target date. As the Alliance points out, this delay will have major adverse consequences for development progress, wasting opportunities for inclusive growth and denying 'hundreds of millions of people online access to education, health services, a political voice and so much more'.

The gender gap in internet use – known as the digital gender divide – has also widened, from 11 per cent in



'Digitalisation! A curse, a tantalising promise, and the only way to go. Today's big issue.'

SASCHA LOBO, author, blogger and strategic consultant

2013 to 12 per cent in 2016. In all regions of the world, more men than women use the internet, but the gap is largest in the least developed countries (31 per cent) and especially in Africa (23 per cent).

The wide gender gap affects access to mobile phones as well. In 2015, more than 1.7 billion women in low- and middle-income countries did not own mobile phones. Women on average are 14 per cent less likely to own a mobile phone than men, meaning that 200 million fewer women than men are phone owners. In nine cities in Africa, South-East Asia and Latin America, the World Wide Web Foundation has investigated the probability that an existing internet connection is being used to generate higher incomes or participate in public life. For women, the probability is 30 to 50 per cent lower than for men.

What prevents so many people, mainly women, from using the internet, despite its potential to radically improve their lives by helping them find a job, work online or make their voice heard, for example? The main obstacle is the high cost of devices and connections. The price of mobile phones has fallen, it is true, and »

375

billion dollars is the likely annual cost of cybercrime – equivalent to 0.6 per cent of global income.

EXAMPLES OF GIZ'S WORK

A reliable digitalised administration contributes to stability.

GIZ is currently engaged in around 200 projects involving digital applications – across all sectors. Many projects focus on improving public administration: with the modernisation of public service delivery in Ukraine, for example, citizens can now complete many formalities online.

As early as the 1980s, we began to make use of information and communications technology in development cooperation. Since then, the range of applications has steadily expanded. The digitalisation of civil registers and the issuing of personal identity cards, for example, is a huge area of work for us.

In many developing countries, civil registration is patchy. This has negative consequences: many people have no legal identity, so they cannot access public services or open a bank account. One of the goals set in the 2030 Agenda is therefore to provide legal identity for all. Gaps in civil registration also undermine the reliability of population statistics, making it almost impossible for governments to plan the provision of public services. And if electoral rolls are inaccur-

rate, some people will vote more than once. Tax registration is another example: if this is inaccurate, some citizens may avoid paying their tax dues.

Fast and reliable access to personal documents and certificates builds public trust in government. A reliable digitalised administration thus contributes to stability. Since 2017, on behalf of the German Federal Ministry for Economic Cooperation and Development, we have been assisting the Government of Cameroon in setting up a computerised civil registration system. In Togo, too, the digitisation of citizens' personal data is part of a programme to decentralise and modernise public administration. Data protection and data security play a key role here.

We are also continuously improving our own work processes using digital technologies. For example, we are investing in new virtual exchange and cooperation formats that make knowledge-sharing more efficient over distances of thousands of miles. For us, people – not technology – always come first.

BRAZIL

2 million

square kilometres in the Cerrado, a savannah region in Central Brazil, are being monitored for outbreaks of fire using satellite technology. The data is collated in a project commissioned by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety and is providing vital information for effective fire prevention.

JORDAN

35,000

people, including 3,000 Syrian refugees, have already signed up as customers of Dinarak, a Jordanian financial services provider that offers mobile payment services. GIZ supported Dinarak's start-up on behalf of the German Federal Ministry for Economic Cooperation and Development.

VIET NAM

53,000

hectares of mangrove forest in Viet Nam are being monitored by drones, enabling much of the coastal area to be mapped. Replanted mangrove forests provide flood protection for coastal communities, rice fields and shrimp farms in the Mekong Delta.

TUNISIA

8,000

app developers have received training from GIZ, the national employment agency and mobile service providers as part of a project commissioned by the German Federal Ministry for Economic Cooperation and Development. Since then, many of the young adults who took part in the training have set up small businesses. Follow-on management training is also provided.

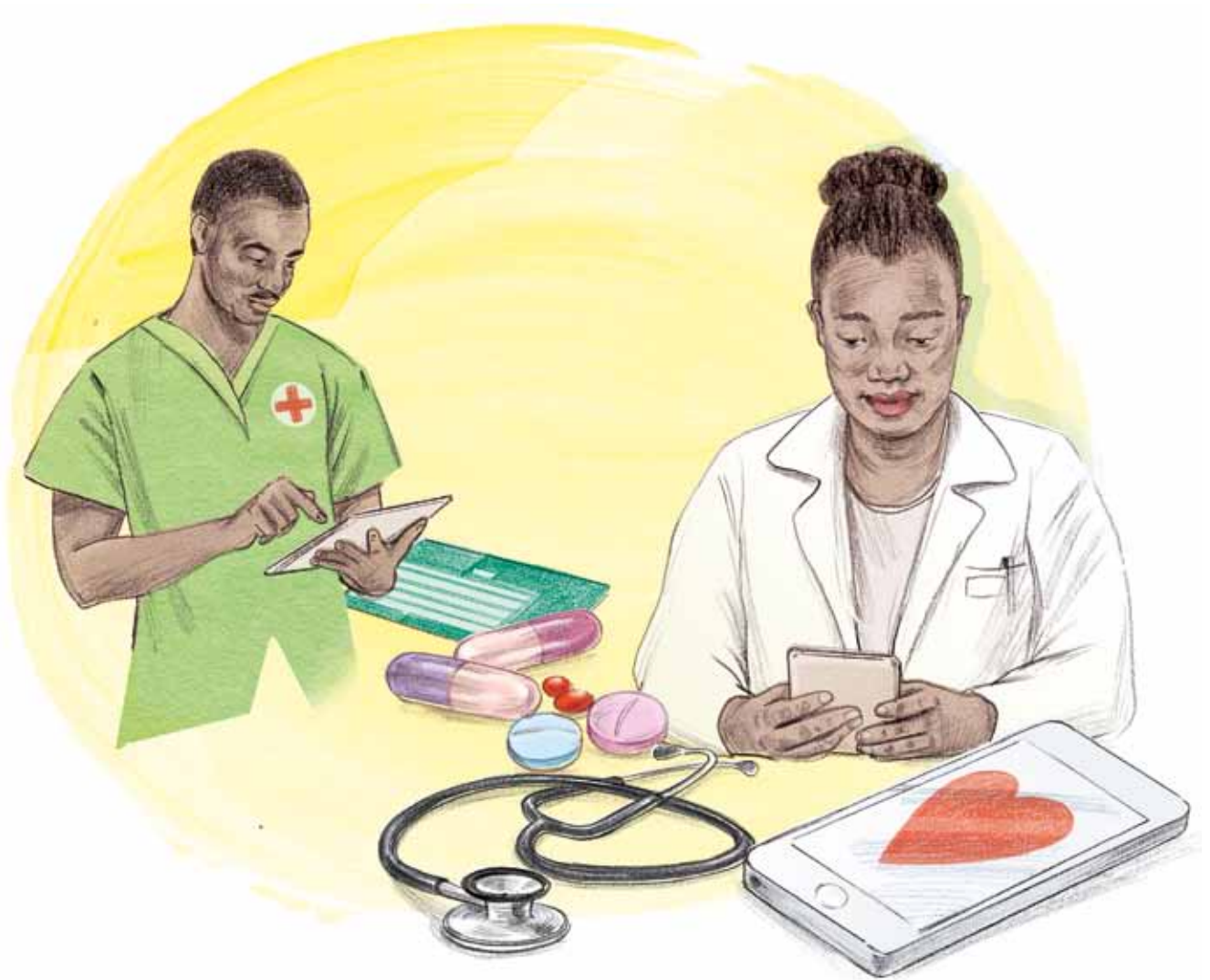


ILLUSTRATION: ANJA STIEHLER-PATSCHAN/JUTTA FRICKE ILLUSTRATORS

smartphones are increasingly in use on every continent, but they often cost more than low earners can afford. Making matters worse, low earners end up paying a far higher proportion of their income for a simple broadband connection compared with someone on an average wage.

In South Africa, for example, the basic tariff for mobile internet access with 500 MB of data costs around 1.5 per cent of the average monthly income. In 2014, the average annual income in South Africa was USD 6,790. However, 60 per cent of the population earns less than half this amount. So a figure which, on the face of it, seems affordable actually costs the majority of South Africans between 6 and 19 per cent of their income. Added to this is the fact that women all over the world earn 30 to 50 per cent less than their male colleagues – meaning that even if an internet connection seems affordable, it is still out of reach for women and the poor. In Indonesia, by contrast, the 500 MB tariffs cost around 2.8 per cent of

the average income of the poorest 20 per cent of the population, making them more accessible for low earners.

Phones cannot work without electricity

But other factors also come into play. According to Women's Rights Online – a research and advocacy network coordinated by the World Wide Web Foundation – many women in poor urban communities are excluded because they lack basic internet skills. However, women's confidence in their digital skills increases with education. Other reasons why women do not use the internet are lack of time and lack of relevant content, especially in local languages.

In addition to this, and issues about devices and tariffs, infrastructure also has a key role to play. Sometimes, telecoms companies decide that it is not worthwhile providing a regional infrastructure. Or per- »



Internet visionary Jaron Lanier takes a look at our digital future – critically, but without cultural pessimism – in 'Who owns the future?'.



‘Getting women online often delivers much greater benefits compared to men: women reinvest their profits in their children’s health and education.’

SHERYL SANDBERG, Chief Operating Officer at Facebook



During the post-election unrest in Kenya in 2007, the Ushahidi platform (the name is the Swahili word for ‘testimony’) collected eyewitness reports of violence and mapped them to warn the public. Since then, it has been deployed in many other crisis countries. An app enables users to share information.

haps the local power supply is unreliable, making phone charging a challenge. In many instances, these factors converge, generally in regions which are already marginalised. In such cases, there is very little incentive for people to go online and use the internet for their own purposes. Thus digital divides emerge between rich and poor, men and women. And if the poor and women are already marginalised, there is a risk that they will be excluded completely from the benefits of digitalisation and left even further behind.

Various stakeholders – governments, the private sector and non-governmental organisations – are now facing up to the challenge of providing access for these groups. This is creating a mishmash of laws, rules and practices. Many governments are developing or updating their national communications technology and broadband policies in order to move closer to the goal of universal internet access. In some countries, for example, governments

are setting up state universal service funds, with mandatory contributions from internet service providers. The funds are used to subsidise access to these services for underprovisioned communities.

