

GREEN IMPETUS

How we should use the post-COVID-19 era to change course towards sustainability.

CYCLE PATHS in Mexico, water efficiency in Bolivia, bamboo beds in Ethiopia, green spaces in Kenyan towns and cities and wetland conservation in India – across the globe, everything is pointing towards sustainability. So far, nowhere near as much money has been invested in this transition as people had hoped and would like to see, but there are indications from all over the world that, although the COVID-19 pandemic has caused a great deal of suffering, it has also prompted change.

IN FACT, the pandemic has confronted us with huge challenges but at the same time offers the opportunity to pursue the Sustainable Development Goals (SDGs) with greater determination than before. Since 2015, these goals have formed the compass that guides the international community and it has now become clear that human life on Earth can only be preserved in the long term if we consistently pursue them. The billions earmarked for COVID-19 stimulus packages now open up the opportunity to push this agenda more forcefully than has been the case to date. That will create numerous advantages: greater investment in cutting-edge technologies, reduction in harmful emissions, preservation of biodiversity, protection of water resources - all combined with more employment and less poverty. The energy transition alone has the potential to create around 100 million new jobs throughout the world by the middle of the century.

GREENER AND FAIRER – those are the goals of post-COVID-19 recovery. Many countries, particularly in poorer areas of the world, are still in the very midst of efforts to fight the pandemic, but signs of a new start can be seen in several places. This issue's 'In

focus' section shows how green recovery works and where it is already taking place, providing an overview of green activities across the globe.

A GUEST ARTICLE by Indonesia's Minister of Finance, Sri Mulyani Indrawati, describes the financial incentives and general conditions that her country has created to accelerate the transition. In an interview with Andrea Meza Murillo, Costa Rica's Environment Minister, we find out how her country aims to harness the crisis, particularly to promote sustainable mobility. And finally, Member of the Management Board Ingrid-Gabriela Hoven discusses where and how GIZ is promoting a green recovery – for example in Colombia, where GIZ is helping to incorporate green approaches into the COVID recovery programme.

ALL THE ARTICLES have one thing in common: they very clearly advocate a move away from our old fossil fuel-reliant world in favour of truly embracing change. They also show that there is no blueprint for this, however, and that each country needs to find its own green path. GIZ sees its task in supporting other countries on this path towards sustainability. That is true now – during the COVID-19 pandemic – more than ever.

Find out more in this issue about how the world is preparing for what comes after the pandemic. I hope it makes for an illuminating read.

Jahre Torles

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IN FOCUS: GREEN RECOVERY

A new start!

The coronavirus pandemic has brought our usual way of life to an abrupt halt. We must use the pandemic as an opportunity to change direction and build sustainable economies based on social justice.

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Every dose counts

A pilot project in Malawi shows how vaccines are being kept cool in difficult conditions. **p. 10**

PHOTOS: IMAGINECHINA/LAIF (P. 4, ABOVE), JULIAN RENTZSCH (P. 4, LEFT), GIZ/FALCO SELIGER (P. 4, RIGHT)

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Sign of the times

In Bilbao, a hyperrealist installation is attracting attention. p. 38



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Mother courage

Four voices from Colombia's LGBT community describe their difficult journey towards peace. p. 44



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Water is a precious resource in Central Asia. Fair distribution is key to stability in times of climate change. A trip to Uzbekistan p.40

INTRODUCING

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Our magazine is also available online in an optimised form for mobile devices. akzente.giz.de/en

DIGITAL AKZENTE



IN FIGURES

5.1 bn

Germany provided around EUR 5.1 billion from budget funds for international climate financing in 2020. According to the German Development Ministry, more than 85 per cent of this funding came from its own budget. Between 2005 and 2020, the German Government increased its climate financing more than tenfold.

200 m

According to a report by the World Bank, climate change will force more than 200 million people to leave their homes in the next three decades if countermeasures are not adopted. The report forecasts migration hotspots in many places, including large cities in North Africa, where people from coastal areas and river deltas will seek refuge.

110 cm

Depending on the climate model used, scientists anticipate a rise in sea level of between 30 and 110 centimetres by the end of this century. The rise is being caused by thermal expansion of ocean waters as a result of temperature increases and by additional meltwater from glaciers and the Greenland and Antarctic ice sheets. The German Climate Consortium reports that low-lying coastal areas are at risk of flooding and tidal waves.



Sustainably delicious

MEXICO Madre Tierra — Mother Earth — is the name of the first project on sustainable strawberry growing in Mexico. It helps small farms to increase their productivity, create jobs and preserve biodiversity. GIZ is implementing the project on behalf of BMZ with Danone and other partners. The project brings together all the actors in the value chain — from the field to the marketplace. That fosters trust and generates knowledge. A new addition to the programme is the Madre Tierra app, the first mobile application in Mexico to manage fruit plantations, exclusively for small strawberry farms.



Peace is possible. Peace is necessary. Peace is the only pathway to a sustainable future.

ANTÓNIO GUTERRES, Secretary-General of the UN



Farewell visit

BONN Before taking up his post at the United Nations, the outgoing Federal Development Minister Gerd Müller paid another visit to GIZ at the Bonn Campus Forum at the end of October. His assessment after two terms in office and around eight years of cooperation was positive: 'Regardless of whether the topic is nutrition, generating prospects through employment, or health, we see time and time again that development policy is peace policy. That is why it is so important that our challenging work and, above all, the impacts it has, become even more visible and are understood and appreciated even more. Because what we do makes sense. I would therefore like to express my respect and thanks to everyone at GIZ and particularly to those who work in dangerous situations - and their families.' GIZ's three managing directors and 50 other staff members spent 90 minutes discussing these issues with Gerd Müller. They focused on the challenges and successes of the ONE WORLD - No Hunger initiative, GIZ's work in conflict-affected countries and the vastly more difficult conditions under which the company has had to operate during the COVID-19 pandemic.

THREE QUESTIONS FOR



DR ELYSEE AMA BONSII KARIKARI-AGYEMAN

is a pharmacist from Ghana and former chair of the Community Practice Pharmacists' Association (CPPA). She took part in a training session on COVID-19 vaccines organised by GIZ on behalf of BMZ and is now sharing her knowledge.

How is the training helping to fight COVID-19 in Ghana? After months of waiting, we finally took delivery of the first batch of vaccines in March 2021. Since then, we have been receiving vaccines from various sources, including COVAX. Ghana's strategy involves vaccinating particularly vulnerable population groups first, such as health care staff and the over-60s. The training has helped us feel confident in handling the vaccines because we maintain the cold chain and protect ourselves appropriately.

How can you boost confidence in the vaccine?

As an advisor in the health sector, I stress that the vaccine is safe. Some people have religious or political reservations, but now we can tell them about the advantages and possible side effects of the vaccination. Studies confirm that the vaccination is necessary and effective. We report possible side effects to Ghana's Food and Drugs Authority.

How are you passing on the information from the training? We are training pharmacists to administer the vaccination. Ghana's 5,000 pharmacists form an important network, particularly in rural areas.

Tutoring for sniffer dogs

UZBEKISTAN With its abundance of natural resources, a young, well-educated population and its strategically favourable location, Central Asia offers huge trade potential. Nevertheless, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan are only integrated into the global economy to a limited extent. Reasons for this include the high cost of transporting goods by land and time-consuming inspections at the borders. Working on behalf of BMZ, this is where GIZ comes in. A pilot measure is being implemented to train sniffer dogs in Uzbekistan. Valdis Bi-

kovskis, one of the European Union's leading dog trainers, spent two months coaching staff and service dogs at the State Plant Quarantine Inspectorate. The dogs can now reliably detect banned, fake or poisonous plants being smuggled into Uzbekistan. The aim is to prevent plant diseases being brought into the country and at the same time to accelerate border checks. This is one example of how obstacles can be identified and overcome at regional level to simplify trade at interregional level and to make it more profitable for all countries.

Food from the web

IN COMPARISON An increasing number of people regularly buy food and everyday goods online — a trend being boosted by COVID-19. Consumers in China are the most frequent users of these online services, while German consumers prefer to choose products offline in stores.





Boost for tourism

BOSNIA Tourists will be able to admire Bosnia and Herzegovina from above in future. The country's first hot air balloon was recently launched with support from GIZ. It is part of a project to promote tourism in the Romanija region and on Mount Trebević in the east of the country. A more diverse range of tourist activities is designed to attract more visitors to the mountainous region and encourage them to stay there longer. While tourists have, in the past, predominantly visited the mountains in winter, the project hopes to boost activities in the summer too, in an effort to increase visitor numbers. In addition, it aims to extend active tourism with attractions such as a climbing wall, via ferratas and an outdoor gym. Tourism promotion is part of the EU4Business project, which is receiving EUR 15 million in funding from the European Union and EUR 1.1 million from the German Government. Tourism has great potential for creating new jobs and offers sustainable prospects for young people in particular.

Water for rural India

INDIA A total of 600 million people in India already suffer from water scarcity. The Indian subcontinent is one of the regions most severely affected by climate change and the situation looks set to deteriorate. On behalf of BMZ, GIZ is implementing a water resources management project to support climate change adaptation in five of India's largest states. More than 5,000 staff at public and private institutions in the sector are undergoing training to plan and implement integrated water management. In addition, small-holder farmers are learning to use water more sparingly, making them better equipped to face the impacts of climate change. Initial successes are already apparent: more than 5,300 local authorities have used digital technologies to plan relevant measures on site. By storing water, an extra 100 million cubic metres of this valuable resource are to be made available for use in households and agriculture. This can help reduce the excessive removal of groundwater.

INDIA

Official languages: Hindi, English / Capital: New Delhi / Form of government: Parliamentary democracy / Population: 1.4 billion / Population density: 464.1 per km² / Human Development Index ranking: 131 (out of 189)



NEW PROJECTS



Green energy supplier

SUPRAREGIONAL Sustainably produced hydrogen could replace oil as a fuel source in future. On behalf of the German Federal Foreign Office, GIZ is supporting major oil-producing countries in adapting to this innovative energy carrier. It is advising Angola, Nigeria, Russia and Saudi Arabia on the opportunities and challenges involved in producing, using and exporting the new raw material. The project also promotes dialogue and knowledge sharing between the actors.