The private sector and non-governmental organisations, too, are finding innovative ways to extend connectivity to the disconnected. One of the most eye-catching is Project Loon, launched by Google’s parent company Alphabet and consisting of a network of balloons travelling on the edge of space, designed to extend internet connectivity to people in rural and remote areas worldwide. Another is Facebook’s Aquila project: here, a fleet of solar-powered drones will remain airborne for up to 90 days at a time and provide broadband internet access at ground level within a radius of 100 kilometres of each drone.

At the local level, private initiatives such as BRCK in Kenya are working to solve the problem of frequent power outages. Here, the solution is based on a rugged microserver with battery backup for emergencies. In India, Gram Marg utilises unused TV frequencies to provide access for people in rural areas. And then there is Zenzeleni, a South African cooperative that provides power and internet access. The name says it all: it means ‘do it yourself’. These are just a few examples of businesses and NGOs that are working to cut the costs of connectivity and develop technical solutions that are suitable for developing-country markets.

Which type of internet is needed?

But many people are worried about the type of internet that the next billion users will be connected to. Will they gain open and unrestricted access? Or will they be limited to certain areas, meaning that they have a different type of access from those currently connected in the developed world? What is certain is that mobile internet will continue to play a key role in providing access to those who are excluded at present. But for that to happen, mobile broadband prices will have to fall. Another factor to be considered is that mobile devices offer only limited access to the internet.

Imagine the following and increasingly common scenario: someone – perhaps a young person living in a rural region in a developing country – uses a smartphone and mobile internet to go online for the first time. Perhaps they have access to their parents’ internet-enabled »

'A tool for development'

Shradha Sharma is a journalist and the founder of YourStory, the biggest media technology platform for start-ups in India. Looking at her own story, she sees a lot more chances than dangers emerging in the digitalised world.

Are you a digital native?

Yes I am. When I started my platform nine years ago I had no clue, but now I am the biggest champion of the digital world. Why? Because it's a tool for normal people who don't have a lot of money. It doesn't matter what their legacy is or what background they come from. Anyone can go out and create an equitable world with an equal voice. I am the best example of this.

You created the platform YourStory – but what is your personal story?

I used to work as a journalist for media organisations, for the CNBC news channel and the Times of India. After a while I realised that the media are very obsessed with success. When you've achieved something, you make it into the news, you make headlines. That started to bother me because it's easy to write about successful people. What about the less celebrated people who have dreams and a sense of purpose, but are only just beginning to fulfil that? I asked myself how I could contribute and help give shape to their ideas.

That's when you started your platform?

Exactly, that was in 2008. I called it YourStory because I wanted to tell people: Hey, you have a great purpose, you are doing great things. Let's celebrate your story at the very start. And let's share it with others.

And with it, you wrote your own success story?

I had nobody backing me and no background whatsoever in this area, but I did have an idea and a vision. I worked very

hard, day and night. Today the company has 90 staff. We've published 72,000 stories of young, small businesses. We reach 15 million people and we're about to expand into other countries, including Germany. We are the voice of start-up entrepreneurs in India. My goal is to make YourStory the biggest platform of its kind in the world.

That means you make money with it?

We've been profitable from the beginning, with a combination of different income sources, one being start-up summits, another doing the marketing for big corporations who want to get in touch with smaller firms.

How do you find the people and their stories?

In the beginning we looked for them ourselves, just like any good journalist would. We were searching for the unique angle. Now, we get 400 to 500 mails per day from people who want to get heard. We select the stories and then write them up.

Do you see more chances or more dangers coming from digitalisation?

A lot more chances. Of course there's fake news on the internet, and there are issues to resolve, like cyber security and so on. On the other hand, things will evolve; we have to – and we will – find appropriate safeguards. I am very optimistic about that. These are the early symptoms of a profound transformation that has just started.

Would you say the digital world is particularly promising for women and poor people?

It will do more good to women and poor people, definitely. In India, of our 1.3 billion people, 800 million have smartphones. They



'The hurdles to participation are much lower than before – and that's beneficial for vulnerable people.'

can express themselves, they can reach out, they can create business opportunities even in remote villages. That is unprecedented. The hurdles to participation are much lower than before – and that's beneficial for vulnerable people.

Some people feel digitalisation is widening the gap between countries, others say it will close it. What do you think?

I think it will help close it. For instance, with the help of digitalisation India has taken huge steps, also economically, so I consider it a tool for development. In the next five years we'll see a much more connected and equitable world.

Interview: Friederike Bauer

The digital divide

We are in the midst of the fourth Industrial Revolution. It is changing everything – no area of life remains untouched. It is happening much faster than other major upheavals in the past – but not at the same rate everywhere. There are major differences between countries, regions and continents, between rural and urban areas, and between developed and less developed countries. The majority of those who are still offline live in developing countries and emerging economies. Most of them are women.

Women at a disadvantage

Worldwide, more men than women use the internet. In Africa, the difference is 23 per cent.



Cleaning up the payroll

Electronic ID systems are particularly useful in countries with weak governance. In Nigeria, for example, the system recognised that more than 60,000 public servants never came to work. The salaries being paid to these ghost workers were terminated.



Hotspots of innovation

In Africa, there are now 117 tech hubs – technology centres with start-ups and internet businesses. Most are based in South Africa, followed by Kenya, Nigeria and Ghana. Some have been set up in Mali, Cameroon and Togo.



A typical day on the internet

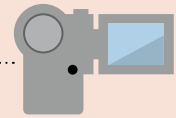
Over 24 hours:



207
billion emails
are sent



186
million photos
are shared on
Instagram



8.8
billion videos are
watched on YouTube



4.2
billion searches
are carried out on
Google

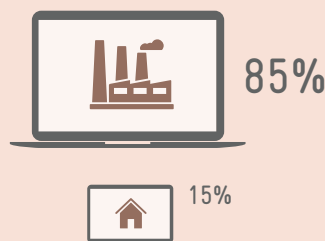


152
million phone calls
are made on Skype

But not everyone has access to this digital world.

Poor connectivity

In the developed world, almost 85 per cent of households have a computer, compared with just 15 per cent in less developed countries.



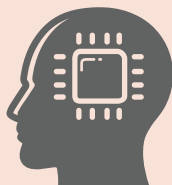
The internet gap

Less than half the world's population – 3.2 billion people – uses the internet. In the developed world, 80 per cent of people surf the web, compared with just 30 per cent in developing countries.



Artificial intelligence

In IQ tests, computers already beat three quarters of their human challengers. By 2025, machines will outsmart even the cleverest human brain.



Internet access

Just 5 per cent of people on low incomes in sub-Saharan Africa have gained access to the internet since 2014. In South Asia, the figure is even lower – 4 per cent – compared with 66 per cent in the developed world.



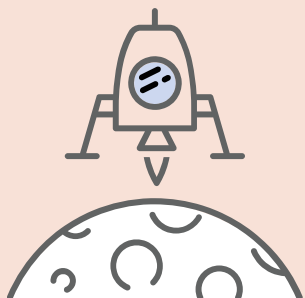
An uncharted future

Many of today's schoolchildren will be employed in an occupation that does not yet exist. In the USA, this applies to two children out of every three.



Out of this world

Nowadays, the average smartphone is far more powerful than all of NASA's combined computing for the moon landing in 1969.



Sources: Süddeutsche Zeitung, UN Data, UNESCO, World Bank



'People always fear change. People feared electricity when it was invented, didn't they?'

BILL GATES, founder of Microsoft

phone and can afford to buy a small data allowance. They have an idea for designing a technical innovation that would solve a local problem. But all they have is a shared mobile device and a basic tariff that only provides access for a short time or to a limited number of websites. The nearest free public Wi-Fi connection – if there is one – is in the town centre, and internet-enabled computers are only available for use in a school library during opening hours.

It is obvious that under these circumstances, this person cannot harness their full potential. And yet this is the reality in regions where mobile internet access is given priority. This raises serious questions about mobile internet access. How useful is it in reality? Isn't it creating a new digital divide?

\$25

buys you a basic computer nowadays.

Not just consumption: content creation counts

Limited internet access is better than none, according to conventional wisdom, and on the face of it, it is surely a sound argument. However, there is a risk that it will »



In *Makers*, Chris Anderson, bestselling author and a founder of the Maker Movement, describes how anyone can design and produce things using the internet – a revolution in manufacturing.

create a large group of internet users who are mainly consumers without the wherewithal to contribute or develop digital content of their own. Even if more people go online in the short term, they will not necessarily have equal opportunities in the longer term if this is their only way of accessing the internet.

Technological advances alone will not move us closer to the target. The digital divide is mainly the outcome of political failure, so we need sound policies that guide all activities in all sectors and have a lasting effect. Studies show that countries which have IT or broadband policies with clearly defined strategies and targets generally have more broadband connectivity – at lower prices.

Wanted: an internet policy roadmap

Policy frameworks must be put in place, based on a commitment to closing the gender gap and enabling universal and affordable access to the internet. What is needed is a clearly defined roadmap with quantifiable goals and

actions to cut costs and help more people gain internet access within a specified timeframe.

How can it work? Costa Rica shows how: it is using a state fund to subsidise the costs of devices and broadband access for individual users or programmes. With support from this initiative, low-income households, communities, schools and health centres are gaining access to the internet. Around 95 per cent of qualifying households are headed by women. For women and low earners, the programme is opening up a digital world filled with opportunity.

For long-term success, we need much more than technical innovation: we also need people who are effective advocates for ground-breaking policies and creative solutions, especially in developing countries. That is the seedbed on which the transformative power of digitalisation will unfold its true potential.

www.giz.de/expertise/html/1843.html



THE POWERLESSNESS OF USERS

Guest article by CONSTANZE KURZ

PROFILE

CONSTANZE KURZ is a computer scientist, author and activist. She is a voluntary spokesperson for Chaos Computer Club, a European association of hackers. She has received several awards for her work supporting democracy and civil rights.

How secure are the photos and messages on your mobile phone? Which apps are spying on you? Which security issues have been addressed, and which haven't? These have become everyday questions that we tend to push to the back of our minds. After all, who likes to live with the idea that someone is looking over their shoulder?