Automotive sustainability

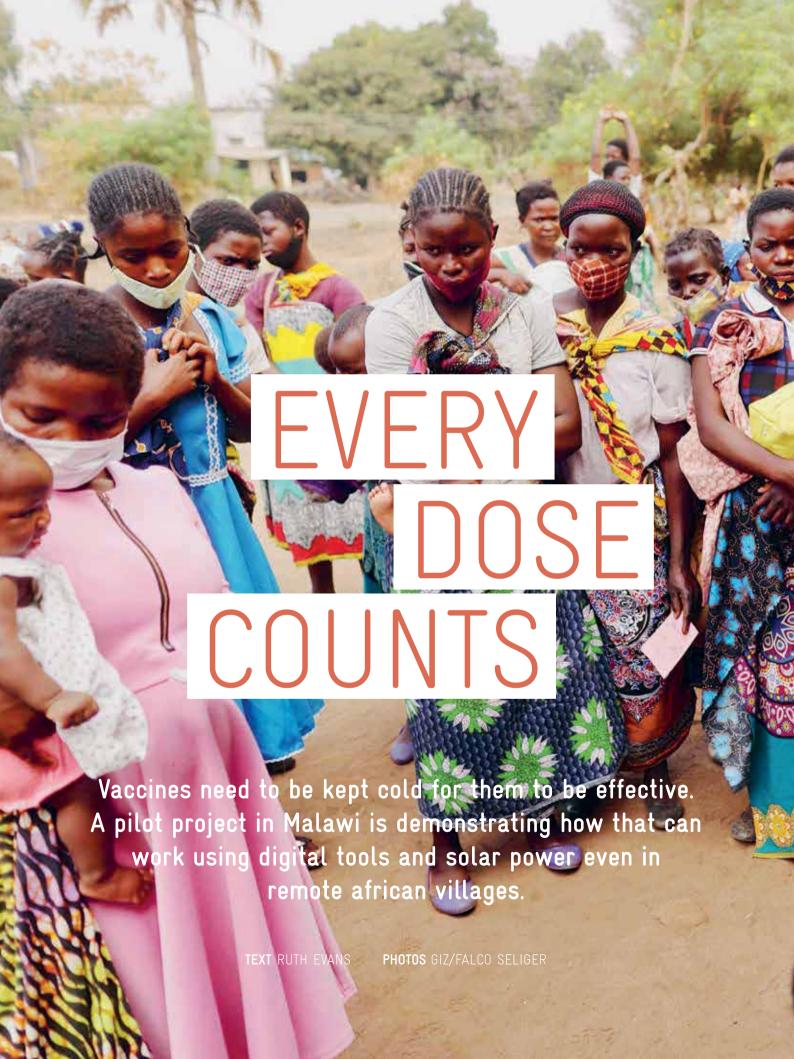
RWANDA Electric tractors with batteries charged using solar power could replace diesel tractors in Africa. On behalf of BMZ, GIZ is supporting the National University of Rwanda in conducting research and developing an electric tractor with Volkswagen. Decentralised solar panels are to be used not only to charge the batteries for the electric tractors, but also to provide power for other agricultural activities and services. Farmers will be able to hire the communal e-tractor using an app.

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Resilient growth

NEPAL The agriculture sector provides employment for two thirds of the Nepalese population. The impacts of climate change are hitting them particularly hard. Crop growing and value chains urgently need to be adapted. On behalf of BMZ, the EU and Finland, GIZ is promoting climate-resilient green economic growth in the provinces of Sudurpashchim and Karnali in western Nepal. The aim is to strengthen climate-resilient practices and to promote networking between stakeholder groups to enable them to share and expand their knowledge.







Top: Health assistant Wellington Chafulumira working to help protect more babies.

Right: Equipped with sensors, the cool boxes guarantee vaccine quality right up until they reach remote villages.



Under the shade of a mango tree, Wellington Chafulumira bends down to administer a vaccine in a restless baby's thigh, as her mother tries to hold her still. As the local health assistant based in Kalungama village, he's responsible for the monthly outreach clinic giving childhood vaccinations. The children receive their basic vaccinations against diseases such as measles, mumps and rubella here. It's hot work in the searing temperatures on the southern

shore of Lake Malawi, and a group of mothers and babies patiently wait their turn in the shade, sitting on the parched earth.

In remote villages like Kalungama, where there is no constant power supply or refrigeration, it is a huge challenge to ensure that the 'last mile' of the cold chain is properly maintained. Vaccines require continuous refrigeration – from production to use – to ensure their effectiveness and avoid waste. Kalungama is 13 kilometres away from the nearest health centre in Bilira, and Samuel Mtalimanja, Senior Disease Control Officer, had a very early start to deliver the vaccines to Wellington. After 23 years in the job, he's used to the challenges of dawn starts. Recently, however, life has got a bit easier with the arrival of five insulated vaccine carrier boxes that help to keep the vaccines cool.

These cool boxes are part of the emmunize project, partly funded by the Merck Family Foundation and being piloted by GIZ in Bilira. The health station lies in Malawi's Central Region, one of the poorest areas of one of the poorest countries in the world.

The project aims to ensure more efficient immunisation in rural areas by combining reliable and environmentally sound cooling de-

The project contributes to the following United Nations Sustainable Development Goals (SDGs):







vices with user-friendly digital tools. It was initiated by winners of the GIZ Innovation Fund. The emmunize project was developed by a global team of health experts, doctors, environmental engineers and political scientists who specialise in off-grid cold chain technology and green cooling solutions designed to protect the climate and the environment.

These innovations are now being used around Bilira: the cool box sensors wirelessly monitor the temperatures of carriers throughout mobile outreach sessions and send live data to an app. 'This will help us a lot because we will be sure that the vaccines are always kept at the right temperature,' says Samuel.

The emmunize app is linked to Malawi's new electronic patient register, which is also being tested in the Bilira region. While Wellington Chafulumira is vaccinating the children, his colleague Olipah Chabwera sits with a tablet in front of her, calling up a child's records on the electronic patient register and updating them with information about the jabs they have just received.

In the past, vaccination records were kept manually, and it was often difficult for health workers to access paper records or keep them up to date. The old records were impractical and not always to hand. Now, however, the emmunize app stores and updates all of the key information on children's immunisation schedules and allows easy tracking of outstanding vaccines. It also helps health workers to plan outreach sessions more effectively since it generates more accurate attendance lists and calculates the amount and type of vaccines required for specific clinics in the communities.

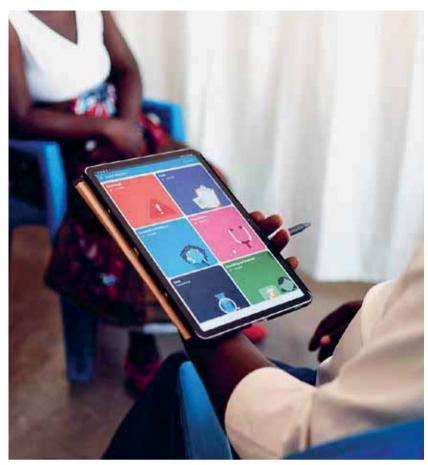
MALAWI

Capital: Lilongwe / Population: 18.6 million / Economic growth: 0.8 per cent (estimate for 2020) / Human Development Index ranking: 174 (out of 189)

Source: World Bank







New technologies: medicine deliveries by drone along with tablets with the emmunize app and a connection to the electronic patient register are improving health care for people in rural areas of Malawi.





In Bilira, the medical team is proud of the digital innovations. 'We were chosen for the pilot because Bilira was a fairly typical rural health centre with basic facilities and poor power supplies,' says Emmanuel Gawanika, Senior Health Surveillance Assistant. 'Now it is to become a centre of excellence for improved services and data collection – setting an example for others.'

The electronic patient register, which is being tested for a potential rollout throughout the country, is currently already in use at Bilira's paediatric clinic, in antenatal and postnatal care and in the delivery room. Staff have been equipped with handheld tablets. In addition to keeping medical records, the integrated system also provides simple treatment guidelines, based on WHO standards, which help with timely and accurate diagnosis and treatment.

At the health centre in Bilira, a shelter for vaccinating children under five has also been built and is equipped with an environmentally friendly solar-powered refrigerator (SolarChill) that works without batteries. It is used to store vaccine doses before they are transported to the villages in the cool boxes. Health workers are being trained on how to use and maintain the equipment to ensure its long-term operation. The installation of solar panels means that power blackouts can be avoided.

50 per cent fewer wasted vaccines

For Samuel Mtalimanja, the changes in Bilira have already started to have a visible impact. The number of vaccine doses that have to be disposed of due to cooling and storage problems has halved. This means that more doses are available, which is helping to protect babies and toddlers more effectively. 'We used to run out of vaccines every month in the past. But now the e-register makes it easier to plan and order the vaccines we need to avoid stockouts,' Samuel explains. Although the e-register and the emmunize app are currently only in use in Bilira, Stephen Macheso, Director of Health and Social Services in the district of Ntcheu, believes both patients and health workers have benefited enormously. 'This is the way to go for the whole country. We need to move quickly in this direction to make sure the whole health system becomes more efficient and effective.'

As the sun dips in the sky over Kalungama, Samuel Mtalimanja and his colleagues pack up after a long day of vaccinations. The improvements brought about by the emmunize app and the cooling system mean that the vaccines are used effectively. Mothers carry their sleepy babies on their backs to their huts, happy that they are part of a new way to improve the health of babies, toddlers and mothers in Malawi. —



RUTH EVANS is a freelance journalist specialising in development and health topics. She writes articles and produces podcasts and radio documentaries, including for BBC Radio, and has received several media awards for her work.

ADDED VALUE FOR HEALTH

GIZ is supporting Malawi's Ministry of Health in setting up a pioneering electronic patient register. Commissioned by BMZ, the project receives funding from the Bill and Melinda Gates Foundation. It is cooperating with Jembi, a South African non-governmental organisation that develops digital transformation programmes for the health sector, and the IT company Ona, which is devising open source solutions to adapt the system to Malawi's existing digital structures. The Health Information System Programme (HISP) Malawi, which is responsible for introducing the health information system (DHIS2), is also involved in the project. Integrating the electronic patient register into this national health information system will be extremely useful, as it will mean that more precise data is rapidly available that can be used both for nationwide statistics and for work carried out by experts at local level.

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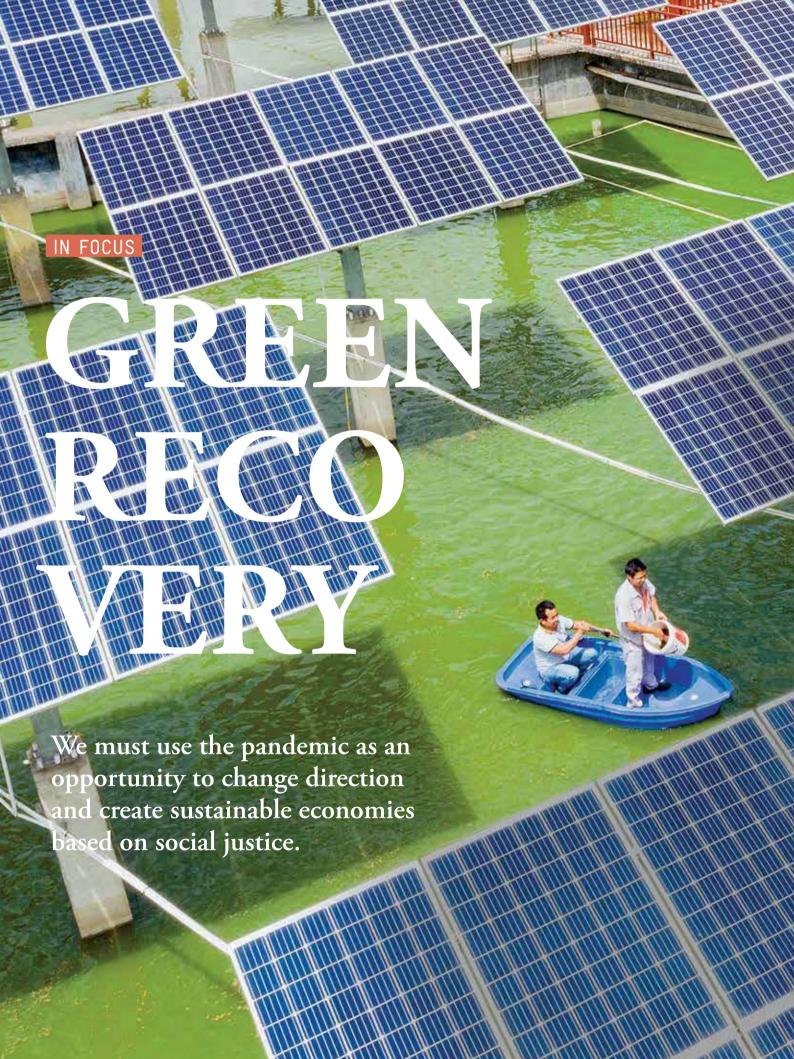
'The monitored cool boxes will help us to keep COVID vaccines cool and get them out into remote villages.'

SAMUEL MTALIMANJA.

Senior Disease Control Officer at Bilira Health Centre in Malawi

Read an interview with him at akzente.giz.de/en

'HOTO: EMMANUEL GAWANIKA (P. 15, RIGHT)





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Green and fair

Why it is so important to build sustainability and social justice into our economies after the pandemic. **p. 18**

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Greening the economy

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'We cannot go back to the old normal'

Costa Rica's Environment Minister Andrea Meza Murillo on her country's ambitious goals **p.32**

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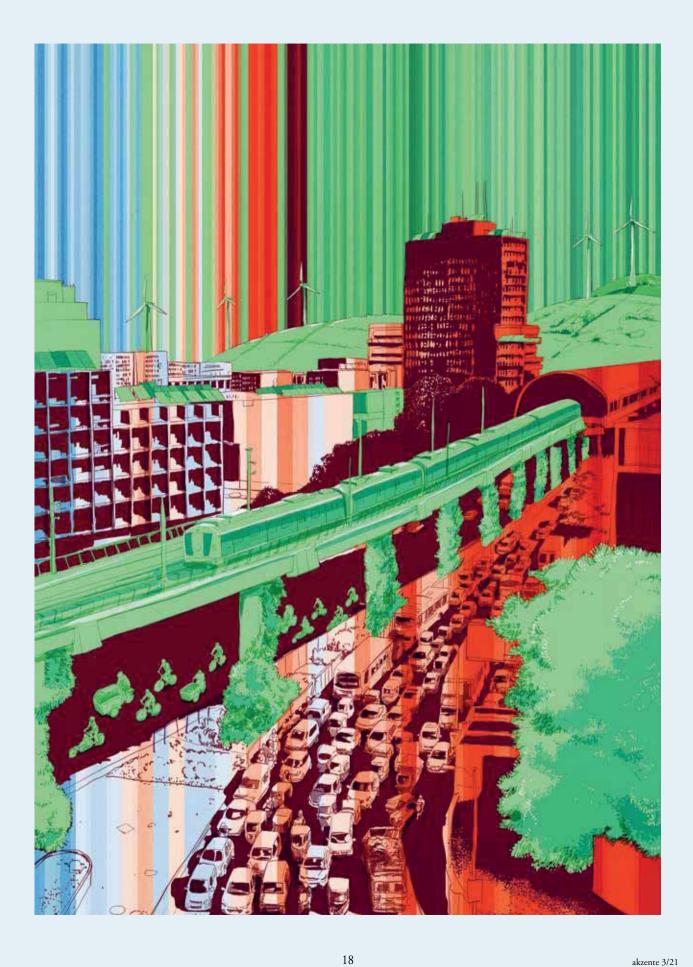
Drawing the right conclusions

An analysis by Ingrid-Gabriela Hoven, GIZ Managing Director **p.36**

EXAMPLES OF GIZ'S WORK

Green with a social impact

One goal, many paths. How GIZ is working to build sustainable economies rooted in social justice. **p. 37**



Green and fair

The stated **goal of the international community** following the pandemic is to change course and embrace forms of economic activity that are sustainable and socially equitable. Our essay explains why that is important and where it is already happening.

Text ULRIKE SCHEFFER Illustrations FLORIAN BAYER

n Lima it is hard not to spot Edgar Fernández. Among the countless vans and trucks jostling through the streets of Peru's capital in a cloud of exhaust fumes, the young coffee roaster uses a yellow zero emissions cargo bike to transport his wares, some 70 kilos of raw coffee beans. Once the beans have been roasted, he jumps back on his bike to deliver the finished product to his customers. The pandemic struck Peru with great ferocity and continues to wreak havoc. Yet even in the toughest moments, Edgar's business boomed. He was able to continue delivering coffee directly even when the shops were closed. Looking ahead, he will have to fight off the competition again, but this is a business model with a bright future. The beans come from small local farms. In fact, Edgar's business brings together many of those key elements that we need to embrace, including sustainability, environmental conservation and fairness.

IN THIS ARTICLE

1. THE GOAL

Why the opportunity has now arisen to create a greener and more resilient world.

2. THE OBSTACLES

How and why we can all have a say in deciding whether to seize this moment or let it slip away.

3. THE PATH

How we can build economies back greener, even in developing countries. The international community can only achieve its goal of limiting human-induced global warming to a tolerable level if we reshape our economies in ways that no longer damage our climate, create social injustice or ruthlessly exploit the natural world. Strangely enough, it is the deadly COVID-19 pandemic that has given us an opportunity to make that change. Two words now form the great rallying cry of our times: 'green recovery'. All our efforts to rebuild economic systems weakened by the pandemic can and must be directed towards a social and environmental transformation. The message from UN Secretary-General António Guterres and many others is that this reboot can produce a healthier and more resilient world.

We already have the blueprint in the form of the 2030 Agenda, a series of sustainable development targets defined by the international community and to be achieved by the end of this decade. The basic message was development and progress for all, but

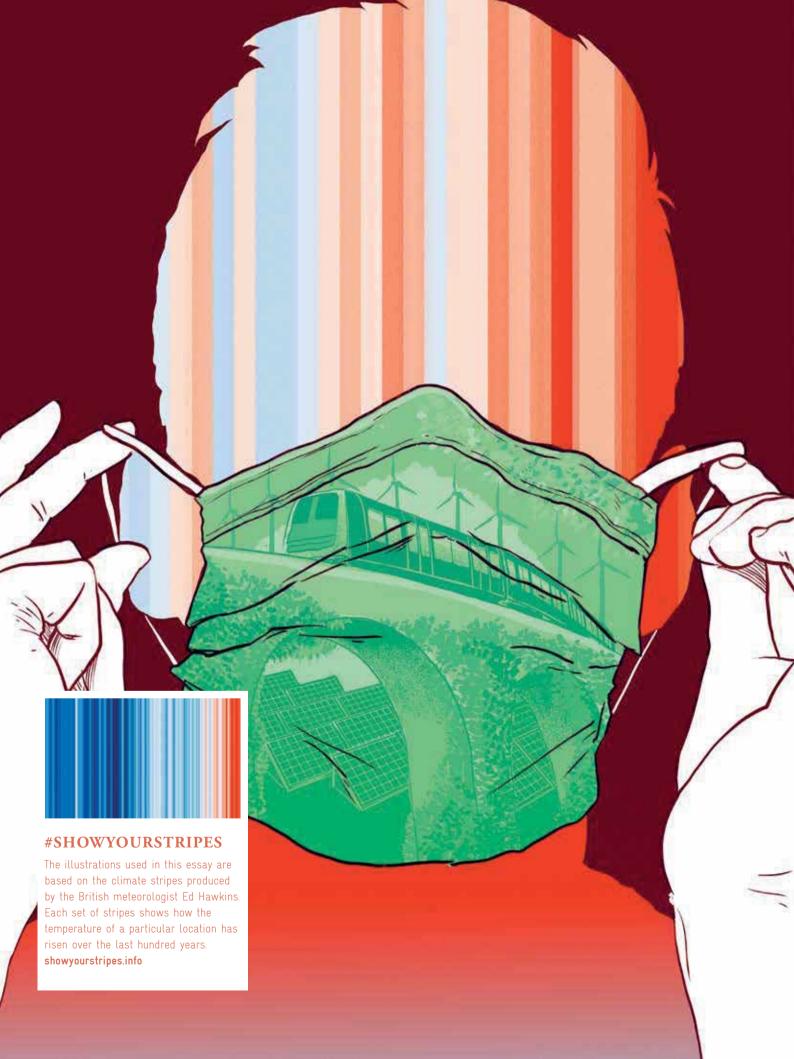


PHOTO: TILO RÜCKEIS (P. 2

not at the expense of the environment and the climate. To date, global efforts to meet those targets have lacked ambition. Despite international agreements designed to limit the damage to our climate, CO_2 emissions rose by over 60 per cent between 1990 and 2017.

As stipulated under international law in the Paris Agreement, we need to cut our CO₂ emissions to net zero by 2050. That will require a rapid and far-reaching transition. The momentum created by the pandemic gives us a unique opportunity to embark on this path. Never before has so much money been directed all at once in pursuit of a single goal. According to the Organisation for Economic Co-operation and Development (OECD), however, less than a third of the spending commitments announced to date have had a positive impact on the climate and the environment. That is alarming. The recovery packages and programmes designed to inject life back into our economies should be used to drive the shift from fossil fuels to renewable energy, to develop resource-efficient technologies for our industries, skilled trades and agriculture, to promote environmentally sound building methods and to roll out climate-friendly infrastructure.

A green reboot along these lines could generate so many new jobs, especially in those developing countries where the pandemic has destroyed much of the progress achieved in recent years. India has shown how this can be done. Delhi's metro system dates back to 2002. Work to extend it as part of the city's wider public transport infrastructure created nearly 15,000 jobs. The project also generated employment on the production side as most of the trains and other technical rail systems are manufactured within the country.

In Peru, the mayor of Lima wants to use international funding for climate action in urban areas to reduce air pollution in the capital. The plans involve building a series of 'green islands', planting two million new urban trees and creating 46 kilometres of cycle paths to help protect the climate and improve the quality of life for all of the city's residents. This could also generate employment, for example building and maintaining

'The success of this transition depends on consumers all over the world rethinking their behaviour and making more sustainable choices.'

all those green spaces and setting up new climate-friendly delivery services such as that provided by coffee-roasting entrepreneur Edgar Fernández. 'If cities can find inclusive ways of tackling the climate crisis, they can act as a catalyst for economic recovery,' observed the city's mayor, Jorge Muñoz Wells.

Over in Rio's Copacabana district, around 11,000 deliveries are already being made every day by cargo bike. In Mumbai, a major online retailer had the idea of using the traditional 'dabbawala' system, which provides many of the city's office workers with a home-cooked lunch, to deliver parcels. Examples such as these show that even relatively small initiatives can set change in motion – and that even those on very modest incomes can benefit from the resulting changes.

The crucial role of agriculture

Yet if we are to achieve a wider global transition that allows the world's leading economies to phase out fossil fuels completely, we need to lay correspondingly strong foundations. That is not yet the case, even though renewables have long since been competitive. In this context, however, it is worth noting that China, for example, now invests more in expanding its renewables capacity than in new coal-fired power stations.

One of the 'elephants in the room', as Peter Poschen from the University of Freiburg puts it, is agriculture. Agriculture is the second-biggest source of climate-damaging gases after energy. It also accounts for 70 per cent of worldwide water consumption and is one of the main drivers of another phenomenon, namely species loss. The expansion of agricultural land is a major contributing factor to deforestation and to the destruction of other plant and animal habitats. At the same time, however, agriculture is the biggest source of employment around the world. It is still by far the largest sector of the economy in developing countries. That means it has to be right at the centre of any plans for an economic reboot in the global south, especially since growing conditions have worsened considerably in many countries due to the climate crisis.