The crisis of confidence began a few years ago and has gradually deepened ever since. It has two sides: firstly, hardly anyone now believes in effective data protection by means of law. On the internet, you are essentially surrounded by professional peeping Toms. And since Edward Snowden, everyone knows about the mass state surveillance that – far from being curbed – is actually being expanded. Secondly, people know that computer security cannot be trusted and there is nothing they can do about it.

Digitalisation could be a chance to address this. Instead, networks are descending into battlefields of the future, full of state hackers from all different nations. There are dozens of stories in circulation about inadequate system security, data leaks and the abundance of 'big data' – at the expense of companies and normal users. The victims include parliaments, companies, heads of government and political campaigners, proving

that network and computer spies know no bounds.

Ultimately, the crisis of confidence in IT is collateral damage from the economic incentives created by the political and economic espionage of international intelligence services. Their troops of paid hackers besiege networks, financing an entire industry that sells security problems instead of fixing them. This is compounded by technology companies that generate income through clicks and whose job it is to build clear profiles of people based on their data usage.

These incentives prevent security and data protection from receiving the attention they deserve. We are already heavily dependent on the functionalities of this world and on mechanisms that protect our most personal data. What's more, we have known for some time that this dependency will only grow.

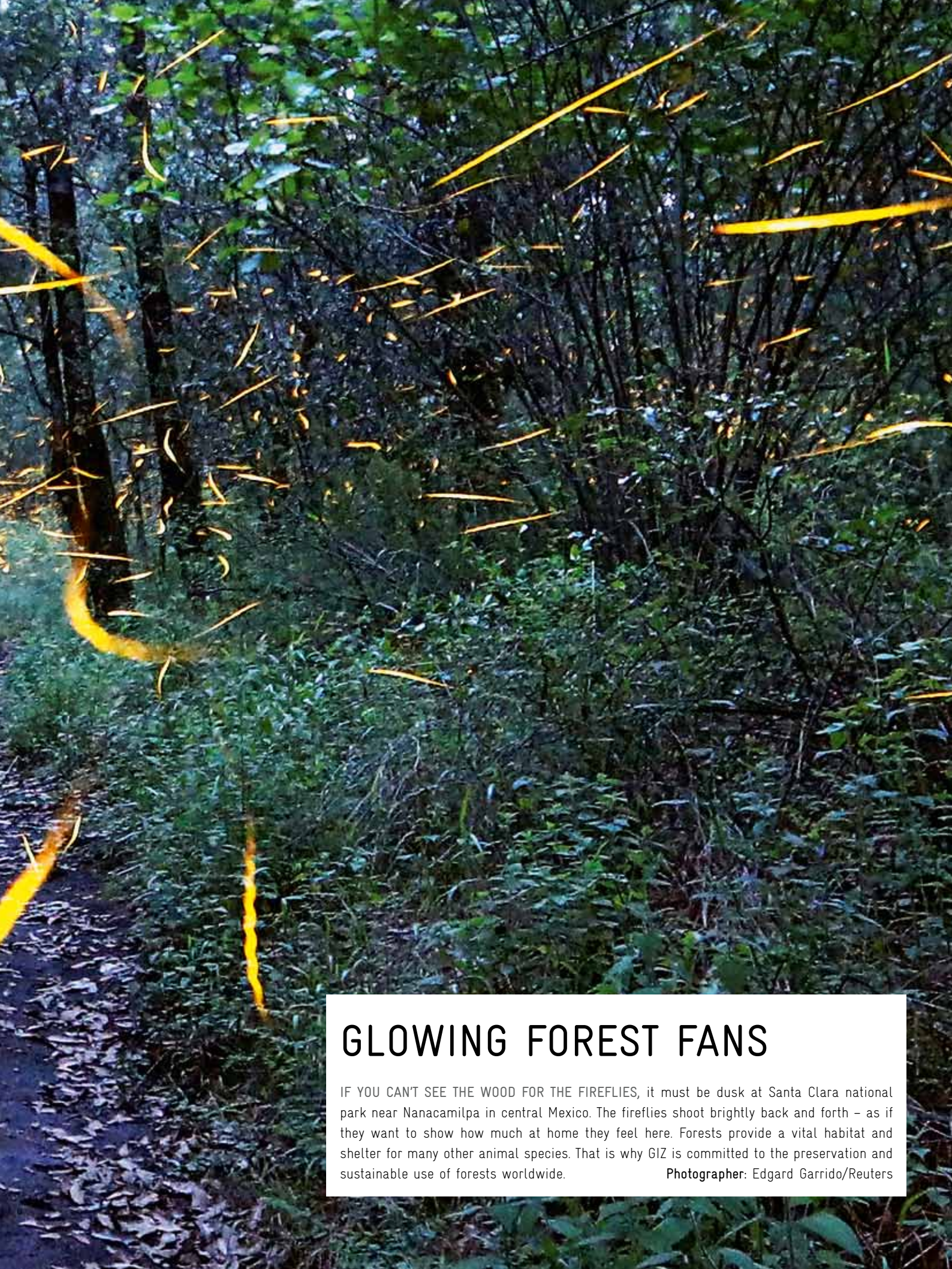
But what can we do – simply keep clicking? There are, of course, technological alter-

natives. We can use free software and ensure that our communications are properly encrypted. But, at the same time, it would be advisable to seek a political solution that really addresses the issue and provides other incentives. Companies with poor track records on data security should be held to account, and data companies should be legally obliged to ensure greater transparency.

When a substantial majority of users have been calling for more data protection and less surveillance for some time, it is also necessary to look to international political institutions such as the United Nations. The German Government would do well to stand up for more rights against surveillance in the Human Rights Council. Privacy is a fundamental human right that must be defended across borders, especially in the digital age and against the backdrop of international data companies.

With the German constitutional right to informational self-determination and the constitutional right to probity and confidentiality in information technology systems, the German Federal Constitutional Court has established far-sighted requirements for the digital future. The German Government should actively promote the implementation of these standards within the context of the United Nations.





GLOWING FOREST FANS

IF YOU CAN'T SEE THE WOOD FOR THE FIREFLIES, it must be dusk at Santa Clara national park near Nanacamilpa in central Mexico. The fireflies shoot brightly back and forth – as if they want to show how much at home they feel here. Forests provide a vital habitat and shelter for many other animal species. That is why GIZ is committed to the preservation and sustainable use of forests worldwide.

Photographer: Edgard Garrido/Reuters

CLIMATE CHANGE: AN EXISTENTIAL RISK

Millions of people are being forced to leave their homes because climate change is taking away their livelihoods. Lorenz Petersen explains why climate-induced migration is set to rise.

Extrême weather events caused by climate change are on the rise: in many regions, hurricanes, floods and droughts are forcing people to leave their homes. In 2016, 23.5 million people looked for a new home within their country of residence. In Bangladesh alone, six million poor people from rural areas moved to slums. Experts expect the number of climate migrants to rise in line with the extent to which the effects of climate change are felt – although this is not yet backed by scientific evidence.

We talk about climate migrants because climate change is not recognised as a cause of displacement. According to the Geneva Convention, the term refugee applies to any person who, owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality.

There are usually several reasons for climate-induced migration: rising sea levels, insufficient groundwater, erratic rainfall, saline soil. In most cases, the real reason is poverty: if a person has no prospects, a hurricane will often simply give them the push they need to try their luck elsewhere.

Another cause of migration is a lack of, or ineffective, development planning. It is often the poorest of the poor who settle in areas at risk of flooding. A wide range of metropolitan areas are affected, especially cities in developing countries such as Jakarta, Dhaka, Manila and Calcutta. Wealthy countries are better able to protect their inhabitants: the geography of the Netherlands, for example, is comparable with that of Bangladesh – large parts of the country lie at sea level or thereabouts. But the Netherlands is able to invest much more in coastal protection (around EUR 400 million per year). By contrast,

Bangladesh, which is among the countries most at threat from climate change, currently has no modern dykes.

Bangladesh is the first country in which the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH has launched a project designed specifically to address cli-



LORENZ PETERSEN is Director of the Climate Change, Rural Development, Infrastructure Division.

mate-induced migration. On behalf of the German Federal Ministry for Economic Cooperation and Development, we are building sanitation facilities, roads and water pipes in 19 slums. The local population has been involved in project work, with 1,400 people finding temporary employment. Some 14,000 inhabitants are benefiting from the improved infrastructure.

In more than 100 countries, GIZ is already engaged in long-term efforts to combat climate change and its various effects – one third of our projects are climate relevant. Half of these aim to reduce greenhouse gas emissions. In this way, we are supporting energy efficiency in buildings, the use of renewable energy and the climate-friendly expansion of public transport in many countries.

The other half of our climate-relevant projects aim to improve adaptability to climate change through, for example, urban and development planning, adapted agriculture and the preservation of mangrove forests to protect coastal areas. Climate risk insurance is also playing an increasingly important role: in Peru, we have organised insurance for around 300,000 farmers on behalf of the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety. In the event of crop failures due to weather-related disasters, they will now receive compensation quickly and be able to buy new seeds.

Unfortunately, there are also limits to what can be achieved through adaptation: if sea levels rise too much, resettlement measures will be unavoidable on some islands in the South Pacific. On Fiji, GIZ is supporting the relocation of villages to inland areas or higher ground on behalf of the German Government. In the village of Narikoso, for example, it has joined forces with local inhabitants and ministries to develop relocation guidelines that can be used as a model for the entire region. As well as encouraging extensive community participation and good planning of new roads and water pipes, the measures aim to offer alternatives to fishing as a source of income.

Previous 'Background' articles on GIZ's work can be found at: akzente.giz.de/en

COMMITMENT

Where GIZ is active, how it approaches new challenges and what its projects achieve:
three current examples from Ethiopia, Mali and Chad



FOR PEACE

MALI How GIZ is fostering reconciliation in this West African state, and helping the people address human rights violations.

Page 40

GREEN MIRACLE

CHAD Why the Abdallah family are now harvesting so many tomatoes on what used to be arid land that they even need help picking them. **Page 44**

THE STUFF THAT FUTURES ARE MADE OF

ETHIOPIA How Etsegenet Mitiku imagines her future as a manager in the textile industry – and why the prospects are bright. **Page 34**



THE STUFF THAT FUTURES ARE MADE OF

Ethiopia's textile industry is booming. Growing numbers of people are set to benefit from the new jobs it is creating, and an alliance with companies is helping to ensure that they have the right skills for the labour market.

TEXT UTA RASCHE PHOTOS MICHAEL TSEGAYE

The Ethiopian Government has set itself an ambitious goal: it intends to create 350,000 jobs in the textile industry by 2022. It has commissioned the construction of industrial estates for the new businesses, with their own wastewater treatment plants and a reliable electricity supply along with massive halls, available for lease to investors. In Hawassa, a town with a population of 300,000 around 270 km south of the capital, Addis Ababa, the Government's plan is already showing results. A total of 18 international textile companies have set up operations there, creating 20,000 jobs. In all, 12 industrial estates are planned across the country, with two already up and running.

But why is the Government placing such emphasis on the textile industry? Around the world, the industry has repeatedly hit the headlines with disasters such as the collapse of the Rana Plaza factory in Bangladesh in April 2013. More than 1,100 people died there and over 2,400 were injured. The accident – for which the company running the factory was responsible – shone a spotlight on working conditions in parts of the textile industry, including poor wages and low social, safety and environmental standards.

Ethiopian-manufactured checked shirts: an American company produces clothing at the Hawassa industrial estate in southern Ethiopia, where it has created many new jobs.

There has been substantial progress in Bangladesh since the Rana Plaza disaster. For example, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is helping to improve social and environmental standards in the textile industry. Working on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) and with financial support from the European Union, it has so far trained 10,000 managers and employees in areas such as fair pay, fire prevention, and working safely with chemicals. Working conditions have improved in more than 800 companies as a result, and 200,000 mostly female textile workers are now aware of their rights.

The Ethiopian Government has been monitoring developments in Bangladesh closely and has worked with German experts from the outset to expand its own textile industry. Ethiopia already has legislation on working time: the working week can be up to 46 hours, with a maximum of 10 hours' overtime. In building the new industrial estates, the Government is complying with rigorous environmental standards, because both it and manufacturers know that buyers from major fashion brands and consumers alike are placing increasing emphasis on sustainable production. Appropriate certification in areas such as wastewater treatment, emergency exits, accident prevention and fire prevention ensures the industry can compete on global markets.

The textile industry is a major driver of job creation. Ethiopia's current population of 100 million is continuing to grow, so the country needs jobs. Mulugeta Mergia (25) and Jemal Shiferan (26) are just two of those already benefiting from the boom in the textile sector: they are recent graduates in textile engineering, and over the past 10 months, they have been working for a US company at the Hawassa site that manufactures men's shirts. Mergia stands in a high, light-filled hall. A computer-controlled machine cuts the checked fabric into sections around a metre in length. Ten women then cut out shirt fronts and backs, sleeves, collars and pockets under guidance from the engineer.

Training is almost a guarantee of employment

To ensure that the skills of graduates like Mergia and Shiferan meet the requirements of businesses, GIZ is working in the areas of initial and continuing training in Ethiopia. Mergia has completed a six-week training course at the state-owned Ethiopian Textile Industry Development Institute in Addis Ababa, where around 400 graduates were trained on new machinery in the run-up to the opening of the Hawassa industrial estate. Every single course participant has found employment and since then, the Institute has trained 5,000 more textile engineers.

Right: Jemal Shiferan is responsible for a large warehouse full of textiles, yarns and buttons. The young engineer says much of what he learned during his GIZ training is proving invaluable in his work in the factory: 'I'm a lot more confident,' says the 26-year-old.

Below: Etsenget Mitiku wants to become a manager. The 24-year-old has been working at a textile factory in Addis Ababa for seven years. She is ambitious and has already been promoted to overseer: 'I work quickly and I've got a lot of energy,' says the young Ethiopian.



This additional skills development is important because universities in Ethiopia lack the technical equipment to offer practical, rather than just theoretical, training. It was not until they completed the six-week course that Mergia and Shiferan learned to use computer-controlled machines, to plan the manufacturing process and to carry out quality control. Shiferan says, 'For me, the training course was a sort of bridge between what I learned at university and what really goes on at work. It's made me a lot more confident.'

Ethiopia's 350,000 vocational school students also lack access to practice-based training. Working on behalf of BMZ, GIZ is also engaged in this area. At the national TVET training institute, which trains teachers for all the country's 900 vocational schools, curricula have been overhauled and improvements made in teaching quality. As well as textile engineering, the subject areas reviewed include the timber, metalworking and electrical trades.

Higher production levels boost wages

Very few of the owners of the clothing manufacturing companies in Ethiopia are locals. Most of them come from Bangladesh, China, India and Turkey. They bring experienced managers with them when they set up in Ethiopia, but many of the people they employ locally have never even seen the inside of a factory: they are typically from agricultural worker families, and many find training in a factory environment difficult.

The companies' response is to plan training centres in Hawassa and in Mekelle, in the north of the country. GIZ is supporting them in doing so. The local investors' association is GIZ's partner in Hawassa, while H&M and a Bangladeshi textile company, DBL, are the partners in Mekelle. As Pierre Börjesson, H&M's Africa representative, explains, 'We want to improve efficiency. Training is a very essential part of that.' The plan is for both centres to provide continuing training for up to 20,000 overseers, mechanics and quality controllers over the next few years. 'Raising productivity gives the supplier better possibilities to improve the worker's wages,' »

'Ethiopia's bridge to industrialisation'

Mr Tadesse, your textile company got off to a slightly shaky start in 2004.

What kind of challenges did you face?

We had to import fabric but found it difficult to source adequate quantities. That was one reason why our initial productivity was low.

How did GIZ support you?

One way GIZ helped us was in developing our employees' skills. It brought training experts over from Germany; they stayed for four weeks, analysed our working processes and set production targets for us. We learned, for example, the best way to design our production lines, and that helped us become more efficient.

And what impact did these changes have on your company's growth?

Seven years ago, we were producing around 20,000 garments a month. Now it's 20,000 a day. GIZ has also introduced us to the global market: our clients now include companies in Germany and the USA.

Wages in Ethiopia are lower than in Bangladesh and other countries with major textile sectors. Are they likely to rise in the years ahead?

Our employees learn quickly, and the seamstresses' productivity is likely to increase in the near future, which will of course increase pay levels. However, unemployment is very high in Ethiopia, so productivity is likely to increase more rapidly than pay.

GIZ is planning to organise the construction of workers' accommodation. Why should employers concern them-



FASSIL TADESSE, Chief Executive Officer of a textile company and President of the Ethiopian Textile and Garment Manufacturers' Association.

selves with better living conditions for their workforce?

Having their own apartment is usually out of the financial reach of ordinary Ethiopian workers, but they could potentially access shared housing, supported by the employer in a lease-purchase model, for example.

Why is the Ethiopian Government currently promoting the textile industry so energetically?

The industry is Ethiopia's bridge to industrialisation. It employs large numbers of people and has particularly high potential for growth. The textile industry is also very competition-oriented, meaning that young managers have excellent prospects. A bigger textile industry will bring on a new generation of young entrepreneurs who have the skills to play a major role in Ethiopia's future development. By building up a strong textile industry, we will develop Ethiopia very rapidly.



adds Börjesson. Many Ethiopian workers are not paid a living wage: there is no statutory minimum wage, and almost one third of the population lives in extreme poverty.

Etsegenet Mitiku is one of those whom the initiative has helped out of poverty. The 24-year-old has been working in a textile factory on the outskirts of Addis Ababa for seven years. The factory is run by a Turkish company and produces T-shirts, blouses and baby clothes for the German market. The company employs 7,000 people. When she started as an unskilled worker, Mitiku earned just 400 Ethiopian birr a month (around EUR 12) but she now leads a team of 16 seamstresses and earns the equivalent of EUR 117 a month. The average monthly wage in Ethiopia is EUR 28. Mitiku and her husband, who is also employed, are able to rent an apartment, buy food and pay a family member to look after the apartment and their child.

Mitiku checks that seams are straight and buttons firmly attached. She then fills in a card for each of the women in her team, listing how many items each has completed that day. The target is 30 sets of children's pyjamas. The factory manager says that Ethiopian workers are not as productive as those in Asia and that the wages reflect that. Nevertheless, the starting



Also available on the akzente website:
Etsegenet Mitiku talks about her plans.
akzente.giz.de/en

Above: The seamstresses work an eight-hour day and have an hour's lunch break.

Centre: This factory employs 2,000 people and makes shirts and jeans for an American fashion chain.

Below: A street in Addis Ababa. The newly created jobs in the textile industry have given many women a secure income for the first time.

wage rises as soon as an employee is able to use all the different types of sewing machine in the factory. Aberash Mitike is 22 and has been working as a seamstress for six years. She now earns the equivalent of around EUR 70 a month. An ordinary seamstress cannot earn enough to rent a room of her own, so two or three single women typically share a room. Their standard of living is very basic: they cannot afford meat and eat rice and vegetables.

The seamstresses work from 08:00 to 12:00 without a break. They have an hour for lunch, which they eat in the factory canteen: the company provides a midday meal free of charge. The employees then resume work until 17:00. They are also entitled to paid holiday – 14 days a year to start with, with one further day for each year of service. Mitiku completed ten years of school education and would like to continue studying: ‘I’d love to be a bookkeeper,’ she says. She is aiming to work her way upwards in the factory, adding ‘There are a few Ethiopian managers here, and they are my role models.’

Purchasers from international companies attend the annual textile fair in Addis Ababa. The fair ran for the third time in 2017, but this was the first time it was organised in cooperation with Messe Frankfurt, the world’s largest trade fair organiser. GIZ has played a vital part in making the textile fair a regular fixture and establishing the link with Frankfurt.

H&M’s Pierre Börjesson thinks that Ethiopia offers enormous potential for the textile industry: ‘Right now, fabric is imported, e.g. cotton from India. But it’s possible to cultivate sustainable cotton here, the conditions for that are fantastic. Energy costs are low, too, and goods do not have to travel far to Europe.’

It looks very much as though the Ethiopian Government’s plans are working – and the textile industry is indeed driving the country forward as it transforms from an agricultural society to an industrialised one.