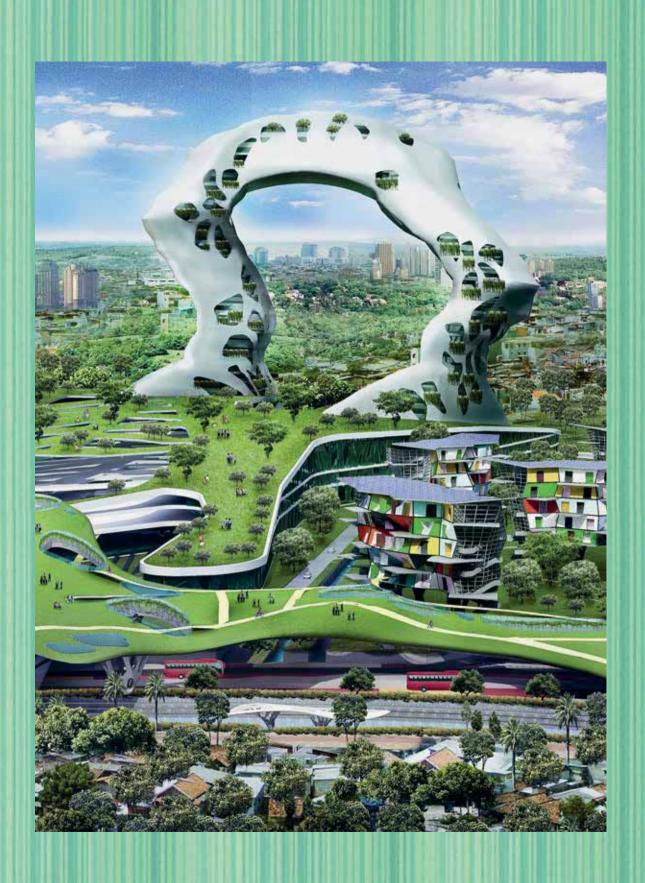
It is crucial that developing countries receive the funds they need to initiate a shift towards resource-efficient, climate-proof and socially equitable agricultural systems and economies that hold out the promise of a secure livelihood for their respective populations. In turn, this will require rapid action on debt relief and carefully targeted funding programmes. In some places, the transition has already begun. In western Uganda, for example, thousands of farmers have switched to cultivating organic crops, allowing them not only to generate more income but also to reduce their impact on the environment.

The success of this transition depends on consumers all over the world rethinking their behaviour and making more sustainable choices. In Lima, at least, Edgar Fernández's customers seem to have understood that message. —



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is focused on immigration and migration, populism, environmental transformation and foreign, defence and development policy.



GRENING THE ECONOMY

Indonesia's path towards a sustainable future, summarised by Minister of Finance **Sri Mulyani Indrawati**

he Paris Agreement was adopted by 195
Parties in 2015. Its goal is to limit global
warming to well below 2 °C, and preferably to 1.5 °C, compared to pre-industrial
levels. Under the agreement, countries
communicate commitments and action plans to reduce
their greenhouse gas emissions and build resilience to
adapt to the impacts of climate change in the Nationally
Determined Contributions (NDCs).

But even if all unconditional NDCs were implemented, we would still be on course for a temperature rise of well over 3 °C, according to the United Nations. So, it is clear: we need a more ambitious commitment on dealing with climate change. Or at the very least, the commitment to the NDCs must be fulfilled without any delay.

As a vulnerable country, Indonesia has a strong commitment to addressing climate change. Our target is to reduce emissions by 29 per cent against the business-as-usual scenario and by 41 per cent with international support. We aim to achieve this target through

five sectors, of which forestry and energy are the two most important ones. We also wish to increase our resilience to climate change through five aspects: life system resilience, special territory resilience, economic resilience, ecosystem resilience and support system resilience.

These ambitious targets require considerable resources. The financing needed for this climate mitigation programme amounts to almost USD 250 billion according to Indonesia's Second Biennial Update Report. The average required per year is USD 19 billion, of which more than 80 per cent is earmarked for energy and transportation, while the rest is needed to fund other sectors.

The pandemic has taught us a valuable lesson, that we should include sustainability aspects in development. The outbreak demonstrated vividly that the environment recovered quickly, as pollution levels hit multi-year lows due to policies that limited activities. The World Meteorological Organization (WMO) found that global CO_2 emissions had decreased by 6 per cent during the

pandemic. However, this was or is only a short-term phenomenon. As our current economy is still closely tied to emission-producing practices, it can be predicted that emission levels will rebound as soon as economic and social activities recover.

A comprehensive policy package is therefore needed to counter the emission increase during the economic recovery and link this with a green transition. Although government budgets are limited, especially during a pandemic, we cannot afford to stay passive. In fact, state budgets can be used to enhance the transformation towards a green economy. Revenue policies can be directed



'Climate change is a challenge for all of humanity and requires strong global political will to take action.'

to stimulate the use of renewable energy as well as environmentally friendly business fields. The tax system supports the development of renewable energy in the form of tax holidays, tax allowances, exemption from import duties, reduction of VAT, government-borne tax and reduction of property tax. Also, special policies encourage low-carbon and climate-resilient government spending. This is exactly what Indonesia is doing. The Ministry of Finance implemented a Climate Budget Tagging mechanism to determine the contribution of the state budget in tackling climate change. Last but not least, Indonesia is developing innovative financing instruments to finance green projects.

Innovative finance is key

To promote and encourage innovative financing in Indonesia, the Government introduced green sukuk. These are climate bonds that invest in renewable energy and other environmental assets. The Government launched the first green sukuk in 2018, and was able to obtain more than USD 1 billion - and it received thirteen international awards for that, including from IFR Asia, Islamic Finance News, FinanceAsia, Euromoney, and Climate Bonds Initiative. This issuance was followed by three more, the second one at the height of the pandemic in June 2020, which saw the number of green investors increase by more than 33 per cent. The latest was in June 2021, when we introduced a 30-year tenor global green sukuk format for the first time, which was also the first in the world. This issuance proves the dedication and long-term commitment to green and sustainable financing, as well as pioneering financing methods in tackling climate change. There are five areas of funding that have been financed by green sukuk, including sustainable transportation, energy efficiency, renewable energy, resilience to climate change for disaster risk areas, and waste to energy and waste management.

We also provide various funding windows to support climate change mitigation and adaptation actions in Indonesia, such as SDG Indonesia One, the Green Climate Fund and an Indonesian environment fund called Badan Pengelola Dana Lingkungan Hidup (BPDLH). BPDLH is a public service agency that gives out various financial instruments to improve the environment and control climate change. SDG Indonesia One is a blended finance platform providing various project funding facilities which are aimed at achieving SDG targets. Meanwhile, Indonesia has also accessed the Green Climate Fund for several climate projects. Together they are expected to catalyse green investments in Indonesia.

We believe the transformation into a green economy requires a solid synergy between fiscal, monetary and financial sector authorities. Only then can we direct economic actors to take into account environmental aspects and climate change in their activities. In recent years, the Ministry of Finance has passed several policies, among others the Mitigation Fiscal Framework. It states clearly how public funds are to be spent to help mitigate climate change. And we will continue to formulate policies in that direction. In addition, the Financial Sector Authority (OJK) launched guidelines under the title Sustainable Finance. They require national financial institutions to have a portfolio in green financing. They also contain a roadmap for the years 2021 to 2025 that aims at creating a sustainable financial ecosystem. This will be the basis for the financial





The images on this route show parts of the Manggarai 2030 project, a green vision for Jakarta conceived by the architectural studio Budi Pradono Architects.

sector and a reference for related ministries in developing innovative financing.

The global community needs to do more

So, all in all Indonesia has entered this new path and is well on its way. One issue that worries me, however, is the global political will when it comes to financing. Bluntly put, it is still lacking. The developed countries' obligation to mobilise financial support for developing countries remains unfulfilled. That is unfortunate, especially when compared to the enormous amount that has been spent in response to COVID-19: this comes to an unbelievable USD 16 trillion, while the promised climate funds add up to USD 100 billion, which is but a fraction. Yet, at the same time, this fact highlights the immense opportunity that opens up here if the COVID funds are aligned with climate objectives. And it constitutes a great risk if they are not.

Climate change will surely impact growth. Even if all countries succeed in achieving their respective NDCs, we will still experience economic losses from climate change due to disasters, such as drought and floods. This will disrupt food chains and endanger water supplies, infrastructure and health. The Intergovernmental Panel on Climate Change (IPCC) estimates that economic losses from climate-induced disasters could reach 0.2 to 2.0 per cent of global GDP. Political will is thus im-

mensely important if effective steps and actions towards a green recovery are to be taken, and taken seriously. We in Indonesia take our share of the responsibility. Others should follow.

Climate Change Fiscal Framework

We are developing a blueprint for fiscal policy to support climate action through a Climate Change Fiscal Framework (CCFF). It is intended to show the finance gaps that hamper Indonesia from achieving its NDCs. And it is supposed to identify how to utilise public finances more effectively and structurally to leverage green private investments. But it goes without saying that we need international support in this endeavour. Since climate change is a challenge for all of humanity, it requires strong global political will to take action. Particularly because acting now is definitely less costly than reacting later.

We have a once-in-a-lifetime opportunity to shift our economies, to make them climate-sound and greener. This is our call. We have to seize that opportunity before the global economy starts growing again. Emissions will quickly return to a pre-pandemic level unless we make that necessary shift. Even if the situation is difficult now, still in the midst of the pandemic, we should not let our attention on climate change fade away, but rather engage in a green recovery that truly deserves this label. A number of countries are moving forward, Indonesia is among them. Let's move ahead together and mobilise everything we have to strive to provide better policies for sustainable economies – and a safer world. —

SRI MULYANI INDRAWATI is an Indonesian economist. She was the country's Minister of Finance from 2004 to 2010, and has held this post again since 2016. Between 2010 and 2016 she served as Managing Director of the World Bank.

In focus: Green recovery



HOTOS: SHANA FATINA (1), AIREF (3), STEGMÜLLER (1) (P. 26)

Frozen sunlight

Green economic recovery in action: a successful
German-Indonesian project illustrates how renewable energy can
boost the local economy in fishing villages
across the archipelago – with solar-powered ice makers.

Text BRIGITTE SPITZ

or years, fishers from Sulamu have had to make the daily journey south in their boats across Kupang Bay to fetch ice to keep their fish fresh. They can see the lights of Kupang, capital of the Indonesian province of East Nusa Tenggara, from the shores of their village. While Kupang has seen strong growth over the past two decades, little has changed in Sulamu. There is a mosque, a school, a few small stands selling goods along the village street and an old lighthouse. Sulamu is typical of the small villages on the Indonesian archipelago, which is made up of around 17,500 islands. It is well away from the big cities and the tourist hotspots on Java and Bali. The 1,500 inhabitants of Sulamu live very simple lives, most of them from agriculture, and above all from the sea. Many feed their families by harvesting seaweed and catching fish. It is small-scale fishers such as those in Sulamu, employing traditional methods, who are vital to preserving Indonesia's rich marine biodiversity. Sustainable practices, for instance using longlines or fish traps, prevent overfishing and by-catch. Across the country, around 80 per cent of the people in the fisheries sector work in family-run

enterprises. Without effective and affordable cooling for their catch, however, they usually have no access to economically significant markets. Large-scale industrial fishing is the big volume business – and it is big: Indonesia is the world's second largest fish producer.

Without ice, fish will go off

In these small-scale fisheries, the level of freshness is not good enough for export, and it is not always possible to sell everything locally, either. Block ice for the boats from Sulamu can only be obtained from the cooling plants in Kupang. It has to be reserved days in advance, and there is not always enough available. In that case, the fishers of Sulamu have to go without. 'Sometimes they have to throw 15 tonnes of fish away because it has gone off, for lack of cooling facilities,' says Gabriel Kennenbudi, who comes from the region and is familiar with the problems the people have. When a university friend told him about the idea for an ice-making machine powered by the sun, the 54-year-old decided to invest in the pilot project for the solar ice maker.