› CONTACTS


TRAINING PROJECT:

Nicola Demme > nicola.demme@giz.de

SUSTAINABLE TEXTILE MANUFACTURING:

Ulrich Plein > ulrich.plein@giz.de

ETHIOPIA



CAPITAL:
Addis Ababa

POPULATION:
approx. 100 million

GROSS DOMESTIC PRODUCT PER CAPITA:
USD 707¹

ECONOMIC GROWTH:
7.6 PER CENT¹

HUMAN DEVELOPMENT INDEX RANKING:
174 (out of 188)

Source: ¹ World Bank 2016

JOBS IN THE TEXTILE INDUSTRY

PROJECT:

A SKILLED WORKFORCE FOR ETHIOPIA’S ECONOMY:
CAPACITY BUILDING IN THE EDUCATION SECTOR

COMMISSIONED BY:

GERMAN FEDERAL MINISTRY FOR ECONOMIC COOPERATION
AND DEVELOPMENT

LEAD EXECUTING AGENCY:

ETHIOPIAN MINISTRY OF EDUCATION

TERM:

2015 TO 2018

Ethiopia’s economy is growing rapidly and the country has a young population, but unemployment is high. The Government is keen to create jobs in the textile industry. With its skills training programme, GIZ is helping to ensure that the training undergone by the country’s 350,000 vocational school students and 750,000 university students reflects the needs of the labour market. The programme has already trained more than 6,100 teachers to go on to teach at the country’s 900 vocational schools. On behalf of the German Federal Ministry for Economic Cooperation and Development, GIZ is also advising companies on compliance with international social and environmental standards. The objective of the Sustainable Production of Textiles and Clothing programme is to work with businesses to construct apartments for their workforce. And GIZ is collaborating with the Ethiopian Government to draft regulations on sludge to ensure that residues from factory wastewater are used sustainably.

www.giz.de/en/worldwide/18871.html

FOR PEACE IN MALI

Germany is offering support to the people of Mali as they move towards reconciliation and stability. The focus is on security, democracy and investigating human rights violations in this fragile West African state.

TEXT BRIGITTE SPITZ



There is one mother's fate that Dr Yaya Diarra simply cannot forget. The woman was living in a village in Gao, in the north-east of Mali in 2012, when the area fell first to separatist rebels and then to Islamist terrorists. Her husband, a government employee, was one of the first to be threatened. The family decided to flee, but they were caught by armed attackers, who stole everything they had. The fighters shouted at them to run down the hill. The parents turned and ran with their children. Just as the woman began to hope that they had really escaped with their lives, the men behind them began to shoot. Her husband and one of their twins fell. They died the same night. The woman too was hit. By sheer force of will, she managed to drag herself to the next village. Today she lives in Bamako, Mali's capital city, where she has received psychological support from Yaya Diarra after reporting on her dreadful experiences to the Truth Commission.

In this multi-ethnic state, the Commission is intended to foster reconciliation and strengthen democratic structures. Many of Mali's 18 million inhabitants have been traumatised by the unchecked violence and severe human rights violations they experienced during the civil war. 'We must work with these sections of our society to build trust. The Truth Commission must take a proactive approach and seek contact,' explains Ag Attaher, who is in the oasis town of Timbuktu to talk to victims of the atrocities. 'It is a huge challenge, because many people have been victims of rebellion and violent repression more than once. They suffered for years, while the state did nothing. Now they no longer believe that public bodies will help them.' Like Diarra, Attaher has been trained by GIZ to work with traumatised individu-

Germany is working in Mali so that children, women and men can look forward confidently to the future.

INTERVIEW



ANNE-KATRIN NIEMEIER
GIZ Project Manager in Mali

Ms Niemeier, Mali is an extremely unstable country. How does that affect your work?

GIZ staff cannot travel to all parts of the country because of security considerations. We work with local partners, small NGOs and representatives of civil society. Committees that bring together different ethnic groups exist in the various regions. They decide what their local community needs. We then get this information and provide assistance. 'Remote management' of this sort is very complex, and you need stamina.

Can you see success stories already?

There are a lot of small steps. We have managed to get former rebels and government representatives, i.e. the former adversaries, to agree on the content matter of our training manual about the peace agreement. At various events this information is made available to all Malians in a variety of local languages. Here not everybody can read a newspaper or find out about the peace agreement on the internet. The level of interest is high. The Truth Commission has already opened five regional offices. It sends teams out into isolated regions to investigate human rights violations.

You can read the complete interview about GIZ's work in Mali at akzente.giz.de/en.

als, an extremely difficult task. Today, they both work for the state Truth Commission. More than 100 Commission employees have benefited from training in interview techniques and victim support. So far they have recorded statements from about 6,000 witnesses of severe human rights violations.

Alongside further stabilisation measures, these efforts to address Mali's recent past and campaigns to inform the people about the peace agreement are at the heart of GIZ's engagement in the country on behalf of the German Federal Foreign Office. Support for peaceful and democratic development in Mali is part of Germany's long-term engagement. Parallel to this, though, Germany is providing direct support for the Malian people. One example is the measure financed by the German Federal Ministry for Economic Cooperation and Development that is improving water supply and sanitation in rural parts of the country.

Working in every region with all sections of the population

GIZ experts are working in every region of Mali, with all sections of the population, often with the support of local partners. They have already been able to reach several million Malians. Germany's work in this fragile state is based on closely interconnected environmental, foreign, development and security policies. That is why the Federal Republic of Germany is not only engaged in civilian missions in Mali: Bundeswehr contingents are also part of the EU's EUTM mission and the United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA).

But since the crisis first erupted in 2012, Mali has been unable to offer its people safety or security, and it still has a long way to go. Government troops and UN soldiers patrol dusty roads, armoured vehicles feature prominently, while news agencies report one terrorist attack after another. The peace agreement between the government elected in 2013 and some of the armed groups is being



Top: An armoured UN vehicle patrols dusty roads around the north-eastern desert town of Gao.



Bottom: The young patient and his mother are some of the 100,000 people in Gao region for whom the local hospital is the only source of medical assistance.

implemented sluggishly at best. The volatile security situation is an obstacle to development in this country, which is already one of the poorest in the world (see box). And large sections of the population refuse to recognise the government, which has no presence in some parts of the country, and in others is able to provide only limited services for the local population.

‘Concrete improvements in living conditions help gradually restore trust in state structures,’ underscores GIZ project manager Anne-Katrin Niemeier. She talks regularly with Bundeswehr representatives stationed in Gao to ascertain where practical assistance is needed.

One example is the restoration of the region’s only hospital. Today the hospital’s toilets and washrooms are once again operational, while the courtyard and other parts of the

building in Gao are no longer flooded during the rainy season. Some 100,000 people benefit from these improvements. Two of them are Rachida Maïga and her husband. ‘A year ago I brought my husband here to the hospital. The toilets and showers were in a deplorable state. It was disgusting,’ she tells us. ‘But now everything has been renovated.’

Germany’s engagement is designed first and foremost to restore trust between the opposing groups in the north of the country. In the citizens’ dialogue, facilitated by GIZ, participants agreed on common projects that serve to foster reconciliation and social cohesion. In Gao, a particularly critical region, each of the 19 municipalities had implemented at least one of these projects by the end of 2017. More than 150,000 people benefit.

Ménaka Orchestra revives the country’s rich musical culture

The concrete form this can take is demonstrated by the orchestra in the new district of Ménaka, established in the wake of the crisis. The orchestra has received guitars, drums, a piano, tuba and other instruments. Now the musicians can play again at weddings and in competitions. Why is that so important in a crisis-ridden country like Mali? ‘Music is an important and integral part of our identity. It is very important for the pride of the region,’ explains Mahamadou Assalia Maïga, Ménaka’s musical director.

In the past, Mali was known around the globe for its vibrant musical culture thanks to the Festival au Désert. In 2012, Islamist terrorists banned dancing and music for entertainment in the areas under their control. The musical instruments for Ménaka are to bring the people together again. ‘They belong to the entire region, and everybody may use them,’ stresses Monsieur Maïga.

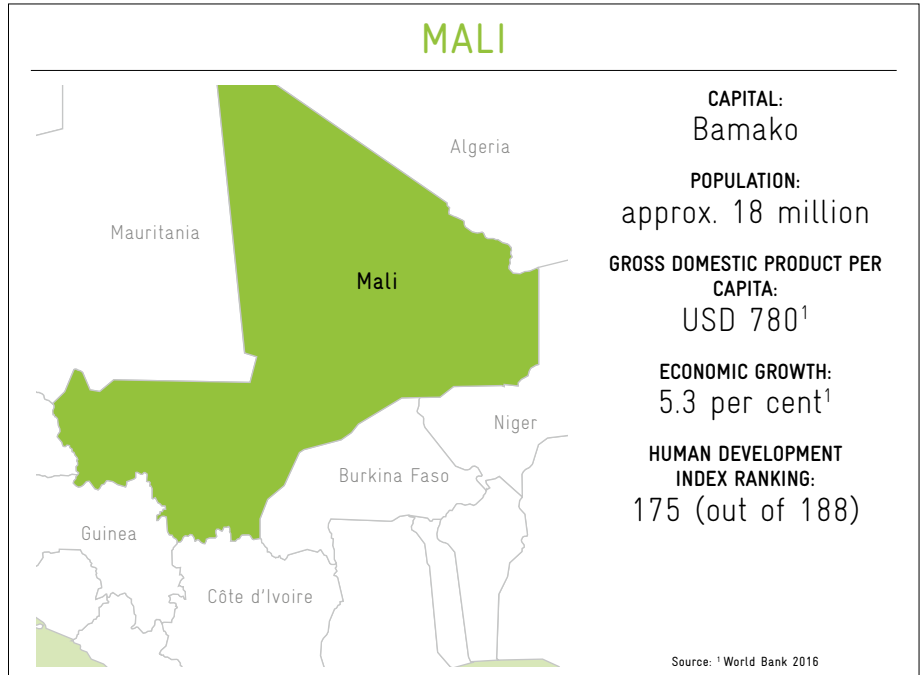
Part of GIZ's broad-based approach in Mali involves providing information about the peace agreement signed in Bamako in 2015. Many Malians expect nothing of the agreement – for the simple reason that they know nothing about it. That is why GIZ and the Malian Ministry of National Reconciliation have launched an information campaign. A drama group plays small venues, explaining the contents of the peace agreement in the form of sketches performed in the local languages. In this way even illiterate Malians can find out about the peace agreement. Some 55 performances to audiences of up to 1,000 have already introduced tens of thousands of Malians to the agreement.

Many in the audience hear for the first time about the work of the Truth Commission during these performances. It plays an important part in implementing the peace agreement. 'In spite of the ongoing crisis in the country, or perhaps precisely because of it, it is crucial for all Malians to establish the truth and come to terms with everything that has happened,' says Ouleymatou Sow Dembele, commissioner for victim support. 'A local proverb says: an infected wound cannot heal. For us that means that there can be no lasting peace until we establish the truth and no reconciliation without redress.' But she knows herself how much courage is needed to speak out against the perpetrators.

The mother, whose story Yaya Diarra can never forget, recognised the leader of the group that murdered her husband and her child. Their former neighbour still lives unchallenged in their village. The woman is now ready to speak out at a hearing of the Human Rights Commission – so that the truth is heard.

› CONTACT

Anne-Katrin Niemeier >
anne-katrin.niemeier@giz.de



NETWORK FOR RECONCILIATION

PROJECTS:

SUPPORTING THE STABILISATION AND PEACE PROCESS IN MALI, SUSTAINABLE DEVELOPMENT OF THE WATER AND SANITATION SECTOR IN MALI

COMMISSIONED BY:

GERMAN FEDERAL FOREIGN OFFICE, GERMAN FEDERAL MINISTRY FOR ECONOMIC COOPERATION AND DEVELOPMENT

LEAD EXECUTING AGENCIES:

MALI'S MINISTRY OF NATIONAL RECONCILIATION, MINISTRY OF ENERGY AND WATER, MINISTRY OF THE ENVIRONMENT

TERM:

2016 TO 2019 AND 2015 TO 2019

GIZ is assisting Mali on behalf of the German Federal Foreign Office to stem the conflict that erupted in 2012 between the Tuareg, Islamist rebels and the government. The contents of the peace agreement are being taken to the people across the country in the form of plays and brochures in 13 of the country's languages. So far the message has been brought to hundreds of thousands of people. GIZ is also training the staff of the Truth Commission. They have already recorded statements from more than 6,000 witnesses of human rights violations. The water project implemented by KfW and GIZ, and financed by the German Federal Ministry for Economic Cooperation and Development, is helping restore state services. Since 2015, about 900,000 people have been given access to safe drinking water and sanitation.

www.giz.de/en/worldwide/29088.html / www.giz.de/en/worldwide/41927.html

GREEN MIRACLE

In the past, the Abdallah family barely grew enough tomatoes for themselves, but now they even need helpers in their fields. How arid land is becoming fertile again in Chad.

TEXT AND PHOTOS KATRIN GÄNSLER



It is just after sunrise and Mariam Adam already has her hands full. The slim woman mixes a porridge of millet and rice for her large family. Sheik Saleh, who has just learned to walk, is first in line. The youngest son of the Abdallah family sits happily on a large blanket, eating from a white plastic bowl. One after another, his siblings sit down next to him. 25-year-old Mariam Adam gives each of her children breakfast.

'We have three meals a day,' says father Abdallah Mahamat Nour. He sits a little to the side on a woven mat, watching his six children and his niece, who lives with the family. Breakfast, lunch and supper are by no means something that Chadians can take for granted. The central African state, home to just over 14 million people, is one of the world's poorest countries. The nation ranks 186 out of 188 on the United Nations Development Programme's Human Development Index. Almost 90 per cent of the population lives below the poverty line, yet over the past few years Chad has taken in some 400,000 people fleeing neighbouring countries, not least as a result of the activities of Islamist group Boko Haram's terrorist militia.

It is a rocky and sandy road to the Abdallah family's home. The route from eastern Chad's largest city Abéché is dominated by dull yellow. However, the landscape suddenly turns green when you reach the valley around Baïbor and 16 other settlements. There are trees, bushes and plants growing everywhere. Many smallholders are out in the fields today, harvesting millet.

Abdallah Mahamat Nour intends to pick the first tomatoes of the season from his



'Having access to water for crop cultivation positively impacts the basic supply situation of entire families. It's true to say that children are now better nourished.'

AMHARBA WELETNA works for GIZ in Chad. Read an interview with her at akzente.giz.de/en.

bushes. Just after 7 am, when the heat is still bearable, is the best time for doing so. The 43-year-old has handed several wooden baskets to his oldest daughter Aché and these baskets are now hanging on the saddle of the donkey waiting patiently in front of the farmyard. The animal carries Aché and her younger sisters to the field almost two kilometres away. The girls are helping their parents while they are still on school holidays.

In the field, the smell of tomatoes hangs in the air. Farmed by Abdallah Mahamat Nour, this plot of land is around the size of

three and a half football pitches. 'In the past, I couldn't do anything with this land, as it was bone dry.' The idea of growing something as sensitive as a tomato plant was inconceivable, but now he points to a green hose that runs across the field from a small well – irrigation is no longer a problem here. The farmer crouches down and picks large, juicy tomatoes to sell at the market in a neighbouring village the next day.

The green miracle in this desert-like area was all made possible by walls built out of baked bricks. Such walls are a common sight in the regions of Ennedi, Batha and Wadi Fira, where the village of Baïbor is also located. Some are inconspicuous, while others can be up to two kilometres long. These water-spreading weirs ensure that, following rare, but heavy rainfall, the water from the wadis is held back and does not run off the dry, hard earth as quickly. A stepped system now retains it for longer in collecting tanks, stopping it from percolating away as fast. In this way, key groundwater reserves are being built up once again. The soil is now covered with plants, which slows evaporation, thus enabling the soil to store water for longer.

Preventing conflict over water

Kagne Pombe, Deputy Secretary-General at the Ministry of Agriculture, stresses the importance of having access to water. 'Climate change has given rise to two trends in Chad: it either doesn't rain at all or it rains too much.' He says that because large sectors of the population live in poverty and have no surplus funds, they are hit particularly hard when rains fail and plants dry up.

The water-spreading weirs are not only vital for agriculture and for supplying people with water directly; they also serve as a meeting place for herders with their camels, cattle and goats. Some days, they water as many as 10,000 animals at the weirs. Livestock breeding is often the only source of income for people in the Sahel region. The weirs are use-

Bountiful tomato harvests for the Abdallah family: water-spreading weirs ensure regular irrigation and high yields.



Top left: The donkey is loaded up with water supplies. The water table along the wadis has risen significantly as a result of the water-spreading weirs.



Top right: In the summer, the children help to bring in the harvest, which also pays for their school fees.



Bottom right: The water-spreading weirs are built using baked bricks. Many cattle herds are watered here.

ful to farmers and herders alike, and also serve to prevent tension and conflict arising over water supplies, not least between locals and refugees.

Heading to the market by car instead of donkey

Since 2012, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH has been working in four of Chad's eastern regions on behalf of the Swiss Agency for Development and Cooperation (SDC). GIZ International Services is using its expertise there to improve agricultural practices and thereby ensure food security. GIZ has had almost 150 water-spreading weirs built by local companies to irrigate a total area of 4,022 hectares in 284 valleys. The Abdallah family are one of around 15,000 households benefiting from this initiative. Smallholders were also provided with seed and given training at their agricultural cooperatives. All in all, liv-

ing conditions have been improved for more than 110,000 people.

The Abdallah family's harvests are now so large that they require the assistance of two neighbours. They fill one bucket after another, while Mariam Adam sits in the shade under a tree and washes the tomatoes. She is more than happy with the harvest. 'You can't even compare how much we harvest now compared with in the past. Back then, the donkey carried the tomatoes to market. Now, we often have to hire a car.' The situation is similar for other families, who have increased their incomes by around 50 per cent on average.

In the meantime, Abdallah Mahamat Nour has cut large tufts of grass from the fringes of the tomato field and is using them to line his baskets. He works with quiet concentration, chatting briefly to his wife every now and again. They suddenly both laugh. In the past, unpredictable rainfalls often caused them major problems. The family owns

around five hectares of land, but they could not earn a living from it. Like many other men in the region, Abdallah Mahamat Nour had to regularly look for work in Abéché and even in the capital N'Djamena.

The 43-year-old speaks openly about the problems of migrant workers: 'Being away all the time was no good for our relationship. I often had sleepless nights as a result.' Even now, it is still normal for many men to leave their families behind in their villages in order to find work. The women remain at home and have to take care of the work in the fields as well as looking after their families.

Their daughter has different plans for her future

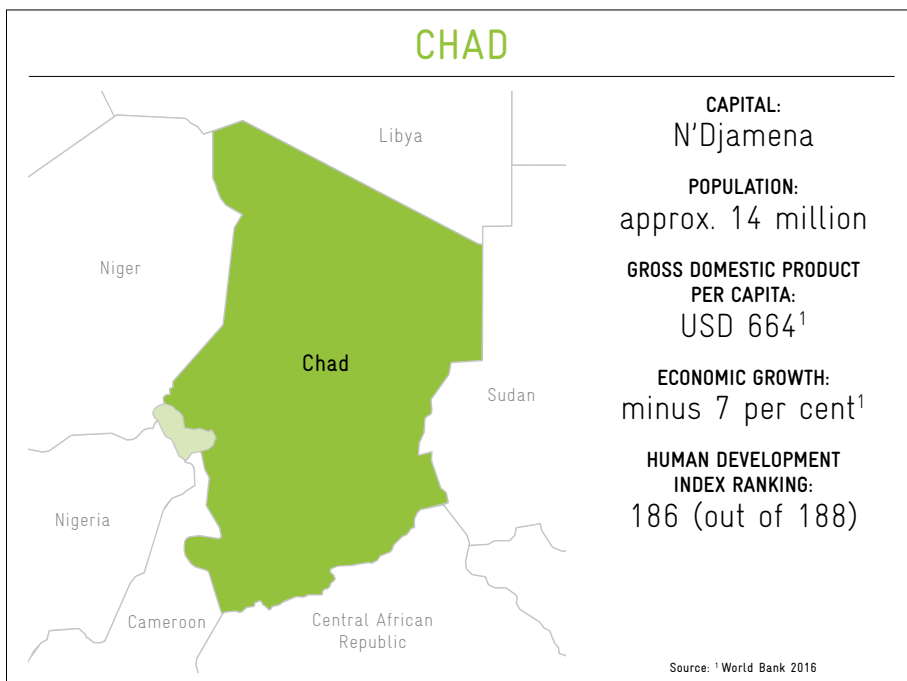
Aché helps her father load up the last few tomatoes. Today, the family harvested six full baskets, each of which will bring in at least CFA 7,000 (almost EUR 11.00). The family intends to use their earnings among other things to pay the school fees for the year ahead, which come to the equivalent of EUR 15.00 per child. Two more of the children now go to school in addition to Aché.