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FAR-SIGHTED INITIATIVE

Indonesia is the world's largest island nation and is particularly affected by climate change. After the coronavirus pandemic, this South-East Asian country would like to focus on green investment and jobs, and use renewable energy to boost rural productivity. One way in which GIZ is contributing is by supporting the distribution of solar ice makers. Development started in 2016, as an integral part of the Indonesian-German energy programme that had a number of different projects and commissioning parties, including the German Development Ministry (BMZ). Currently the initiative is anchored in the ExploRE project (Strategic Exploration of Economic Mitigation Potential through Renewables), which was commissioned by the German Environment Ministry (BMU). It is also supported by Germany's COVID-19 recovery stimulus packages.

Contact: Frank Stegmüller, frank.stegmueller@giz.de

Kennenbudi works full time at the administrative authority in Kupang. The graduate engineer is interested in new technologies and has provided funding for the building in Sulamu where, from 2022 onwards, the solar ice maker will produce up to 1.2 tonnes of ice blocks every day, depending on the amount of sunshine. That means 120 blocks, each weighing 10 kilograms. The photovoltaic modules have already been

mounted on the roof of the small factory building, and the refrigeration system will be fitted by the end of 2021. Installation had been delayed by the pandemic and its travel restrictions and lockdowns, but everyone involved kept driving the project forward all the time.

The solar ice maker is a vivid example of what a green economic recovery can look like, in particular for the post-pandemic pe-

> riod. A recovery that leaves no one behind, and a true win-win situation, thinks Dadan Kusdiana, Director General of New, Renewable Energy and Energy Conservation at Indonesia's Ministry of Energy and Mineral Resources, the project's political partner. Rural productivity will improve, he says, smallscale fishers' incomes

will rise and at the same time Indonesia can reach its climate targets faster by cutting ${\rm CO}_2$ emissions. Dadan Kusdiana is full of praise: 'Solar cooling, and the solar ice maker technology in particular, will contribute to the green recovery of Indonesia after the pandemic.'

But how does the solar ice maker work? Ice is produced from the power of the sun, making the whole process climate neutral. The crux was to combine solar and refrigeration technology in one system as effectively as possible, because while solar energy is plentiful in tropical Indonesia, solar modules provide only a limited amount of electricity. This is why the refrigeration system uses a highly efficient motor and high-tech fans. In designing the fans, the engineers found inspiration from the wings of owls, which fly particularly quietly and thereby save energy. Furthermore, an intelligent energy management system and sensor technology enable ice production to be dynamically and automatically adjusted to the amount of solar energy available. It is a technological marvel that requires neither a power connection nor a large storage battery.





Above: To be able to sell their precious tuna at a good price, small-scale fishers need to have ice available. That way they can avoid wasting food.

Left: Fishing provides a livelihood throughout the archipelago.

In specific terms, the pilot plant in Sulamu alone will save 40 tonnes of CO, a year, thanks to annual savings of around 14,000 litres of diesel for electricity generation and transporting ice. At the same time, cooling prevents valuable fish from going off. Small businesses can successfully bring their chilled catch to market. For tuna alone, the price of chilled, high-quality produce is over two-and-a-half times as high as that of poor-quality fish. Over the course of a year, this works out at greater added value of at least EUR 60,000 at each location. This extra money could be available to the fishing families in future - perhaps to invest in their children's education.

'It couldn't be better,' says Steffen Sinn, who is responsible for the South-East Asian market at German fan manufacturer Ziehl-Abegg. 'I was enthusiastic right from the outset, because I know Indonesia well. Anything that improves people's lives while also helping to mitigate climate change makes the world more liveable.'

The company is based in Baden-Württemberg, south-west Germany, and is one of nine private enterprises that have cofinanced the solar ice maker and brought it to fruition. 'We are relying on the multiplier effect and hope that the solar ice maker will provide energy-efficient, green cooling in other remote regions of the world too.' Frank Stegmüller, who is responsible for the innovative ice makers at GIZ, is similarly optimistic: 'There is huge potential for this outstanding technology in Indonesia with its 540 small local ports.'

GIZ launched the project back in 2016. Even then – years before the pandemic – the main concern was how to boost traditional small-scale fishing in Indonesia on a sustainable basis and create local jobs. It quickly became clear that block ice, made using local renewable energy, can help leverage development. With GIZ acting as the coordinator, the German Institute of Air Handling and Refrigeration (ILK) in Dresden took on the task of developing a special solar-powered ice maker and subsequently transferring the technology to Indonesia so that production could be set up locally.

'The ILK team in Dresden did an outstanding job and got to grips with the con-

INDONESIA

Capital: Jakarta / Population: 271 million /
GDP per capita: USD 3,870 / Economic growth: -2.1 per cent (2020) /
Human Development Index ranking: 107 (out of 189)



ditions in Indonesia,' Frank Stegmüller explains. GIZ looked for appropriate partners, established production with local, German and European companies in Indonesia and made sure that communication between everyone involved was clear and transparent.

The pilot project can be used to publicise the solar ice maker in years to come. GIZ is currently working with the International Pole & Line Foundation, a maritime non-governmental organisation, to press ahead with dissemination of the machine. From now on, manufacturing will be handled by the Indonesian industrial enterprise Selaras Mandiri Tehnik (SMT). This will create sustainable, green jobs locally, and for the long term – not only in Java, Indonesia's

political and economic centre, but also in far-off Sulamu.

As Gabriel Kennenbudi points out, 'ice production also offers new employment opportunities for young people in the village.' The investor is still thinking ahead, and would like to create a central contact hub for fishers around the ice production site where they can find everything they need, from fishing permits to fuel and all their equipment. 'Once we have got going, I hope that more people will be interested in making environmentally friendly investments here,' he adds.

First of all, anyway, the fishers of Sulamu will no longer have to chug across Kupang Bay to pick up ice blocks to stop their catch from spoiling. That's a good start. —

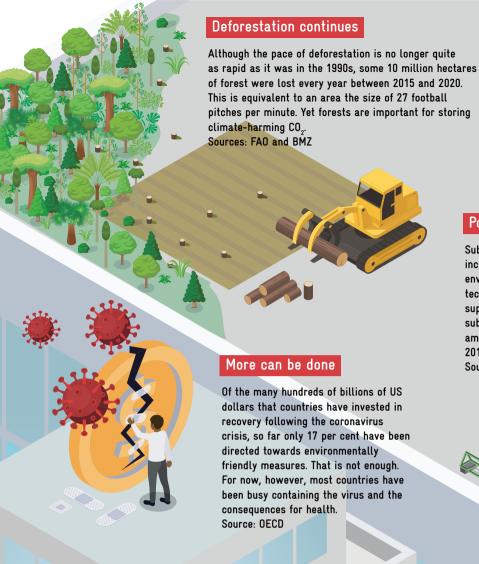
The project contributes to the following United Nations Sustainable Development Goals (SDGs):











Poor incentives

Subsidies often create the wrong incentives. Rather than promoting environmentally sound, future-oriented technologies, many countries still support harmful practices. Global subsidies for fossil fuels, for example, amounted to almost USD 450 billion in 2019 alone.

Source: OECD

CO2

Wrong direction

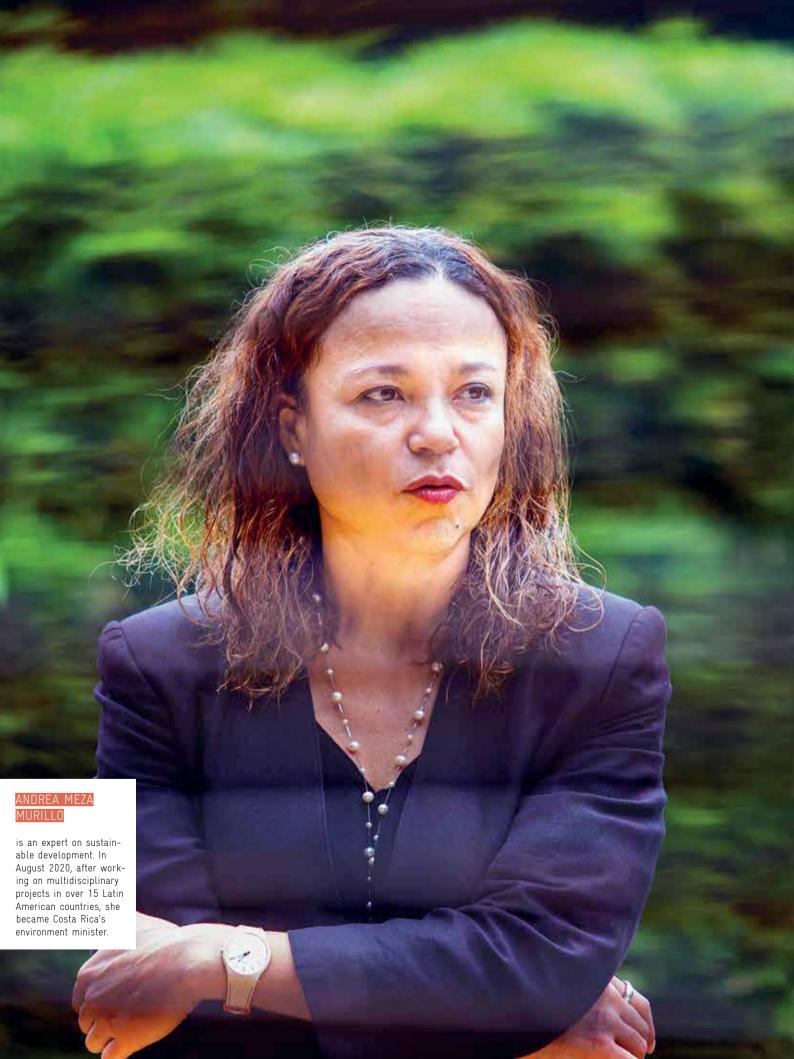
First the good news: CO₂ emissions fell by seven per cent in 2020. Since then, however, the figure has been rising again. According to forecasts, emissions will soar to record levels in 2030. What can be done to prevent this? Systematic backing of environmentally friendly technologies and the conservation of biodiversity around the world is one answer. Source: IEA

Brick by brick

The construction sector is seen as one of the world's biggest 'environmental villains', consuming raw materials and emitting CO₂. Now, though, there is a trend towards sustainable construction. The floor area of certified green buildings, for example, has grown more than tenfold in the space of 10 years and recently recorded another significant increase.

Source: World Green Building Council





HOTO: PRISCILLA MORA FLORES/COLECTIVO NÓMADA/PARA PNUD (P. 32)

'We cannot go back to the old normal'

Andrea Meza Murillo is the Environment Minister of Costa Rica, a country with a long record of pushing forward on sustainability issues. She talked to akzente about her country's ambitious goals, why a green recovery from the pandemic is so important and what kind of support she needs from the international community.

Interview: Friederike Bauer

Some people say we are facing a complicated triple crisis at the moment: climate change, biodiversity loss and the pandemic. Do you share this analysis?

Absolutely. Scientists are telling us every day that we have to change in a very robust way in order to address this triple crisis. More concretely: we need to transform the way we produce and consume. Otherwise – as the pandemic has taught us – we will not be able to live healthy lives and have healthy societies.

Combining our response to the pandemic with public funding programmes to drive the shift towards a greener economy has been described as a once-in-a-lifetime opportunity. What is your opinion?

It is definitely an opportunity we must not let go by. On the other hand, this is not an easy task because we have to cope with recessions all over the world, particularly in our own region. Latin America has been hit very hard by COVID-19, and many people have lost their lives. We are facing heavy economic repercussions that interfere directly with people's lives. But we have to do this anyway. It is critical that we direct public money into the right investments and create a nature-positive economy. We cannot go back to the old normal.

How do you want to seize this opportunity? Generally speaking, we have to use these funds to generate jobs and mitigate the im-

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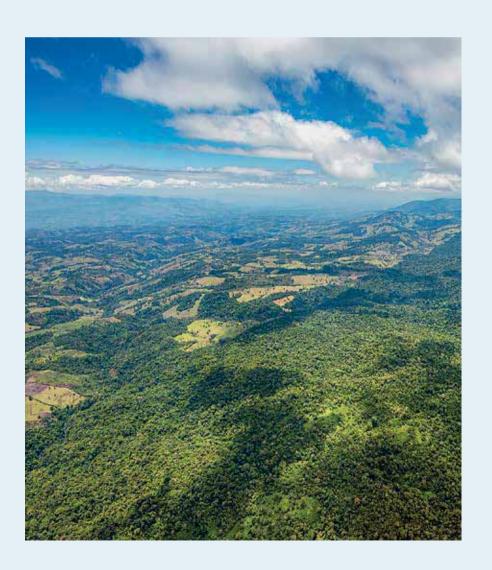
pacts of the pandemic. At the same time, we have to come closer to achieving the Paris goals and to protecting nature. It is precisely this kind of investment that we have to identify. The good news is that we have the knowledge and the technology to do so. What we don't have is the money.

Which green projects in particular are you investing in or do you want to invest in?

In 2018 we launched an ambitious decarbonisation plan that aims to create a netzero emissions economy by 2050. Our biggest problem in Costa Rica is the transport sector. It was and still is a major source of greenhouse gas emissions. We therefore want to electrify 75 per cent of the trans-

port sector by 2035. One of our most ambitious projects is an electric train that is supposed to connect the main cities in Costa Rica. And we want to expand our public transportation systems within the cities. We also plan to change our agriculture sector, reduce emissions from livestock and improve the ecosystem services provided by our forests. We had intended to do this before the pandemic, but then a lot of our public money had to be redirected, and that makes it difficult to implement the plan. For this reason, we would like to get international support in the framework of green recovery funds.

'We need to transform the way we produce and consume. Otherwise we will not be able to live healthy lives and have healthy societies.'



How much money would you need for all this?

We estimate our decarbonisation plan will cost about USD 37 billion between now and 2050. At the same time, we expect to see net benefits across the entire Costa Rican economy of around USD 41 billion by 2050. So we think in the long run it should not really be an economic sacrifice for Costa Rica but, if done properly, it can be better for everyone. And this kind of change contributes to the overall international climate and biodiversity goals.

But to achieve this goal you need additional support from the international community.

That's right. We have to get the necessary funds. The international community should link all its grants and loans to certain conditions.

What sort of conditions do you mean?

We have international agreements like the Paris Agreement or the Biodiversity Convention. Here in Costa Rica, we feel that countries doing more to fulfil those agreements should be allocated more money than others. Those who are really doing their job, are committed and make a huge effort should be rewarded by the international community. I think the global financial system should be coherent here to support the goals we all have agreed upon.

Is that not the case at the moment?

No. That's why I feel that the whole financial system should move over to green investments and be aligned with that transformation.

Apart from the financial aspects, do you fear social trade-offs by engaging in green investment projects now at the height of the pandemic?

This is a very important aspect. We have to take the people with us. And this is why the public transportation system is at the heart of our decarbonisation plan. People can see the difference, they benefit directly. Many



Left: Around 50 per cent of Costa Rica is covered in forest. The country is widely regarded as a global conservation leader.

Right: From forest projects to international conferences, Andrea Meza Murillo is involved in conservation work at many levels.

Costa Ricans cannot afford to buy a car, but they still have transportation needs. Being able to commute, to take a train into and around the city, makes this transition tangible for them. In my view, this is really a crucial aspect and a very democratic approach. No green recovery will work if we do not get the people to agree and collaborate. It has to be fair.

Are you taking any other measures to support people who are particularly vulnerable at the moment?

Yes, we are. We identify vulnerable groups and offer them economic transfers if they get involved in this campaign to put nature at the top. That might be planting trees, saving mangroves or communities that engage in products from ecosystem services. They receive direct transfers, which helps them get through the crisis – and supports our overall goal. And of course we're also

'Those who are really doing their job, are committed and make a huge effort should be rewarded by the international community.'

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creating new jobs by building this new transportation system.

Tourism is very important in Costa Rica, but the sector nearly collapsed during the pandemic. What have you done to compensate for those losses?

As I said, we granted transfers to the worst-affected communities, partly so that they can carry on looking after the many protected areas we have in order to safeguard nature. That is one reason why we face fiscal constraints at the moment.

Do you see Costa Rica as a frontrunner?

Yes and no. We are moving ahead and are probably farther along in the process than other countries. But with more support we could do better and we could move faster. —

Drawing the right conclusions Why and how GIZ is working to build a green economic recovery. By INGRID-GABRIELA HOVEN

he coronavirus pandemic has taught us a lot. Above all, it has shown us how vulnerable we are. Another lesson we need to take on board is that we cannot go on living at nature's expense. If we do, we will simply be cutting off our own life-support systems. We do not yet know for certain how the virus emerged, but the most likely explanation is that COVID-19 is a zoonotic disease — one that has jumped from animals to humans.

In fact, around 70 per cent of all the new pathogens we identify in humans - for example Ebola, Zika, influenza and HIV/ AIDS - are zoonotic in origin. According to the World Biodiversity Council (IPBES), there are still hundreds of thousands of unidentified viruses in mammals and birds, a substantial number of which could jump from their current host species to humans. The more we destroy intact ecosystems, the greater the risk of transmission. In our own interest, therefore, we need to draw the right conclusions from the pandemic. One of the crucial lessons is that we need much bolder action to help us build a sustainable future. The Sustainable Development Goals (SDGs), the Paris Agreement and the global biodiversity goals all point us in the right direction. In terms of our knowledge, there is nothing new about all this. What has changed is that the coronavirus crisis has reinforced the need for urgent action.

On the positive side, we now have a powerful lever at our disposal in the form of huge stimulus programmes set up in nearly every country all over the world to reinvigorate our economies after the pandemic. Our challenge is to use those programmes for sustainable investment. In past emergencies – the oil crisis or the financial crisis – the main focus was on direct financial interventions in order to get the economy back up and running. Today, we can use that public money instead to drive a green recovery based on the principles of social justice.

is a Member of the Management Board at GIZ.

And that is precisely what we should be aiming for.

In concrete terms, that involves not only mitigating the immediate consequences of the crisis - as right and crucial as that is - but also restructuring our economies for the long term. The time has come to abandon past approaches and instead seize the opportunity created by the situation we now face to shape the inevitable transition and inject a much-needed sense of urgency and ambition. That means, for example, ramping up investment in renewables and energy efficiency, preserving and recreating woodlands, redesigning our transport systems, adopting more efficient irrigation methods, embracing nature-based solutions in the agriculture sector and building a circular economy.

At GIZ, we are doing what we can to harness this unique opportunity, advising our partner countries on ways of protecting and developing economic structures that combine sustainable models of production and consumption with measures to protect the climate and the environment and deliver social justice. Without developing countries and emerging economies, all our efforts to tackle climate change and reduce our consumption of natural resources are likely to remain piecemeal. Although poorer countries usually have

lower levels of per capita consumption compared with the industrialised world, they are nevertheless a vital component of any programme to build a sustainable future.

Three examples serve to illustrate what a green recovery looks like. GIZ advised Colombia on incorporating sustainable and green approaches into its national COVID Recovery Programme. As a result, the programme now includes investments in renewable energy and a scheme to plant 180 million trees. In Kenya, the pandemic all but destroyed the tourism industry. Conservation projects were on the verge of collapsing, too, since 90 per cent of this work is funded from tourism revenue. Through its support for game reserves run by local Maasai communities, GIZ has helped 100,000 people whose livelihoods depend on these areas. Together with the European Investment Bank, GIZ supports the Financing Energy for Low-carbon Investment - Cities Advisory Facility (FELICITY), which helps municipalities to access funding for green infrastructure measures. In Mexico, the city of Naucalpan used the money to set up a waste management project. Those are just three examples; the full list is much longer.

What is important to us is that the measures contribute to long-term environmental and climate goals while also helping to create jobs and improve people's circumstances. That generates a double return and helps to build acceptance within populations and societies that is so important to this fundamental restructuring process. The next 10 years will be crucial in our efforts to achieve the SDGs, preserve biodiversity and tackle the climate crisis. We cannot afford to lose sight of these goals as we respond to the pandemic. The international community must pursue the 'green' agenda with much greater vigour. It should also look at ways of channelling more money towards those countries that have set themselves ambitious targets focused on the SDGs and a green recovery. -

LLUSTRATION: JULIAN RENTZSCH

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Green with a social impact

Towards an economic recovery that delivers social and environmental benefits

The right boost

The coronavirus pandemic is not just a health crisis with major consequences. It is also a symptom of a wider environmental and climate crisis that threatens many lives and livelihoods. That is why GIZ sees the worldwide response as an opportunity to bring about a far-reaching economic and social transformation. We want to help achieve that vision through our programmes and projects.



WATER The Andean state of Bolivia is extremely vulnerable to climate change. As well as having a negative impact on the water cycle, this is also causing more droughts and increasingly frequent extreme weather events. Through a project commissioned by BMZ and cofinanced by the EU, GIZ is helping to develop modern water management systems that protect the country's water resources in the long term and therefore increase water security. —

Wetlands

ECOSYSTEMS On behalf of BMU, GIZ is supporting the work of people in rural areas to restore and preserve wetlands. These are highly biodiverse ecosystems such as mangrove forests, streams and ponds. The restoration work provides short-term employment for people returning from the cities due to the coronavirus pandemic. It also creates permanent jobs, improves the supply of fresh water and food, and increases biodiversity. —

Bamboo beds

BAMB00 One of GIZ's projects in Ethiopia involves making thousands of sustainable camp beds. Locally sourced bamboo is used for the frames and high-quality cotton from Senegal for the bedding. The beds are intended for use in rural clinics set up to deal with the rise in COVID-19 patients. As well as helping to combat the pandemic, the project generates business for sustainable producers, stimulates trade between African countries and creates jobs. GIZ is supporting the project on behalf of BMZ. —



Green investment

REFORMS A green economic recovery requires a great deal of investment and new laws and regulations in almost every country. The European Union has designed a toolkit of measures to stimulate green growth, and GIZ is exploring which of these are suitable for use in Asian countries. When it comes to driving green and inclusive growth, Viet Nam leads the way in Asia. As part of a programme commissioned by BMZ and cofinanced by the EU, GIZ is supporting the Government's efforts to mobilise green investment and reinvigorate its economy. Much of that investment is systematically directed at sustainable business models through funding mechanisms such as green bonds. —

Jobs with a bright future

EMPLOYMENT Africa's very young population means that the demand for training and jobs is huge. On behalf of BMZ, GIZ is working in various countries to support development partnerships with the private sector, for example in the textile industry, with the aim of creating jobs. These partnerships are run under the 'develoPPP for jobs' programme which brings together governments, civil society and responsible companies, combines their knowledge and resources, opens up new sources of income and creates both long-term and sustainable jobs. —





A WELL OF COOPERATION

Water is a precious resource in Central Asia.

akzente visits Uzbekistan to see how it can be distributed sustainably and fairly — and how this enhances stability in the region in times of climate change.

TEXT AND PHOTOS EDDA SCHLAGER

t's just a flick of the wrist, but Solizhon Matmurodov knows exactly what happens when he opens or closes one of the valves controlling the water supply to small canals known locally as 'aryks', which run off a retention basin. The aryks are separated from one another with movable barriers. Matmurodov explains: 'If I open this one, I can irrigate 72 hectares of land growing mostly vines. These ones, on the other hand, irrigate 122 hectares of tomatoes, cucumbers and apples.'

Matmurodov is the Chief Engineer at the state Water Users' Association, which supplies water to Asaka District in Andijan Region in the far east of Uzbekistan. The system he manages ensures that all the farmers have access to the water they need to irrigate their land. Water means responsibility, so the individual in charge of water distribution has always been one of the most highly respected members of Uzbek society. And Matmurodov attracts con-

siderable respect. Farmers look on appreciatively as he explains his special measuring equipment – the 'smart stick' – and then dips it into the water gushing through one of the aryks. 'We're only getting nine litres a second here at the side of the aryk,' he says, 'but here in the middle, it's 450 litres a second.' The smart stick is around a metre long and bent into a right angle at the bottom, while there is a small white box with a display screen at the top. It is one of Matmurodov's most important tools, and he places enormous trust in it. It enables him to determine exactly how much water each field gets over any given period. The information is transferred to a database for storage.

'Farmers used to get too much water sometimes, or too little, and that caused discord,' he explains. 'Now, they accept what I allocate because they can all see that they are in fact getting what they need.'





TAKING IT TO THE NEXT LEVEL

Climate change is having a particularly severe impact on water supply and soil quality in Central Asia, for example as a result of droughts and melting glaciers. This threatens the livelihoods of millions of people and creates significant potential for conflict. The German Federal Foreign Office's Green Central Asia initiative brought the Central Asian states around the table in early 2020. The founding conference in Berlin marked the start of cross-border political dialogue on climate and security. Green Central Asia also enables stakeholders from the academic and research community and civil society in the region to network with each other and with German experts. The initiative is in line with the EU's Central Asia strategy. The Central Asia Water Initiative known as 'the Berlin Process' - has formed the basis of cooperation for over 10 years, and GIZ has implemented major parts of it in a number of countries. Now the company is supporting the dissemination of research findings to enable those involved to tackle the challenges of the future.

Contact: Caroline Milow, caroline.milow@giz.de



'Climate change
is no respecter of borders,
so we also need
to find cross-border
solutions.'

CAROLINE MILOW

GIZ Programme Manager for Green Central Asia

Read an interview with her at akzente.giz.de/en

Water is a scarce resource in Central Asia, and climate change and the burgeoning population will make this water shortage much worse in the region over the coming years. On behalf of the German Federal Foreign Office, GIZ implemented the Transboundary Water Management in Central Asia programme between 2009 and 2020. The EU was involved in cofinancing in Uzbekistan between 2016 and 2020.

Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan have been able to improve the way in which they coordinate the management of their natural water resources, not only at policy level but also specifically for agricultural irrigation. Employees of the Water Users' Association in Asaka and other regions have been trained in modern methods and equipped with tools, including smart sticks.

As Caroline Milow, Programme Manager in Uzbekistan, explains, 'The programme has been a huge success, but after 10 years, we needed something new.' The Federal Foreign Office's Green Central Asia initiative, launched in Berlin in 2020, takes cross-border cooperation to a new level. Water management has formed the basis for 'beginning diplomatic dialogue on climate, environment and security,' adds Milow. The objective is to foster stronger regional cooperation, improve the exchange of information and form connections with the academic and research community and civil society on climate change.

The countries in the region all rely on the Amu Darya and Syr Darya rivers, the life blood of the Aral Sea basin, which is an area of some 1.8 million square kilometres extending from Kazakhstan in the north through Central Asia and into Afghanistan and Iran.

Shukhratjon Ergashev manages a small part of the basin. He is the Vice-Chair of the river basin authority in Andijan from where, as he explains, 'we supply the whole of Central Asia with fruit and vegetables.' This region of Uzbekistan is sited in the Fergana Valley, which stretches across the east of the country and into parts of Kyrgyzstan and Tajikistan. The valley is one of the most fertile – and therefore most densely populated – regions of Central Asia. Irrigation farming has been carried out here for centuries.

River basin authorities are important governmental partners for GIZ in Uzbekistan. As Caroline Milow explains, 'Local people have technical expertise that we want to promote and broaden so that they can make more effective use of existing resources.' GIZ and its partners have won particular trust in all the countries involved over recent years, she adds, 'so we want to work with them and others involved in the Green Central Asia initiative to deepen our involvement and draw up a regional climate change adaptation plan.' The plan will provide long-term strategies for water use on the basis of climate forecasts and other environmental trends.

Water manager Shukhratjon Ergashev: 'We know what problems we need to tackle. The canal systems date back to the 1970s. They urgently need upgrading.' That is why he and his colleagues really appreciate the support GIZ provides. 'And it's important that the farmers themselves learn how to save water,' he adds.

One of the places they can learn to do this is a six-hectare fruit farm in Andijan. Mohammad Sadiq Hidayatov is one of the farmers







who have benefited from training at this model farm. As he drives through rows of apple and pear trees, he explains, 'We have drip irrigation on two hectares, sprinklers on another two hectares, and normal furrow irrigation on the remaining two hectares.' He and his colleagues have already seen what difference these irrigation methods can make to water consumption and are putting what they learn into practice on their own farms, he says.

GIZ has now handed over the model farm, tractors, a water reservoir and a pump system to the river basin authority. And Shukhratjon Ergashev believes this initial scheme should be expanded. The Uzbek water expert would like to see recognition at the highest political level that climate change is having a direct impact: 'We used to have a drought every 30 years or so; now, it's every seven or eight years,' he says.

Ergashev has seen bitter conflict over water resources, not only between farmers in his own area but also between the countries of Central Asia. And people in Kyrgyzstan, just 10 kilometres away, face exactly the same problems. 'But regardless of the politicking over the past few years, we water experts on both sides of the border have always maintained contact,' he says. Caroline Milow hopes she can continue to rely on this pragmatic approach in future: 'We need to solve the problems in Central Asia now; if we don't, security across the region will be at risk.'—

Left: Engineer Solizhon Matmurodov uses a smart stick to measure exactly how much water flows through a canal in eastern Uzbekistan. Above: An adequate water supply means fruit trees can grow, as farmer Mohammad Sadiq Hidayatov demonstrates in the Fergana Valley. Below: Village wells are in heavy demand in arid areas in the west of the country.



In this video, a farmer reports how her pomegranate trees benefit from water management: akzente.giz.de/en

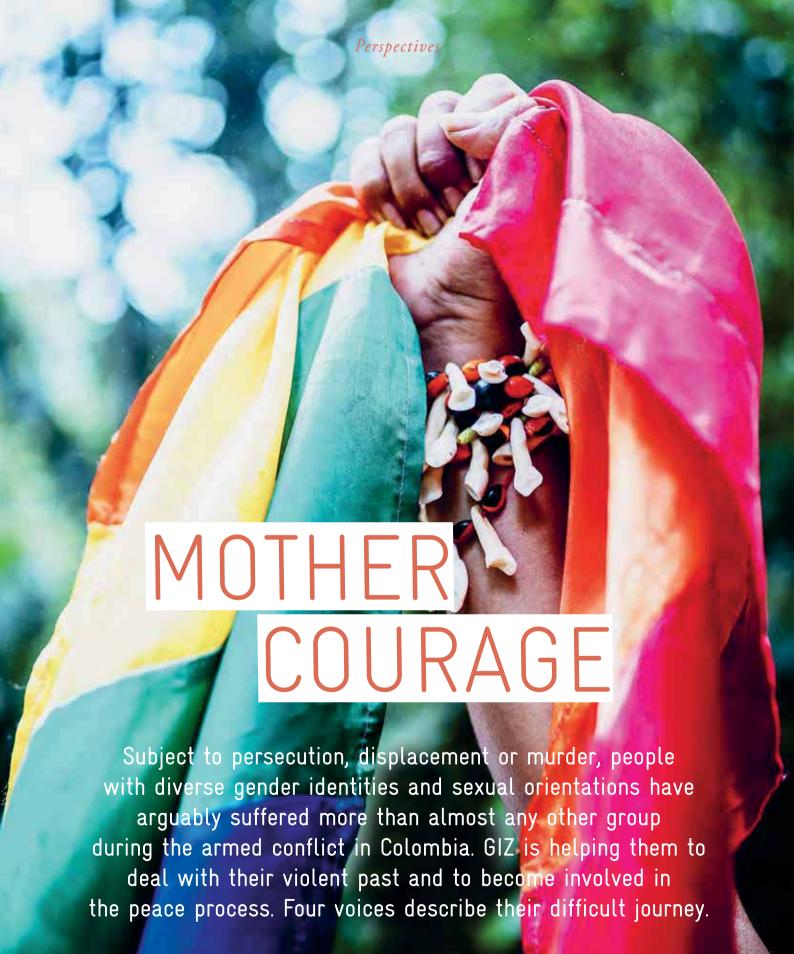
The project contributes to the following United Nations Sustainable Development Goals (SDGs):











'It was the first time I had told my story.'

RAIZA PARRA (55), representative of the LGBT working group and the Committee for Peace, Reconciliation and Coexistence in the Meta region

'I've been a trans woman since I was 28, and I love that identity. I like seeing my body differently, dressing up, colouring my hair, putting on make-up and a dress. I've been campaigning for the rights of diverse people like me for more than 20 years. For example, I established the Gay Pride march in Villavicencio, the regional capital of Meta. People here call me 'Madre' – Mother.

As a teenager, I experienced sexual violence at the hands of guerrilla fighters and then displacement and persecution. And the problems persist to this day. During the armed conflict, we knew where the threat was coming from. But now, we are often unsure who is who. The gender-diverse population still faces discrimination, stigmatisation and persecution, but we will not be intimidated. In fact, quite the opposite is true as we will fight even harder for our rights.

International cooperation is behind the improvements in Meta. The Government trusts foreign institutions. I told my story for the first time for the book 'Construyendo Memorias' ('Making memories')*, which is the result of workshops and training courses supported by GIZ. Years ago, I campaigned in vain for a work of this kind.

We have also produced a report for the Truth Commission and the Special Jurisdiction for Peace, so that it can open a case on the LGBT community. Cooperation with GIZ has brought us together and strengthened our organisations and contact with official agencies. Now we know our rights, and some in our community have also undergone training as managers in psychosocial support. And now we are passing on what we have learned to others.'—

* The book is available in Spanish at https://vocesmulticolores.com/informe





'I want to change the way this country thinks.'

PEDRO LOPEZ* (25), representative of LGBT young people in the Meta region

'I came out when I was 16. I had peritonitis and nearly died. Before I went into surgery, I told my mother I was gay. She told me God punished homosexuals and that I couldn't come back home. And when I left hospital, my uncle and my brother threatened me. The only glimmer of light was the small bursary that enabled me to finish vocational school. My fellow students gave me food, and when I confided in the school psychologist, she arranged a parttime job for me. That was also when I began to get involved in the gender-diverse community. Cooperation with GIZ has brought us all together: within the community - we have got to know and understand each other better. Some people are now less fearful and have found the confidence to speak publicly. We share our experiences and try to encourage others. That's important, because the suicide rate among LGBT young people is shocking. Young people are taking their own lives because their families have rejected them and they don't know which way to turn. Maybe I'll become a politician one day: I want to change the way this country thinks.' —

* Name has been changed

'We've been inspired afresh and made new contacts.'

CLAUDIA P. SALAZAR (57), advisor to the Governor of Meta

'In our rural region, the gender-diverse community has always found things difficult – and it still does. There is discrimination in education and on the labour market. Many queer young people have stopped going to school because of bullying by fellow students or teachers. Families need psychosocial support so that they can learn to accept their children. And we want to train the staff of public health facilities to treat gender-diverse people with respect. These are just two of the aspects we cover in policy guidelines that we have drawn up to improve the lives of the gender-diverse community. We set up the first working group on inclusion of the LGBT community eight years ago. At the time, I was managing the Office of Social Affairs and Citizen Participation in Villavicencio. The mayor of the regional capital was an open-minded man. Back in 2010, he and his wife had joined the first Gay Pride march, setting an example in the process.

Since then, GIZ's ProPaz programme has supported us in getting more people involved. ProPaz has strengthened LGBT organisations and informed members of their rights. It's a great help to us as a regional government, as we don't have the resources to do that. We've been inspired afresh and made new contacts right across society. It's important to forge alliances and to get all agencies thinking about this important issue.'—





'People wept when they heard about the violence against us.'

LENNY RODRÍGUEZ (34), LGBT representative of ethnic groups in Meta

'I was born in an indigenous Tikuna community in Amazonas, where I was rejected because of my sexuality. In the municipality where I lived later, guerrilla fighters forced people to collaborate or join the militia. People had to do what the commanding officers said for fear of being punished, kidnapped or murdered. Later, the Army fought the guerrillas. Many people had to flee, leaving everything behind. The guerrilla fighters drove me and others away because of our sexual orientation. The state gave me no help at all – I had to get through it all alone. As part of the book project with GIZ, we were able to tell our stories for the first time and share our experiences of being indigenous LGBT victims of the armed conflict. It's a huge step forward for us. Our families now know what we went through. People wept when they heard about the violence against us. It's really hard recalling it all – but it's also healing. And it has changed our lives.

I now work in indigenous communities in the region. I help them with social and health issues. I also advise people on their appearance, apply their make-up and cut their hair. And I try to help non-indigenous people, too. I am passionate about my work and put all my spiritual energy into it. Before I was elected as the LGBT representative by indigenous leaders, I visited indigenous communities. They were hostile to begin with, which is no doubt down to wide-spread sexism. But I think I can change that using my spiritual gifts and all my allies.'—



'Participation by victims is a fundamental part of the peace agreement between the state and the former guerrilla fighters.'

MERY RODRÍGUEZ,

Colombian social scientist and consultant on memory work as part of the ProPaz programme

Read an interview with her at akzente.giz.de/en

WORKING FOR PEACE WITH ALL

GIZ is implementing the ProPaz II — Consolidation of Peace in Colombia project on behalf of BMZ to help people deal with the country's violent past. It is also strengthening the rights of victims. In this context, GIZ supports individuals with diverse gender identities and sexual orientations — the 'población diversa' or gender-diverse population. This has enabled the victims of violence to submit their reports to the Special Jurisdiction for Peace and has helped people start coming to terms with 15,000 cases of sexual violence alone.

Contact: Rebekka Rust, rebekka.rust@giz.de

The project contributes to the following United Nations Sustainable Development Goals (SDGs):





EDITOR'S Digital Picks

Making big cities liveable

INITIATIVE Cities are the main focus of hope for green economic recovery. Promoting their potential is the aim of UrbanShift. The initiative is working in nine countries to devise innovative urban planning concepts and bring local, national and global stakeholders together for a greener and fairer urban future for all. —

www.shiftcities.org



A seat at the table

PODCAST 'Table for 10 Billion' explores what it will take to feed the world's growing population. Experts debate issues including why hunger remains persistent and how digital technology is transforming food systems. —

www.worldbank.org, search for 'Table for 10 Billion'

Knowledge for all

E-LEARNING A wide range of free online courses around sustainable farming and management is available from the United Nations Food and Agriculture Organization (FAO). The courses are aimed at experts, are modular in design, and can be followed by users at their own pace. —

elearning.fao.org

Global shapers

REPORT Young people have the potential to create a fairer world. Their ideas and energy can be the key to creating momentum for change. One interesting initiative is the Youth Recovery Plan, which features 40 policy recommendations to help policy-makers integrate the voices of the next generation into recovery efforts.—

www.weforum.org/reports/youth-recovery-plan

Armchair action

CAMPAIGN Too lazy for radical change? No problem! 'The Lazy Person's Guide to Saving the World' has handy tips for saving the planet from your couch, taking you from 'sofa superstar' to 'household hero'. Now we can all support the Sustainable Development Goals in our daily lives. —

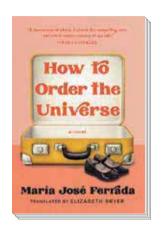
www.un.org/sustainabledevelopment/takeaction



PHOTOS: GETTY IMAGES/ISTOCK EDITORIAL (P. 48, ABOVE), WORLD BANK (P. 48, CENTRE), UN (P. 4

GOOD READS

from around the world



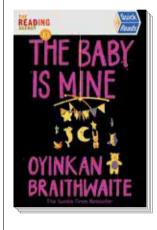
HOW TO ORDER THE UNIVERSE

The travelling salesman for Kramp hardware visits a different village each day. His seven-year-old daughter goes with him, learning lessons from life rather than in the classroom. It's the perfect partnership – until something goes wrong. And in early 1980s Chile, there are ghosts a-plenty lurking in the background. A short, brilliant jewel of a story told with the lightest of light touches. — Anita Djafari

María José Ferrada, Chile. Translated from Spanish by Elizabeth Bryer. Tin House Books, 180 pages

LITPROM RECOMMENDS
Litprom – the Society for the
Promotion of African, Asian and
Latin American Literature – provided these reviews for akzente.
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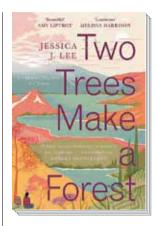
www.litprom.de/en



THE BABY IS MINE

Is the crisis an opportunity? A 'small' story that packs a punch. Oyinkan Braithwaite paints a witty, clever picture of lockdown in Lagos, Nigeria, playfully turning gender relations on their head. — Ulrich Noller

Oyinkan Braithwaite, Nigeria. Published in English. Atlantic Books, 128 pages

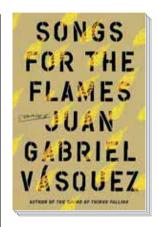


TWO TREES MAKE A FOREST

This book sees the island of Taiwan as an allegory. In this very personal exploration of her roots, Canadian environmental historian Jessica J. Lee discovers the subterranean shifts, luxuriant growth and political strife that characterise Taiwan. She paints a picture of a precarious homeland in the middle of the ocean. This is a gripping story of migration combined with nature writing of the highest order. — Katharina Borchardt

Jessica J. Lee, Canada. Published in English. Virago, 240 pages

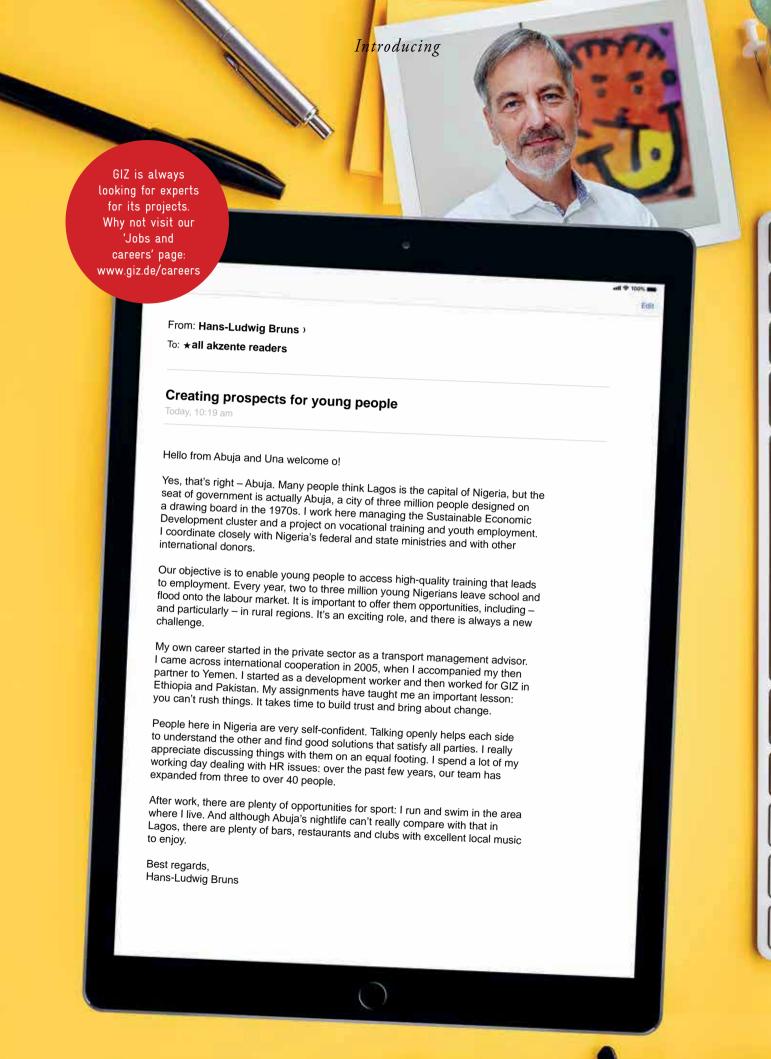
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SONGS FOR THE FLAMES

A tale of exile that weaves
Polanski into the mix takes on an
autobiographical air. A portrayal
of violence in Colombia is almost
unbearably immediate. Stories
dealing with guilt and deception
are more subtle, with accusations of cowardice and a display
of pathos from a freedom fighter.
Across nine stories, Juan Gabriel
Vásquez demonstrates the full
breadth of his skill. —
Ruthard Stäblein

Juan Gabriel Vásquez, Colombia. Translated from Spanish by Anne McLean. Riverhead Books, 256 pages



SUSTAINABILITY

A look back at a project and its results



Project: Modernisation Partnership for Energy Efficiency in Hospitals **Country:** Ukraine

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

Term: August 2016 to June 2020 / Evaluation period: 2019 to 2020

THEN

Ukraine is heavily dependent on energy imports from abroad, which has contributed to soaring energy prices since 2015. At the same time, the country's infrastructure and supply systems are outdated, and the energy efficiency of many facilities is low. This is particularly apparent in the health sector: more than 1,000 hospitals with around 430,000 beds are among the most energyintensive public institutions. In certain cases, they have to spend up to 20 per cent of their budget on energy. The sharp increase in energy prices is putting considerable economic pressure on the hospital providers and greatly limiting their scope for action. Some of the money needed to fund medical care has to be used for energy instead: sufficient amounts of important medical goods can no longer be purchased - with a negative impact on patients.

NOW

The project supported 17 municipal hospitals in the partner cities of Sumy and Chernihiv in reducing their energy consumption. Energy audits were conducted to identify ways to use energy more efficiently and hence to cut costs. By implementing these measures, the institutions are able to save around EUR 1 million a year. Some of the hospitals have undergone energy-efficient refurbishment: exteriors have been insulated, for example, and doors and windows replaced. This has led to energy savings of up to 42 per cent. The project also assisted in knowledge transfer, training more than 60 managers and energy managers in the 17 hospitals. Another success was immediately felt: the temperature in the hospitals increased, benefiting the patients.

https://mia.giz.de/qlink/ID=247790000

AKZENTE

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Green Recovery ['griːn ri'kʌvəri] covers a range of measures to tackle the social, economic and environmental impacts of the coronavirus crisis. It facilitates change that is sustainable, resilient and climate-neutral. In the long term, green growth ensures that natural resources are preserved as the foundation for future generations' livelihoods.

Source: GIZ

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