Mother Mariam Adam expects that all of her children will attend school. For many families in Chad, the situation is different. UNESCO estimates that only one in four children complete their primary school education. Only in South Sudan is the proportion smaller. 'I only went to Koranic school myself,' says the mother, sounding a little embarrassed. 'As girls, it was normal back then for us to get engaged at 14 or 15, marry, make a home and have children.'

Their daughter Aché has different plans for her future. She is looking forward to going back to school shortly, as it will help her on her way to achieving her goal of becoming a nurse one day.

> CONTACT

Cletus Degboevi > cletus.degboevi@giz.de



WATER IN THE DESERT

PROJECT:

WATER MANAGEMENT USING WATER-SPREADING WEIRS IN THE SAHEL REGION OF CHAD

COMMISSIONED BY:

SWISS AGENCY FOR DEVELOPMENT AND COOPERATION

LEAD EXECUTING AGENCY:

MINISTRY OF ECONOMY, PLANNING AND INTERNATIONAL COOPERATION, CHAD

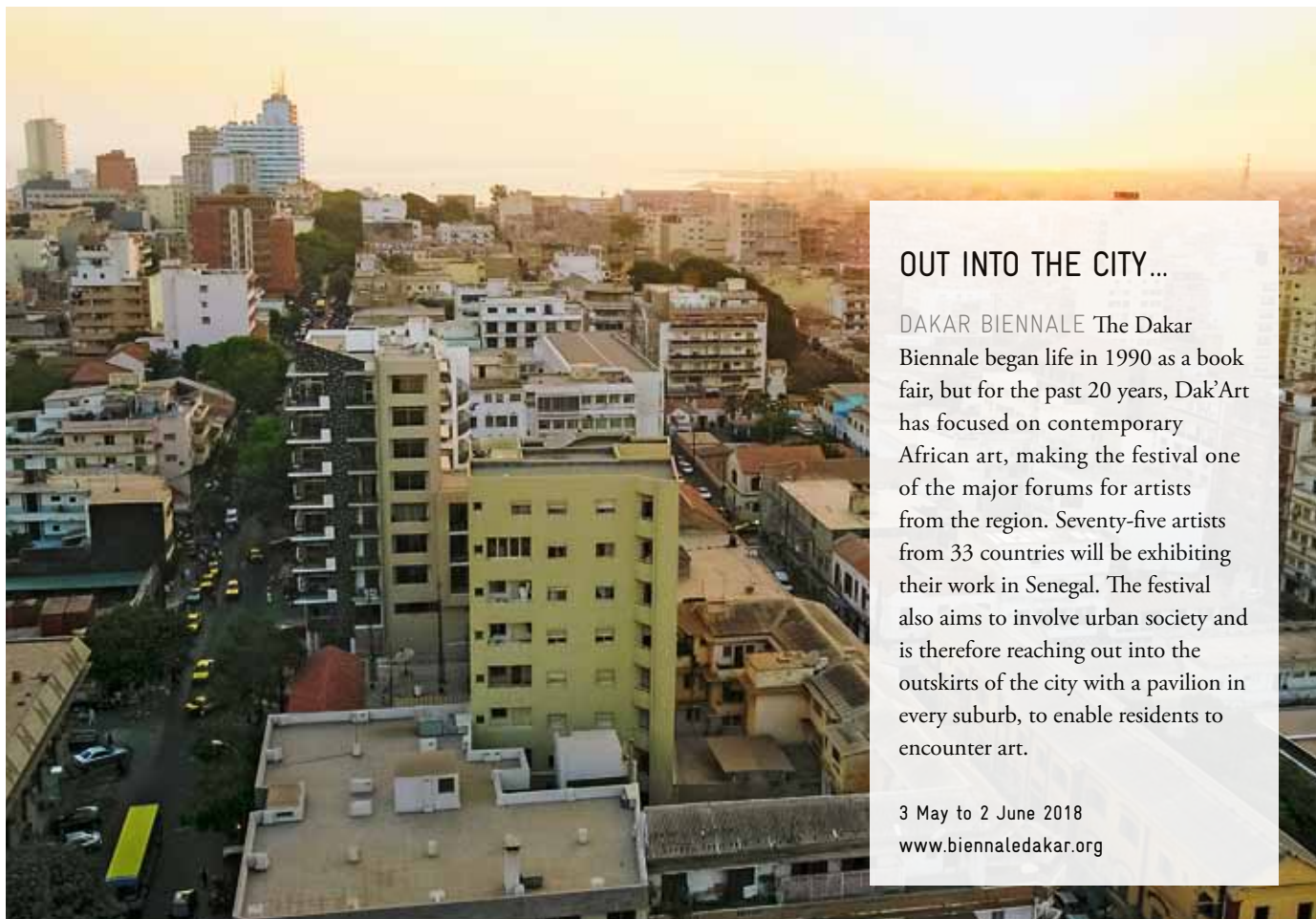
TERM:

2015 TO 2018

Water supplies for people and animals are extremely limited in the Sahel region of Chad in central Africa. Climate change is also leading to soil degradation. Water-spreading weirs are an effective means of making dry valleys fertile again. These weirs help to store water from the extremely rare rainfall, slowing the percolation of the water and thereby allowing groundwater reservoirs to develop. GIZ has had almost 150 water-spreading weirs built by local companies in eastern Chad, allowing an area the size of more than 5,500 football pitches to be irrigated for vegetable growing. The harvests are stabilising the food supply and herders can also water their animals at the weirs. All in all, living conditions have been improved for over 110,000 people in the region.

www.giz.de/en/worldwide/316.html

EDITOR'S PICKS



OUT INTO THE CITY...

DAKAR BIENNALE The Dakar Biennale began life in 1990 as a book fair, but for the past 20 years, Dak'Art has focused on contemporary African art, making the festival one of the major forums for artists from the region. Seventy-five artists from 33 countries will be exhibiting their work in Senegal. The festival also aims to involve urban society and is therefore reaching out into the outskirts of the city with a pavilion in every suburb, to enable residents to encounter art.

3 May to 2 June 2018
www.biennaledakar.org

...AND INTO A READER'S PARADISE

BUENOS AIRES BOOK FAIR Around 1.2 million people attend the Buenos Aires International Book Fair every year, making it Latin America's largest literary convention. This year's Fair is the 44th, and visitors will be able to catch up with the latest book releases and choose between around 1,000 events, including readings, discussions and book presentations. Each year, the organisers invite a city to be the guest of honour, and this year's will be the Uruguayan capital, Montevideo.

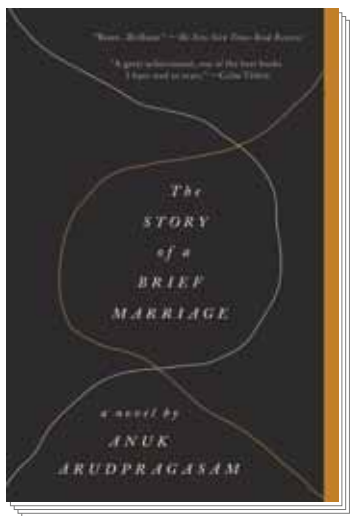
26 April to 14 May 2018
www.el-libro.org.ar/buenos-aires-book-fair



**44.^a Feria
Internacional
del Libro
de Buenos Aires**

LITPROM RECOMMENDS

Litprom – the Society for the Promotion of African, Asian and Latin American literature – provided these reviews for akzente. The titles were selected from Litprom’s list of best new novels. www.litprom.de



THE STORY OF A BRIEF MARRIAGE

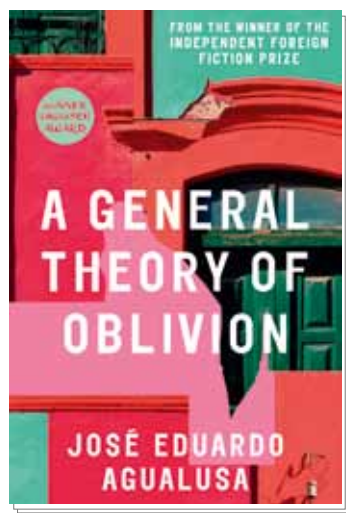
SRI LANKA Can tenderness exist in a violent world? And is it possible to write tenderly about violence? With a rare phenomenological precision, this young author portrays the rigours of meeting the most basic human needs in the midst of war and the desperate attempts of victims of persecution and harassment to preserve a modicum of dignity.
Ilija Trojanow, author and literary critic

Anuk Arudpragasam
Flatiron Books, 208 pages

A GENERAL THEORY OF OBLIVION

ANGOLA/PORTUGAL Luanda 1975, on the eve of the Angolan revolution. Ludovica is threatened by diamond thieves; her sister and brother-in-law have vanished; and there is chaos. Ludovica finds refuge in a bourgeois apartment, where she enjoys sanctuary for many years. A number of fates intertwine to create an entertaining artistic mosaic of (post)colonial Angola.
Andreas Fanizadeh, Literary Editor for Die Tageszeitung

José Eduardo Agualusa
Translated from Portuguese by Daniel Hahn
Harvill Secker, 256 pages



PUBLICATIONS



WORLD BANK SAFEGUARDS REVIEW

Available in German,
Philipp Dann and
Michael Riegler

‘Safeguards’ are what the World Bank calls its internal guidelines, designed to ensure that the Bank’s investment projects are socially and environmentally sustainable. This report evaluates the World Bank’s new Environmental and Social Framework, which replaces the former safeguards.



NAVIGATOR TO SUPPORT ECONOMIC DIVERSIFICATION

Available in English,
Fitsum Weldegiorgis,
Saleem Ali and
Kathryn Sturman

In a diversified economy, risks are spread widely, so if one sector is doing badly, the whole country does not suffer as a result. Yet many states continue to depend on a small number of products and sectors. This study proposes political and financial instruments to help avoid excessive economic concentration.

GIZ publications can be downloaded or ordered free of charge from www.giz.de/publications



HELPING HEROES: GERMAN DISASTER RELIEF AROUND THE WORLD

Available in German,
Ferdinand Bitz
and Manfred Speck;
Lau-Verlag

The German Red Cross has published a Festschrift to mark the 80th birthday of its long-serving President Rudolf Seiters and to pay tribute to all those who work with victims of conflict and disaster around the world. The volume includes contributions and analysis from representatives of the political, social and academic worlds.



GIZ Profile
giz

From: Kadidja Dembele
To: all akzente readers

Greetings from an administrative manager

Today, 12:08

Bonjour!

My father worked for the United Nations, so I moved countries every three years while I was a child, and later just kept on moving around. Since 2012, though, I've been based in Tunis.

I studied agricultural economics and then completed a postgraduate course in banking and finance. My first job was with an audit firm. One of the company's clients was GIZ, which is where I first came across my current employer. Among other countries, I've worked for the company in Mali, Morocco, Senegal and Syria.

The country office in Tunisia has expanded considerably since the Arab Spring. Germany now provides substantial support for Tunisia. Playing a part in managing the changes was a challenge but also an opportunity. When I first arrived, the office employed 65 people; now, it's 275. Our priority areas are agriculture and natural resources, sustainable economic development and employment promotion, regional development and governance, and energy and climate change.

My area of responsibility is complex. As the Administrative Manager, I need to know about financial administration, human resource management and project management, to name just three areas. What I like about my job is the multicultural nature of what I do. And I'm really motivated by seeing how staff I've recruited develop and grow.

When I'm not working, I'm a member of a sports club and I run with a group of friends. Otherwise, I spend time with my husband and 14-year-old son. He loves Tunis and integrated very quickly. Every time we plan to move to a new country his first question is always 'Will I be able to play football there?'

Best wishes from the Tunisian sunshine,

Kadidja Dembele

GIZ is always looking for experts for its projects. Interested? Why not visit our 'Jobs and careers' page: www.giz.de/careers.

SUSTAINABILITY

A look back at a project and its results

PROJECT:
COMBATING VIOLENCE
AGAINST WOMEN IN LATIN AMERICA –
COMVOMUJER (REGIONAL PROGRAMME)

COMMISSIONED BY:
GERMAN FEDERAL MINISTRY FOR ECONOMIC COOPERATION
AND DEVELOPMENT

TERM:
2010 TO 2018

THEN: Machismo and violence against women are rife in Latin America. It is estimated that around one woman in three is subject to physical or sexual violence in the Andes region and in Paraguay alone. The impact on their lives is considerable, but violence also has economic consequences, for example when the victims are unable to work. Academic research commissioned by GIZ shows that every year, medium-sized and large companies in Bolivia, Paraguay and Peru alone lose more than EUR 14 billion as a result of violence against women. Yet without a sound statistical basis, neither companies nor government nor civil society had a grip on the real scale of the problem.

NOW: More than 400 companies are involved in prevention through campaigns and training. Some work alone, others in cooperation with the state or civil society. So far, almost 30,000 people in Bolivia, Ecuador, Paraguay and Peru have received training. The issue has a high social profile thanks to public awareness campaigns, which have already reached over 60,500 people. 1,800 journalists have been trained, and following advice from GIZ, Ecuador's telecommunications company CNT has developed an emergency call app: pressing a single key will connect the caller to the emergency services number. The app is preinstalled on all CNT smartphones, so nobody has to request it specially. And to put a stop to violence against women in the first place, children and young people are being made aware of the issues through a learning circuit.

AKZENTE

Publisher: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Registered offices: Bonn and Eschborn, Germany
• Friedrich-Ebert-Allee 36 + 40, 53113 Bonn, Germany
Tel. +49 228 44 60-0, Fax: +49 228 44 60-17 66
• Dag-Hammarskjöld-Weg 1-5, 65760 Eschborn, Germany
Tel. +49 61 96 79-0, Fax +49 61 96 79-11 15

Sabine Tonscheidt,
Director of Corporate Communications
Email: akzente@giz.de

Internet: akzente.giz.de/en

Responsible: Anja Tomic, Deputy Director of Corporate Communications (GIZ)

Content concept and editing:
GIZ: Uta Rasche (editor), Kerstin Nauth
FAZIT Communication GmbH: Helen Sibum (project management), Friederike Bauer, Judith Reker, Brigitte Spitz, Oliver Hick-Schulz (layout), Corinna Potthoff (photo editing)

English translation: Hillary Crowe, Janet Fraser, Lynne Jagau, Jodie McGilvary, Matthew Popplewell, Judith Steinau-Clark, Gillian Lester (GIZ Language Services)

Proofreading: textschriftmacher

Graphic design/lithography:
FAZIT Communication GmbH

Printed by: Druckerei Lokay e. K., Reinheim

Printed on: Arctic Volume, certified to FSC standards

Maps: GIZ/Ira Olaleye

The maps are for information purposes only and do not constitute recognition under international law of boundaries and territories. All liability for any loss or damage arising directly or indirectly out of their use is excluded.

Cover: alvarez/Getty Images

All images: GIZ unless otherwise stated

Copy deadline: February 2018

Published: quarterly

Current issue: March 2018

ISSN: 0945-4497

Articles by individual authors do not necessarily reflect the opinions of the publisher.

akzente has received several awards for its high-quality journalism and design. In 2017, it won the FOX Award in Gold and the FOX Visual Award in Silver.



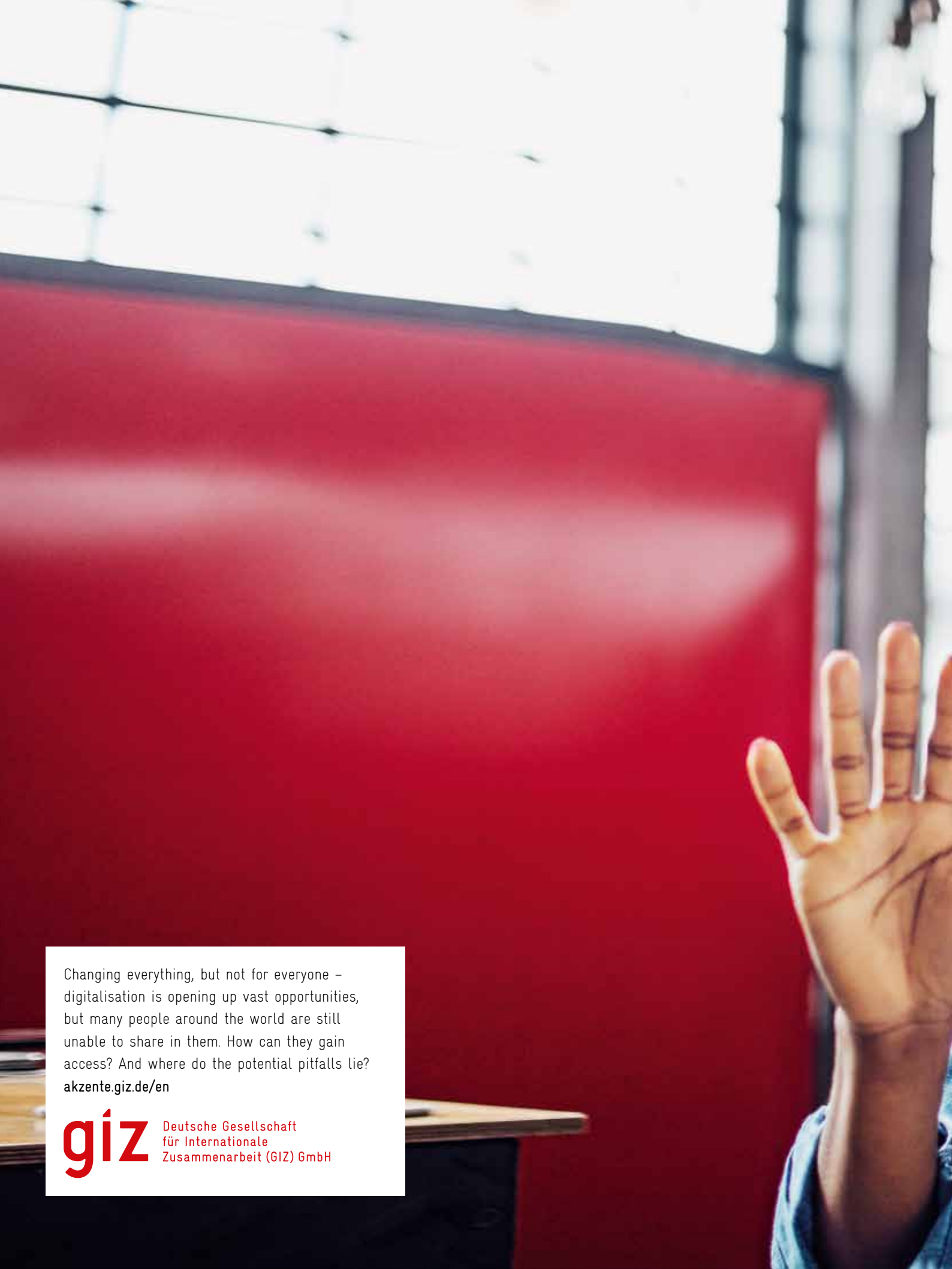
PREVIEW

akzente issue 2/18

GERMANY'S ROLE IN THE WORLD Which global issues should Germany take on greater international responsibility for in future? And which partners should it be working with in the process? How can it coordinate its foreign, security and development policies even more effectively in future, and in which parts of the world should it be doing so as a

particular priority? akzente 2/18 will deliver some food for thought on possible answers – based on the findings of 'Germany in the Eyes of the World', a major study for which GIZ interviewed representatives of the business world and academic and research community, and policy-makers around the globe.



A hand is visible on the right side of the frame, reaching upwards. The background is a large, vibrant red wall. Above the wall, a window with a grid pattern is visible, allowing bright light to filter through. The overall scene suggests a person in a classroom or meeting room, possibly participating in a discussion or presentation.

Changing everything, but not for everyone – digitalisation is opening up vast opportunities, but many people around the world are still unable to share in them. How can they gain access? And where do the potential pitfalls lie?
akzente.giz.de/en

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH