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MIGRATION

Take account of
brain drain in the
health-care sector

ENERGY

What rich nations
must do to support
Africa best

COVID-19 DIARY

German minister Gerd
Müller spells out need
for global solutions



Water supply and climate crisis

Monitor

Two Nobel laureates want economists to focus more on empirical reality and less on fancy modelling | Allowing private-sector companies to challenge climate legislation | Nowadays: A refugee's expertise proves useful in Ugandan camp | Imprint 4

Debate

Comment on migration-induced brain drain in the health sector 8

Tribune

INTERVIEW WITH HANS-JOCHEN LUHMANN
The dual approach to getting carbon prices right 9

Focus: Water supply and climate crisis

KRUPA GE
Last summer, water supply collapsed in the South Indian megacity Chennai 13

INTERVIEW WITH M. A. JABBAR
Waste water treatment in Bangladesh: "Each drop matters" 15

DANIEL NORDMANN, HELMUT LANG AND KATRIN GRONEMEIER
How cooperation in Africa's water sector should look in future 16

INTERVIEW WITH RIAD SULTAN
Better governance would help to reduce water-supply deficits in Mauritius 18

KATIE CASHMAN
Because of global warming, Chile must cope with less water 20

SUDEH DEHNAVI
Why fetching water remains a chore of women and girls 22

SARAH JOSEF
UN report on how climate crisis negatively affects water supply 23

Covid-19 diary 25



Water supply and climate crisis

Scarcities in India and Bangladesh

Last summer, a severe drought resulted in the collapse of municipal water supply in Chennai, the South Indian megacity. Borewells were dry too. Krupa Ge, a local journalist, assesses policy-makers' shortcomings. Bangladesh also faces increasing water-availability problems. M. A. Jabbar of DBL Group, a garments producer, spells out what his company is doing in terms of waste-water treatment and recycling. **PAGES 13, 15**

Prevent „Day Zero“ in Africa

Water supply is precarious in many sub-Saharan countries. Daniel Nordmann, Helmut Lang and Katrin Gronemeier of GIZ make four proposals on how to improve cooperation in the water sector. In Mauritius, flawed governance has contributed to water-supply becoming overburdened, as Riad Sultan, an economist, elaborates. **PAGES 16, 18**

Parched and privatised

Chile's water resources are dwindling in the climate crisis. Policy choices of the past make things harder for masses of people today, as development consultant Katie Cashman reports. **PAGE 20**

Gender injustice

Women of marginalised communities normally do not have the same opportunities as men to earn money. Sudeh Dehnavi of the Cologne University of Applied Sciences argues that this is why fetching water remains a chore taken care of by the female members of a household. **PAGE 22**

The Covid-19 diary we started in our last issue is continued in this one. The most prominent contributor is Gerd Müller, Germany's federal minister for economic cooperation and development (page 28). He demands global solutions for global problems. You will find a list of all diary entries on page 25.

► All Covid-19 diary entries are also included in a briefing on our website, and we will add more as the crisis unfolds: www.dandc.eu/en/briefings/coronavirus-pandemic-affecting-societies-and-economies-around-globe

Vital resource

Cyclone Amphan hit India and Bangladesh on 20 May during the coronavirus lockdown. The storm was devastating. At least 110 people died according to regional newspapers and millions had to abandon their homes. Experts say, this tempest was one of the worst the region has seen in two decades. Masses of people lost access to safe drinking water and electric power.

The pandemic made it harder to evacuate exposed places before the storm and to clean up after it. Lockdown and social distancing had to be suspended even though Covid-19 was spreading.

Cyclones occur regularly in the Bay of Bengal. Scientists tell us, however, that their number and intensity are increasing due to the climate crisis. As the sea surfaces' temperatures are increasing, storm patterns are changing. Tropical storms – called cyclones in the Indian Ocean, hurricanes in the Atlantic and typhoons in the Pacific – belong to the extreme weather scenarios that are becoming more frequent or more forceful, researchers warn. Others are heat waves, droughts and excessive rain.

Disasters of this kind put human lives at risk directly and indirectly. Storms destroy wells and water pipes. Droughts reduce water availability. Developing countries and emerging markets are affected in particular as their infrastructures tend to be weaker and their climates tend to be harsher.

The export of “virtual” water compounds the problems: water that is used to produce crops or manufactured goods for delivery to more prosperous nations is normally no longer available for other purposes. More and better water-treatment capacities would be helpful.

Political scientists have been warning for a long time that future wars may erupt because of water scarcity. So far, that has not happened, but nonetheless water is relevant in many conflicts.

Tensions are increasing, for example, between nomadic herders and farmers in the Sahel region. The climate is changing and rainfall is becoming increasingly unpredictable. Lake Chad is shrinking. The livelihoods of fisherfolk and farmers are disappearing, and that trend enables the Islamist militia Boko Haram to recruit desperate young men.

Water is a contentious issue in the Middle East as well. Israelis and Palestinians are not only divided by faith and politics. Water matters too, and it is mostly controlled and consumed by Israel. Palestinians and Jordanians only get a rather small share. In many world regions, water-related disputes are intensifying, especially where several nations depend on the same rivers or aquifers.

Distribution within nation states tends to be inequitable as well. All too often, access to water depends on purchasing power. Prosperous neighbourhoods have more or less reliable infrastructure, including for sanitation purposes. Villages and informal urban settlements typically lack such amenities.

One result is that the communities concerned are now more exposed to Covid-19. They cannot observe some basic hygiene rules: if you do not have enough water, you cannot afford to wash your hands often. If you live in a crowded settlement, there is no scope for social distancing.

► You'll find all contributions of our focus section plus related ones on our website – they'll be compiled in next month's briefing section.



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Photos: picture-alliance/dpa; picture-alliance/Minden Pictures

Debate



Take account of braindrain

Germany's Federal Government would like to see skilled immigrants filling vacancies – including in health facilities. A new law has been passed to make it easier for people from outside the EU to work in Germany. As Richa Arora, an Indian scholar at the Berlin-based think tank SWP, warns the reform may compound braindrain in developing countries and emerging markets. **PAGE 8**

Tribune



Appropriate carbon pricing

“Carbon emissions pricing” means that state institutions charge a price for emissions. By contrast, “carbon shadow pricing” means that the long-term impacts of emissions are factored into the planning of major projects even if current market prices do not reflect those impacts yet. Shadow prices are fictional, but have a very real impact. A high shadow price for fuel, for example, can make a power plant unviable even though it may look attractive at current market prices. The climate economist Hans-Jochen Luhmann argues that both approaches to carbon pricing make sense. They actually complement one another. **PAGE 9**



Duflo and Banerjee
in Stockholm in
2019.

ECONOMICS

Count in human beings

The new book by two of the economists who won last year's Nobel Prize is quite radical. Abhijit Banerjee and Esther Duflo call for a paradigm change. They want their profession to consider empirical reality rather than indulging in fictional models. In particular, they resent TV economists who sell distorted platitudes as deep insights.

By Hans Dembowski

The book's title is "Good economics for hard times" and the subtitle is "Better answers to our biggest problems". The two professors from the Massachusetts Institute of Technology (MIT) wrote the book before winning the Nobel prize last year. In it, they argue that economists should be like plumbers who solve problems society is facing. In their eyes, their colleagues put too little effort into doing so, but focus too much on explaining models and methodology to peers. The result is that what the general public believes is standard economics is often out-

dated and wrong. Empirical research actually proves wrong many of the platitudes that constitute the conventional wisdom. Supposed experts reiterating it on TV often serve vested interests.

One example is migration. It is widely believed that the immigration of unskilled foreign workers increases labour-market competition to the detriment of unskilled domestic workers. The scenario is used to explain xenophobia. As Banerjee and Duflo point out, the empirical reality is normally quite different. Unskilled immigrants typically do work that people from the host country refuse to do. Moreover, immigrants do not only earn money in a zero-sum game that would mean someone else is deprived of that money. Immigrants are consumers who increase aggregate demand, which in turn creates new opportunities. When immigrants join established teams, moreover, some of their domestic colleagues typically rise to a higher rank in the company hierarchy.

The two Nobel laureates find it irritating that, in conventional economics, labour is a mere commodity, with pay being the only thing that supposedly matters to employers and employed. Once again, the empirical reality is different. Labour relations are always personal relations, and trust is essential.

Moreover, people do not only work because they need money. Work has a bearing on people's sense of identity, self-confidence and self-esteem.

This has implications for social-protection policies. The conventional wisdom is that unemployment benefits and other forms of governmental support for poor people thwart recipients' willingness to work. Once again, the empirical evidence speaks a different language. Banerjee and Duflo insist that human beings want to do something meaningful.

According to the conventional wisdom, growth is the all-important policy goal. The two MIT scholars disagree. While least-developed countries which generally lack resources do need growth, it has not made a difference in most people's lives in rich nations in recent years, since only a privileged few raked in the profits. Banerjee and Duflo insist that people matter – and that policymakers

should focus on increasing welfare, not gross domestic product.

Another cliché is that market dynamics always deliver better results than government action. Reality is more complicated. As the scholars point out, government agencies perform better in some fields. For example, government schools are needed to ensure opportunities throughout a nation because private schools tend to cater only to privileged communities.

At a very fundamental level, Banerjee and Duflo disagree with the idea that a person's preferences are fixed permanently. This fiction is useful because economic theory is to a large extent based on the notion of homo economicus – an entirely rational being that maximises personal utility. In truth, people keep changing their minds about many things. They are influenced by who they interact with, by the media and by various kinds of trends and fashions. Preferences are therefore not sacrosanct, write Banerjee and Duflo, and there is no reason why policymakers should accept them as such.

The book benefits from the fact that Banerjee is from India and Duflo from France, with both working in the USA. They have a good understanding of both advanced nations and developing countries. Their work deserves wide attention. It should be made required reading for undergrad students of economics. Policymakers who prefer economists' advice to those of other experts should read it too.

METHOD OF CHOICE

That said, the approach Banerjee and Duflo take is almost entirely based on a single research method: randomised controlled trials (RCTs). RCTs test how a specific intervention affects a specific community by collecting data from one group of people who are exposed to the intervention and another who are not. If the two groups are otherwise very similar, different outcomes are obviously caused by the intervention.

Developing and using this methodology has made the married couple promi-

nent. They have applied it extensively to find out what works best in the fight against poverty. That kind of work is what they won the Nobel Prize for. On the other hand, some of the things they reveal by the means of RCTs have long been understood by other social sciences. Psychologists have known for decades that work and self-esteem are closely interrelated. Sociologists and political scientists have argued for a long time that markets do not respond to human need, but only to purchasing power.

To a large extent, the merit of Banerjee's and Duflo's work is not to discover these things, but only to prove them in a way other economists will find hard to deny. That is important, of course, because economics is the politically most influential social science. Unfortunately, TV economists peddling platitudes are unlikely to pay attention.

BOOK

Banerjee, A. and Duflo, E., 2020: Good economics for hard times. Better answers for our biggest problems. London: Allen Lane.

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INTERNATIONAL LAW

Companies sue states for climate-protection measures

On the basis of the Energy Charter Treaty, companies are suing countries for damages when the latter decide to phase out or limit the use of fossil fuels. Civil-society organisations have called on member states to institute reforms. They demand, among other things, an end to investment protection for fossil fuels. According to the NGO PowerShift, however, climate change has so far played little role in discussions about modernising the treaty.

By Linda Engel

The Energy Charter Treaty regulates the relationships of over 50 countries in the areas of trade, transit and investments in energy sources. It dates from the end of the Cold War and was intended to, for example, protect foreign investors in the dilapidated

nied this possibility. According to a study by the non-profit organisation PowerShift, which is located in Berlin, this practice has allowed many investors to bring – or threaten – lawsuits when states want to pass laws to protect the climate, thereby endangering investments in power plants.

PowerShift cites the example of the Canadian company Vermilion, which threatened France in 2017 with a lawsuit before a private arbitration tribunal. The government in Paris wanted to issue an incremental ban on oil and gas production. Vermilion is responsible for over three-fourths of French oil production and insisted on its investor rights according to the Energy Charter Treaty. Out of concern over high compensation payments, France changed its planned legislation. Now oil production can continue until 2040 – a defeat for climate

Following the Fukushima disaster, Germany decided to phase out nuclear power. For Vattenfall, this meant that its plants in Germany would be shut down ahead of schedule. PowerShift reports that to date, companies have sued states over 120 times in total. Almost half of the proceedings are still ongoing.

Member states are currently in negotiations about reforms to the Energy Charter Treaty. Fabian Flues, an advisor on trade and investment policy at PowerShift, is critical of this process, however. According to him, climate protection is hardly playing a role in discussions about modernisation. “For us, a clear consequence of the Paris Agreement would be that the EU suspend investment protection for fossil fuels,” Flues says. Any changes to the treaty must be unanimously agreed upon by all 53 member states. But Flues says that some countries, including Japan, have already announced that they see little need for reform.

Also problematic, according to Flues, are the efforts by the secretariat of the Energy Charter Treaty to add more commodities-rich members in the global south, for instance in East Africa. Membership would confer no benefits on these countries, and they would hardly be able to withstand lawsuits from foreign investors.

At the end of 2019, 278 civil-society organisations and trade unions from member states of the Energy Charter Treaty wrote an open letter to the ministers and parliaments of their countries as well as to the European Commission. In addition to an end to investment protection for fossil fuels, they demanded the removal of investor-state dispute settlement before private arbitration tribunals and a stop to the expansion of more member states until comprehensive reforms have been made. Some progress has been made since the letter appeared: member states have agreed to stop expansion until they can review the process.

SOURCE

PowerShift, 2019: *Stolperfalle für den Klimaschutz. Wie der Energiecharta-Vertrag ambitionierte Klimapolitik gefährdet* (only in German).

<https://power-shift.de/wp-content/uploads/2020/02/Wie-der-Energiecharta-Vertrag-ambitionierte-Klimapolitik-gefährdet-FactSheet-1.pdf>



The Canadian-based company Vermilion produces oil in Andrezel, south-east of Paris.

energy companies of the former Soviet Union from nationalisation.

If a state does not abide by the treaty, foreign companies can sue it before a private arbitration tribunal. States, however, are de-

protection, even in a country with relatively few oil reserves like France.

Another example is the energy supplier Vattenfall, which is suing Germany for several billion euros' worth of damages.

Tech training at Rhino Camp

The Rhino Camp Refugee Settlement in northwest Uganda, not far from the border with South Sudan, is an unlikely spot to find a hotbed of IT innovation.

Yet precisely in this sprawling camp, where sporadic violence between different refugee groups has been reported, one refugee is offering his fellow exiles an IT service, as well as a means of connecting with the wider world.

Richard Maliamungu, a refugee from South Sudan, is a long-term resident of the camp. In 2018 he participated in a "training of trainers" workshop offered by the Access to Skills and Knowledge Network, or #ASKnet, an initiative of the Berlin-based non-profit Agency for Open Culture and Critical Transformation.

The training involved how to use the modest cache of locally available materials to create rudimentary electronic devices, and how to make faulty devices work again. The training also focused on connecting online with other innovators to acquire skills and expertise.

In addition to skills, the workshop gave Maliamungu an inspiration: Electronics innovation and repair would become his life's work. "Since I was a kid I loved electronics," he says. "I loved connecting things. For example I would get batteries and connect them with LED lights."

Maliamungu quickly put his new knowledge to work: "All I did was to follow the instructions on how to organise a repair café and then I started repairing broken electronics."

From this humble start, Maliamungu has emerged as the camp's go-to man for electronic repairs. He has also become a freelance trainer for #ASKnet, instructing fellow refugees as well as residents of nearby communities in northern Uganda on rudimentary electronics.

In his work for #ASKnet, he helps the main trainers to offer advanced hands-on skills in all six #ASKnet hubs in South Sudan, Uganda and Kenya. Among other things, the trainers introduce their students to open text documentation and open source platforms such as Git-Hub, which brings software developers from around the world together.

Moreover, Maliamungu has been invited several times to work as a trainer for other non-profit organisations, such as the Youth Empowerment Foundation. In addition, "in 2019 I was surprised to get a call from Platform Africa to facilitate open tech training," he says. "Already there is one repair shop in Eden (a section of Rhino camp) that is a result of our work."

It has been a long road from South Sudan to this point. Maliamungu is one of the estimated 2 million South Sudanese who fled their country since a civil war erupted in 2013. A large proportion landed in refugee camps in Uganda.

Getting there was not easy, Maliamungu recalls. His family fled at the height of the war. To travel the short distance to Uganda, they had to cross about ten roadblocks manned either by government forces or rebels. At the roadblocks, people were killed in front of their eyes. "This tormented me psychologically afterwards," Maliamungu says.

LINK

Access to Skills and Knowledge Network:
https://openculture.agency/asknet_-access-to-skills-and-knowledge-network/



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HEALTH PROFESSIONALS

The impact of brain drain

Germany has been experiencing a lack of skilled workers and professionals for many years. The ageing population in Germany is one of the reasons. Migrants help to reduce the labour-market bottlenecks in countries of destination like Germany, but at the same time create gaps in countries of origin. A new law has just come into force that will make it easier for people from outside of the EU to work in Germany. However, the impact on the countries of origin must not be overlooked, for instance, when they lose health-care professionals. The Covid-19 pandemic is a grim reminder of how big the problems in the health-care industry are.

By Richa Arora

The new immigration law which makes Germany more attractive to potential migrants came into effect on 1 March 2020. Like many other European countries, the Federal Republic certainly needs immigration to fill labour-market gaps. For example, Germany does not have enough nurses. Experts from the German Institute for Applied Nursing Research reckon that 38,000 jobs are currently vacant in this field. The Federal Employment Agency expects that, due to society's ageing, Germany will need about 3 million nurses by 2060 – three times more than today.

So far, migrants from poorer EU countries such as Poland or Romania have plugged many gaps. They helped to bring in farms' harvest, for example, and have been taking care of many elderly people. However, more people are needed, employers face difficulty in finding enough engineers and IT specialists.

Since 2012, the Federal Government has been actively motivating migrants to come to Germany through initiatives like „Make it in Germany“ and „Triple Win“. The idea is to recruit skilled people from specific countries. Some 3,000 nurses from countries like the Philippines, Bosnia and Herzegovina, Serbia and Tunisia have been brought to Germany this way.

For the countries the nurses came from, this development means that skilled people leave and are no longer available. Confronted with the accusation of causing brain drain, German policymakers point out that the number of health professionals exceeds the number of available jobs in countries like the Philippines or India. This



A Filipino nurse working in a German hospital before the Covid-19 pandemic.

argument is not entirely wrong, but it often lacks a holistic understanding of the reasons behind it. Demography matters, and the countries concerned tend to have younger populations than the host countries. However, what they lack is a strong health-care infrastructure. They neither have enough hospitals, nor do facilities often meet the

international quality standards. Therefore, they cannot offer enough employment opportunities to all health professionals. That is what makes Germany, Canada and other Western countries attractive.

For the countries of origin, brain drain is a serious problem. According to World Bank data, Germany has 13.2 nurses per 1,000 inhabitants. The comparative figure for India is 2.1 and for the Philippines 0.2. The Corona pandemic has made the disparities frightfully clear. For patients in critical condition, Germany has many beds in intensive-care units, but it lacks staff, while India and the Philippines have neither the hospitals nor the health professionals to take care of masses of sick people.

Covid-19 shows what brain drain combined with poorly developed health infrastructure means. Policymakers should fix the gaps in their current approaches, whether their nations are marked by immigration or emigration. Incentives to migrate, as are provided by Germany and Canada, for example, matter, and so do the remittances that migrants send home to their families. Governments on both sides of the global divide must cooperate in an effective way. Win-win solutions are feasible.

In this context, the triple win approach promoted by Germany's Federal Ministry for Economic Cooperation and Development (BMZ) deserves a praise. It is geared to only:

- recruiting from countries with more skilled workers than jobs in any given sector, a surplus,
- supporting integration through targeted placements in Germany and
- encouraging migrants to channel remittances through legal means.

More needs to be done, however. Host countries should agree to strengthen health care in countries of origin through funding and professional training. The German Federal Government's aid packages for developing countries to combat the pandemic include the provision of medical equipment to hospitals. That is a step in the right direction.



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<https://www.swp-berlin.org/en/>



Carbon intensive power plant: coal-fired electrical plant Lethabo Power Station in South Africa.

CLIMATE PROTECTION

Appropriate carbon prices

“Carbon emissions pricing” means that state institutions charge a price for emissions. By contrast, “carbon shadow pricing” means that the long-term impacts of emissions are factored into the planning of major projects even if current market prices do not reflect those impacts yet. Shadow prices are fictional, but have a very real impact. A high shadow price for fuel, for example, can make a power plant unviable even though it may look attractive at current market prices. The climate economist Hans-Jochen Luhmann argues that both approaches to carbon pricing make sense. They actually complement one another.

Hans-Jochen Luhmann interviewed by Sabine Balk and Hans Dembowski

Please explain the difference between carbon emissions pricing and carbon shadow pricing.

Well, the starting point is actually the same. The expert community agrees that we will only manage to phase out the emissions that cause global warming if those emissions are made sufficiently expensive. The atmosphere is a global common good with limited

capacity. It is being used to dump the waste of fossil fuels. Since the absorbing capacity of the earth’s atmosphere is limited, emissions must be brought to zero, and the imposition of prices has to serve that purpose. However, there is no global political authority that might impose an appropriate price all over the world. In this setting, we have two mutually reinforcing options to move towards an appropriate carbon price regime:

- The first is for policymakers to add a carbon component to the current market price of whatever causes emissions, in particular the use of fossil fuels, of course. This is called emission pricing. Consider car traffic, for example. As drivers are made to pay for the emissions they cause, they must reduce their rides when the emissions price rises unless they want to increase their car-riding budgets.
- The second option is shadow pricing; it also could have been called “future pricing”. The word “shadow” is used because, for planning purposes, higher fuel prices are taken into account than actually arise currently – that implies that carbon prices are taken into account even if there is no carbon emissions pricing at all. The point is

that “fictional” prices serve the financiers to assess a project’s true economic value. This method allows to factor what market prices still ignore. That makes sense when climate-relevant projects – especially power plants – have long operational life-spans. In the project assessment, the shadow price, usually increasing with time, is applied throughout the life-span of the investment.

Do we need both approaches?

Yes, because both have a real world impact, and both drive markets towards factoring in long-term impacts. They complement each other because we are witnessing spectacular global market failure as the climate crisis escalates. Currently, carbon market prices do seldom exist, and even if, they simply do not show us the increasing environmental costs in future, the equivalent to the increasing scarcity with respect to the remaining carbon budget.

So current emissions pricing is simply not effective?

No, it is not. Consider Germany, which introduced an “eco tax” on gasoline and diesel two decades ago, but then found it politically inconvenient to increase that tax rate regularly, as was originally intended, so it would serve as a constantly growing disincentive. The EU has acted too, by introducing emissions trading for major industrial facilities in 2008. However, it only covers about 40% of European greenhouse-gas

emissions and its implicit carbon price is generally considered to be much too low. The result in terms of reducing emissions has been quite small to date. Last year, Germany made another small step by a bill that will put in place a national certificate-trading system for fuel-generated emissions. It is noteworthy, however, that even in Germany, a country more willing than most to act on climate change, we still do not have even a comprehensive current carbon-emissions pricing system worth its name.

Why is that so?

Well, any attempt to solve the climate problem with emissions pricing systematically runs into the same governance problem: we have about 200 sovereign nation states, and only they have the authority to enforce emissions pricing on their territory. It is extremely difficult to get 200 sovereign governments to move in the same direction. Moreover, they are all tempted to shy away from action in the hope of benefiting from measures taken by others.

What difference does shadow pricing make?

The big advantage of shadow pricing is that it largely bypasses national governments. The multilateral development banks and other international financial institutions (IFIs) are the leaders. They have something like an oligopoly on the financing of major projects. The governments of ODA (official development assistance) supplying countries are involved too, but they are lagging behind. With very few exceptions, shadow pricing so far only applies to emerging markets and developing countries.

Please explain.

It has become common to use shadow prices to assessing project viability in emerging markets and developing countries. The reason is that IFI economists know that current market prices are distorted. To get a realistic picture, they want to take into account what a project will mean in terms of human health and environmental damage. Shadow pricing serves that purpose. The guiding idea is actually textbook economics. For policymakers, it is not enough when a project breaks even. If it does not drive economic prosperity in general, it does not make sense.

Then why do the donor governments not use the same methodology at home?

That is an excellent question. I find it puzzling that they only do so sporadically and erratically. Germany's approach, for example, is inconsistent. Our government has been applying shadow prices in transport-infrastructure planning for decades, but does not do so to assess the efficiency of public buildings.

How does one define a shadow price?

Well, there are two schools of thought:

- The first argues that the carbon price must cover all damages caused. In economics jargon, this is called "internalising external impacts". In regard to climate change, the idea is to discover the "social costs of carbon" (SCC). In Germany's transport sector, for example, project assessments must prove they are worthwhile with an assumed shadow price of €145 per ton of carbon emissions. That was the total damages caused by one ton, according to calculations done by the Federal Environment Agency (Umweltbundesamt – UBA) at one point. Since 2016, the UBA has been saying that €180 would be more accurate. If policymaking were consistent, the shadow price would have to rise accordingly, but the government did not raise it.
- The second school of thought wants to set the right incentive for the decisions of many millions of people. After all, their aggregate behaviour must result in the achievement of the Paris Agreement. This approach is called the "social value of carbon" (SVC). You could say that it tests how much people are willing to pay for fossil fuels. Unlike SCC, the SVC is not so much supposed to reflect the costs of climate damage as to prevent climate disaster by bringing global emissions to zero in appropriate time.

Either way, finding the right shadow price requires hypothetical thinking. It is always controversial. Both is true of emissions pricing too.

So what approach are the IFIs taking?

The World Bank pressed ahead first in 2017, announcing it was beginning to use carbon shadow prices in project assessments. It opted for the SVC approach. Its shadow price is currently \$40 to \$80 per ton of carbon, and that range will rise to \$50 to \$100 by 2030. The background is the work of the High-Level Commission on Carbon Prices, which was led by Joseph Stiglitz and Nicho-

las Stern, two prominent economists. The commission proposed that prices should rise over time, and it defined lower and upper limits. The European Investment Bank has also been using a shadow price of \$50 per ton for 2030, starting in 2017. The European Bank for Reconstruction and Development has taken action too. The IFIs seem to be coordinating action, opting for low-range SVC prices.

Does that make sense?

In political terms, yes. The driving idea is to prevent damage, not account for it, so SVC is the right approach. On the other hand, policymakers of developing countries have been resisting shadow prices because it makes some project that they want unviable. The lower the shadow prices are, the less they worry those policymakers. The implication, however, is that the shadow prices will also be environmentally less effective.

Why do policymakers insist on projects that are likely to do more harm than good?

Well, many of them still believe that fossil-fuel-fired power plants are indispensable. That is even so in North Africa and the Middle East, the world region with the highest solar radiation. Some countries, including Egypt, are still investing heavily in fossil-based infrastructure. I think the main reason is that the leadership there fears that wind and sunlight are too unpredictable for reliable energy supply. It is true that infrastructure will require elaborate facilities for power storage and sophisticated distribution networks (see Friederike Bauer and Achim Neumann in D+C/E+Z e-Paper 2020/05, Focus section). Some governments seem to think that their countries neither have the needed capacities nor can develop them. The big question they do not consider, however, is how will their countries cope with climate disaster? The plain truth is that fossil fuels cause massive harm, which is why both shadow pricing and emissions pricing are useful. Both are indispensable if we ever want to see a truly effective carbon-pricing system.



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Women with donkeys on the way to a well in Ethiopia.

Water supply and climate crisis

Because of global warming and over-use, many poor people are struggling to get the water they need. Development progress is being undone where marginalised communities' access to the vital resource is becoming more precarious. Better infrastructure is urgently needed.



This focus section directly relates to the United Nations' 6th Sustainable Development Goal (SDG), which is to ensure access to water and sanitation for all people. The topic also has a bearing on the entire SDG agenda.





Not enough water: women collecting drinking water from a truck in Chennai in June 2019.

URBAN LIFE

No water – or too much of it

In the summer of 2019, Chennai's water-supply system collapsed because of drought. Compounding people's problems in this south Indian megacity, boreholes ran dry as well. The irony was that not even four years earlier there had been flooding.

By Krupa Ge

Every year, as summer arrives, we brace for uncertainty in our city that was formerly known as Madras. In normal, pre-pandemic times, the main roads were a happy sight, with street vendors selling thinly sliced raw mangoes slathered in chillies and salt. During the hottest months – March to May – they also sell juicy water melon, ice apples and tender coconut water.

Unfortunately, the hot months are also when most smaller roads are crowded with people in queues waiting to fill pots and containers with water. Commercial and government tankers bring water to parched homes in the dead of the night or in the midst of a busy work day. No one knows when exactly they will arrive.

Water is scarce, so our agglomeration of 10 million people must get through the

hottest, most humid days with as little water as possible. May is the worst month. This year, we are also in the midst of a nationwide lockdown because of the novel Coronavirus.

Many recall the frightful drought of 2019. Chennai's municipal water-supply network went dry. For me personally, that was ironic. Lack of water affected us in the weeks before the release of my book on the catastrophic floods of 2015. At every book event I was asked whether I will write about the drought as well. I am not sure if I want to write about it yet. The truth is that Chennai is neither designed to cope with floods nor with droughts, but the climate crisis is making both ever more likely.

Chennai's water comes from four reservoirs that are located a little outside the city. They are rain-water fed, which means that, when the monsoons fail, water shortages paralyse the city.

Chennai is the capital of the Indian state of Tamil Nadu. In 2017 and 2018, state politics was chaotic. Infighting kept our leaders so busy that they failed to notice the insufficient rainfall. The reckoning came in 2019 when the biggest reservoir, Chembarambakkam, went completely dry. News

screens showed images of dead fish on the reservoir bed.

The irony was that the same reservoir had caused the 2015 floods. Back then, it had rained so hard it could not contain the water. Hundreds of families living along urban waterbodies were relocated to faraway places in suburban areas. They lost their possessions overnight, and then their claim to the city. During last year's drought, the same families then had to spend a fourth of their daily incomes to buy water. The infrastructure of their new informal settlements is particularly poor.

DEPENDING ON MONSOON RAIN

Chennai receives most of its water from the northeast monsoon (about 60%) in the months September to November. Last year, however, the northeast monsoon brought only 45% of the long-term average. Because of that deficit, the city's water-supply system failed.

Normally, the municipal corporation provides water to people, and we pay separate water taxes for that service. Last summer, we only got water once in 15 days where I live – and only for five minutes. The situation was even worse in other parts of the city.

When the pipes go dry, we can normally rely on borewell water which we source from the land our building stands on. Last summer, however, borewells dried out

too. For the first time in nearly 17 years, the pump did not yield any water at all.

Like most of urban India, Chennai depends on groundwater for daily needs. In some places, this resource is over-used. For this reason, Tamil Nadu was one of the first states to make rain water harvesting compulsory in the city. The rule applies to all buildings – whether commercial or residential. When the rains fail, however, there is not much to harvest.

Borewell drilling was frantic last summer, sometimes with neighbours competing for groundwater. In several places people had to dig to a depth of more than 200 meters to even find water. According to official data, groundwater was vastly depleted in 22 of Tamil Nadu's 38 districts. The hectic drilling was a scary glimpse of what the future will hold if the climate crisis escalates further.

At some point last year, everyone in Chennai had to buy water commercially. This struck a hard blow to the urban poor. The state government's metropolitan water department, which normally provides water free of charge, sold this essential resource at a price of 700 rupees (the equivalent of about nine euros) per 9,000 litres. The price may seem low – and it was indeed the cheapest water available. The problem was that one had to wait for a long time to get it. The tanker we ordered only arrived after 20 days.

Everyone eventually had to turn to private suppliers. The price soared from 2,600 rupees for 9,000 litres in the beginning of the summer to a peak of 4,600 rupees.

It sounds ridiculous in hindsight, but there was an extra charge for 'clean water'. Otherwise the tanker dumped silted water into people's home water storage area. This sharp rise in the cost of commercialised water hit the city's poor and marginalised the most. Women were affected in particular (see box below).

The state government was obviously unprepared. SP Velumani, its minister for municipalities and rural administration, even said that the drought was a rumour manufactured by the press. Soon after, Chennai had water shipments brought in by train.

Water is always a highly emotive issue in Tamil Nadu. State elections are fought over and won by who can bring irrigation water to the farmlands. Tamil Nadu is embroiled in fights over dams, reservoirs and river water with neighbouring states. A long-standing dispute with Karnataka can be traced back to the 19th century and concerns the river Cauvery. Last year, Kerala, another neighbour, offered extra water, but our state government turned it down, choosing politicking over people's welfare.

Our ministers love photo opportunities when water is released from reservoirs and claim to personally have made it happen. Quick to take credit for success, they do not accept blame when a flood or drought occurs.

To tackle the problems long term, the city needs to improve its infrastructure. It is essential to rehabilitate hundreds of water bodies that have been encroached upon

legally and illegally in the city. That would contribute to recharging groundwater and improving water tables in densely populated neighbourhoods.

Our ancient poets praised Tamil kings for the tanks they built. Unlike our politicians today, they understood how important water management is.

It is true that impacts of climate change are hard to predict – and it is even harder to build the infrastructure they make necessary. However, the time to prepare is now. It is a good sign that the state government has expressed awareness of the challenge. Its recent disaster-management plan mentions "climate change" 55 times. It proposes to restore damaged ecosystems and takes into account floods, droughts and other climate impacts. The assurances are still vague, but they do show that policymakers have noticed the problems.

That is not enough, of course. They must solve them, taking action in particular to protect the most vulnerable people. Chennai needs a water-management policy that serves the needs of the marginalised and oppressed communities. Piped water should not be a privilege of the rich.



KRUPA GE

is a Chennai-based journalist. Her book "Rivers remember – #Chennairains and the shocking truth of a man-

made flood" was published last summer (Delhi, Context).

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Marginalised women's plight

The homes in Chennai's vast informal settlements are not connected to water pipes. People depend on water tankers that deliver water to the slums. They must not miss the tanker's arrival, or they may have to go without water.

Typically, women are responsible for ensuring that families have water. In urban

and rural areas, it is common to see women and especially girls carrying pots of water. Last year, the effects of the water shortage were felt acutely by women from marginalised communities. They are doubly disadvantaged due to gender and caste.

Even in normal times, they stand in long queues as the

day grows hot. Quarrels are so common in these queues that our local dialect has a phrase "kozhadi sanda". It literally means "fight near the water tap" and stands for useless bickering. The reality, however, is that the women are under a lot of pressure. They often worry about not getting enough water. The longer they stand in line, the less time they have for other chores. Depending on the length of the queue, women decide how many pots to fill.

Clashes erupt when someone exceeds an unspoken limit. It adds to the tensions that they have to get up very early since the water truck may arrive as early as 5 am in the morning.

Fetching water is thus stressful even in good times. Drought makes things worse. The lines are longer, the water deliveries are less frequent and reliable, and poor families struggle to afford the higher cost for this indispensable resource.

kg

WATER TREATMENT

“Each drop of water matters”

Increasing water scarcity means that the recycling of waste water is becoming ever more important. DBL Group, a Bangladeshi garments producer, runs its own effluent treatment plants. M. A. Jabbar, the company's managing director told D+C/E+Z what difference they make.

M. A. Jabbar interviewed by Sabine Balk

How much water do you use in your facilities per day, and where do you get your water from?

Our dyeing and printing operations make most use of water. For dyeing, we use about 12,990 cubic metres per day. Our printing unit uses 266 cubic metres per day. The source is primarily groundwater. The communities close to our production facilities also depend on groundwater. Use of this resource is regulated by the government of Bangladesh. At DBL, we are always trying to reduce our water footprint by using water-efficient machineries and modern technology. We are also harvesting rainwater for use in our dyeing, printing and apparel-manufacturing complexes. Our approach to saving water includes reducing water use, reusing water and recycling waste water.

Your factory has an effluent treatment plant (ETP) – how does it work?

Our ETP is one of the largest biological ETPs at a dyeing plant in Bangladesh. We have

another recycling plant in our printing operation which uses an activated carbon filter and multi-grade carbon filters. It allows us to reuse waste water from our colour kitchen and printing screens. The printing unit's ETP allows us to recycle almost 70 % of the water used. We comply with the Zero Discharge of Hazardous Chemicals (ZDHC) guideline which requires us to remove the contamination we have caused before water is returned into the nearest river. So far, we are actually reusing seven percent of the recycled water, and the target is to increase that to 20 % this year. The more efficient we make the system, the less water is wasted.

What is the quality of the recycled water – can you drink it?

No, currently the water is not fit for drinking. It is only used for cleaning purposes and some other industrial processes. However, we have considerably reduced the amount of fresh water we require. We believe that each drop of water matters, so we set our target – we call it a key performance indicator – to reduce usage each year.

What progress did you make in the past decade?

Per kilogramme of fabric we dye, we reduced the fresh water we need from 119 litres in 2010 to 66 litres seven years ago and a mere 55 today. We have cut the figure in half. Our target for this year is to bring it

down by almost another ten percent to 50 litres per kilogramme. The more efficient our water usage becomes, the harder it actually is to make further progress. That is normal. Everyone picks the low-hanging fruit first.

Do you recycle water voluntarily or must you comply with regulations?

The DBL Group appreciates sustainability – both at the level of society in general as well as at the company level. We have adopted an integrated sustainability approach. At the same time, international brands that source their garments from us have guidelines we have to follow. Moreover, financiers such as the International Finance Corporation (IFC) or DEG, the German development finance institute, are promoting environmental protection too. There is, for example, an IFC programme called Partnership for Cleaner Textiles, in which Puma, the German sportswear multinational, is involved.

How is the water situation in the Dhaka agglomeration in general?

According to the IFC, the garment industry consumes about 1.5 billion cubic metres of groundwater annually and discharges it later as wastewater. Groundwater is being depleted by an annual one to two metres. These figures show that inefficient use of water and lack of awareness of the true costs are serious problems. They are being addressed, though we probably need faster progress. Bangladesh needs to make more use of water-treatment plants and effluent treatment plants. Water must be recycled. Moreover, we should do more to harvest rainwater. The discharge of hazardous chemicals must stop.

Who is raising awareness for these issues?

The government is doing so and so are international brands as well as development finance institutions. I have already mentioned the IFC and DEG. The World Bank Group, moreover, has a Water Resource Group – or 2030 WRG for short. It conducts meetings with various stakeholders in Bangladesh. Our company is an active member of the 2030 WRG.



The DBL Group's dyeing and printing units in Bangladesh use a lot of water.



M. A. JABBAR
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INTERNATIONAL COOPERATION

Averting “Day Zero”

Water-supply systems are under mounting pressure in many countries across sub-Saharan Africa. Three GIZ authors make four proposals concerning how to improve pertinent development interventions.

By Daniel Nordmann, Helmut Lang and Katrin Gronemeier

Water supply and sanitation are fundamental requirements for sustainable development. Giving everyone access to clean water and sanitary facilities is a core demand of the UN Sustainable Development Goal 6 (SDG 6). As two thirds of the world population will live in cities 20 years from now, cities are of particular concern (target 11). The UN reckons the urban population of Africa will triple to 1.2 billion by 2050.

In absolute figures, considerable progress has been made in recent decades on improving water supply in sub-Saharan cities. From 2000 to 2015, about an additional 80 million people got access to piped drinking water. The problem is that the urban population grew by around 180 million in that time span, so in relative terms, urban water-supply coverage has actually deteriorated. While two-thirds of city-dwellers had access to drinking water in 2000, the figure fell to just over half by 2015. The downward trend has not been stopped.

Countries such as Nigeria, Kenya, Zimbabwe and even parts of South Africa have had to declare water emergencies recently. They are not the only countries in crisis, facing the prospect of “Day Zero”, the day on which water runs out in a major agglomeration.

Since the mid-1990s, many countries in Africa have reformed their water sectors – mostly with international support. New water policies and laws were adopted, autonomous municipal utilities were created and regulatory authorities were established. Governments and donors furnished additional funding to improve supply systems.

Nonetheless, more needs to be done. Global investments worth \$114 billion per year are required to ensure availability of

clean drinking water and sanitation for all by 2030. That is three times the funding that is being made available currently.

So what can be done to make German development policy more effective, especially in sub-Saharan Africa? We make four

tutions and private-sector businesses – to recover after a shock or a situation of stress. Resilience depends on adaptive and preventive action. To strengthen water resilience, development programmes should do the following things:

- Consider the entire water cycle and promote more effective water-cycle management. Utilities should invest more in protecting water resources.
- Improve governance on water issues at the municipal level involving government agencies, the private sector and civil society.



Water kiosks like here in Tanzania offer an important interim solution for supplying the poor population without access to piped water.

proposals, drawing on the experience of the past 25 years.

PROPOSAL 1: ENSURE RESILIENCE

Water-supply systems must cope with long-term stress factors such as further urban growth and shock events such as floods or droughts which are aggravated by climate change. Very few cities are prepared appropriately, so development policy should do more to strengthen urban resilience.

Urban resilience is the capacity of an urban system – including its people, insti-

- Infrastructure planning needs to be multifunctional and integrated. That means more investment must flow into “green infrastructure”. The point is that green spaces can double up as soakaways and rain-storage facilities. That will prove useful in the next heat wave or drought.

PROPOSAL 2: FOCUS ON COMPETENT UTILITY MANAGEMENT

Water utilities play a central role. As operators of critical infrastructure, they need to be economically viable. In many countries,

the establishment of independent public-service companies was an important step forward.

Today, even some very poor countries have efficient utilities. Top performers include ONEA in Burkina Faso, NYEWASCO in Kenya and NWSC in Uganda. They outperform other water companies in the region, providing for more than 90% of the urban people, even in marginalised areas on urban fringes. These utilities run cost-effective operations and have reduced water losses.

Success crucially depends on corporate governance. Managers have eliminated inefficient practices, improved service quality and ensured that the water supply system reaches everyone. Skills training and human resources development are important, but the crucial thing is the management's willingness to embrace change.

Future development programmes should thus tackle the following issues:

- Promotion of water companies should be more systematically linked to utilities' own efforts and proven performance.
- For incentives to be effective, development interventions must become more flexible. There needs to be a back-out option when agreed standards are not met and no serious reform efforts are discernible. Both global and national approaches permit flexible financing, and they should be taken.
- Partnerships of municipal water utilities in Africa with German counterparts make sense. They should be intensified – in particular in regard to waste-water treatment.

PROPOSAL 3: PROMOTE NATIONAL WATER-SECTOR FINANCING

A comparison of five countries shows that even poor countries can build adequate urban water infrastructure and supply almost every urban household. Professional competence and adequate funding are what matters. Burkina Faso, for example, invested almost 0.4% of its gross domestic product – just under nine Dollar per urban dweller a year – in urban water infrastructure from 2005 to 2015. Public water-supply systems now serve more than 90% of the urban population. This achievement puts Burkina Faso ahead of most other countries in the region.

Since the early 2000s, Burkina's government and the national utility ONEA have

engaged in professional financial planning and systematically accounted for the use of the money invested. The Ministry of Finance is involved in a supervisory capacity, and it has boosted confidence, including among donors. At the same time, ONEA has managed to raise water tariffs to a level that is both economically sustainable and affordable for poor people.

Development programmes should pay attention to the following points:

- Underlying framework conditions of sector financing should be addressed by advisory services. Investment planning is a challenging task. It should be carried out by professional financing institutions in partner countries. To increase transparency and efficiency as required, these institutions should be made accountable to the public, the government and donors.
- Utilities' operating and maintenance costs should be covered by water fees (and where justified by government transfers). Unless that is ensured, donors should not lend support.
- In the medium term, donor institutions should grant developmental loans in partner countries' local currencies. Otherwise, exchange-rate volatility is likely to make debts unsustainable. Moreover, development agencies should foster the cooperation of well-managed water companies with local banks so the utilities will get better loan conditions.

PROPOSAL 4: FOCUS ON UNDER-SUPPLIED COMMUNITIES

Where marginalised communities' water supply is insufficient, people are often forced to buy contaminated water from informal water vendors at high prices. German development policy should therefore focus more on prioritising the expansion of urban supply systems to informal settlements.

- In such settings, grants rather than loans should be the instrument of choice for supporting last mile extensions to the households. By contrast, treatment and distribution plants – the "big" infrastructure for water collection – should be financed as far as possible through loans. That is true of sewage treatment systems too.
- National financing institutions are better suited than international ones for promoting short to medium-term invest-

ment in last mile infrastructure. To ensure marginalised communities are not neglected, donor governments should disburse 10 to 15% of their water-sector funding as earmarked grants – preferably through national poverty funds.

- In the foreseeable future, it will be neither possible nor financeable to connect every household in African cities to piped water in the household. For the time being, the viable solution is public taps and water kiosks that are operated by utility companies. That is how two thirds of urban Africans now get their drinking water.

Our proposals are in line with both SDG 6 and the water strategy of Germany's Federal Ministry for Economic Cooperation and Development (BMZ). The preconditions are thus in place for implementing what we propose. Important partners of Germany, such as the Netherlands, Sweden and France, are also prepared to take such action. This opportunity must not be missed.

LINKS

The content of the article is based on two GIZ studies examining the impacts of water sector reform and investment in five countries from 2005 to 2015. They are available online:

Part 1: https://www.oecd.org/water/GIZ_2018_Access_Study_Part%20_Synthesis_Report.pdf

Part 2: https://www.oecd.org/water/GIZ_2018_Access_Study_Part%20II_Narrative%20Report_Briefing_document.pdf



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GOVERNANCE

“Digitalisation and advanced technologies must be applied”

The small developing island state of Mauritius is classified as a water-stressed country by the World Bank and expected to fall under the water-scarce category this year. Riad Sultan, an environmental economist and senior lecturer at the University of Mauritius, considers the problems to be homemade. He explained what is going wrong in an interview with D+C/E+Z.

Riad Sultan interviewed by Katja Dombrowski

Can you give a quick overview of the water situation in Mauritius?

Considering the natural supply, Mauritius is not a water-scarce island – nevertheless, we experience water shortages. The biggest

challenge for the concerned authorities is to supply the people with water on a 24 hours per day basis and with good pressure. Actually, that should not be too difficult. Mauritius is a small and densely populated country. Almost every household is connected to the water-distribution system. Moreover, due to our volcanic topography, the water runs down from high altitude areas to lower altitude ones; therefore, the water from precipitation runs to the reservoirs and to consumers literally by itself. But there are two important shortcomings: first of all, only a very small amount of rain water is captured for use in the dry season. In 2018, a mere 7.6% of the total available rainfall was captured through our storage system. On average, it is an annual seven to nine percent. Second, up to 40% is classified as so-called non-revenue water. That includes physical leakages due to broken pipes et cetera, commercial losses due to defective me-

asure water is, but it is not. The water sector is not transparent.

So, as a result, the people in Mauritius do not have a reliable water supply?

That's right. Reliability involves a timely service, with the required quality and quantity to be provided around the clock. Problems include low pressure, sudden breakdowns and seasonal variations. Some regions have only two or three hours of water per day. That is definitely not enough. At least during daytime there should be running water in every household. Pressure matters too. If it is too low, dirty water can enter the pipes, because they are very old and not properly maintained. The shortages occur mostly in the dry season. More than 75% of rainfall is in the months from November to April. After two or three months with limited rain – which we experience every year – the water in the reservoirs is low.

What is the solution?

I see two possibilities: one is to store more water. For that purpose, more reservoirs must be built. The other option is to cut the losses – and thus double the amount of water available for use. For a start, the old pipes should be replaced. Both options cost a lot of money. That is why I am not very optimistic that either one of them will materialise.

Why not?

The price the consumers pay for water in Mauritius is very low: aggregating all uses, it is only 12 rupees (\$0.33) per cubic metre. Moreover, the first six cubic metres per month are free of charge. Many households don't exceed that limit, so they don't pay for water at all. The Central Water Authority, which is in charge of the distribution system, does not generate enough revenue to significantly improve the infrastructure. On the other hand, the Water Resources Unit at the Ministry of Energy and Public Utilities, which is in charge of building reservoirs, is completely dependent on public money. So either way does not work without the state paying for it – and unfortunately, water is only one of the many priorities of the government, competing with other infrastructural development.

From your point of view, is there a way to achieve good water supply in spite of the financial problems?



One of the few water reservoirs in Mauritius.

ters and illegal connections and also unpaid water such as water used by firefighters, for example. I think it should be made public how big the share of each type of non-rev-

enue water is, but it is not. The water sector is not transparent.

The whole system must change. Water should not be free – you have to pay for what you use. The provision of water to the people includes the storage and distribution system. Once a good storage system is in place, it is available for everyone. People tend to think that water would flow naturally to them, but one way or another, infrastructures must be paid for. The right water price will make people waste less, moreover. The water tariff should go up, and customers' money should finance the storage and distribution system. Billions of rupees are needed to construct the necessary dams and reservoirs and to maintain the distribution network. In the past 15 years, only one single dam has been constructed in Mauritius. The equation is simple: no funds, no dams. However, all politicians know that it would be a hard sell. That said, I did research on whether households would be willing to pay more if water supply was made more reliable through improvements in storage and distribution. Almost 87% from a sample of 400 households agreed to pay more (a 27% increase of the average water bill) if the money was strictly channelled to infrastructural development to provide reliable water supply on a 24 hour per day basis.

But would uninterrupted water supply not help to win votes?

The government's strategy is different. In the past term, a scheme to subsidise the purchase of water tanks was introduced. This was what it did to solve the water shortage problem. The vast majority of households now have a tank. According to the census of 2011, the last reliable data we have, it was almost half of the households back then, but this figure must be much higher at present. So when there is no water supply from the public system, people can use the stored water. But one needs to have one's own land or an appropriate roof to install the tank. Installation and maintenance cost money moreover, so the poorest people lose out. The scheme has created a disparity among those who can afford a tank and those who cannot, leading to different standards of living. That's not good. However, this scheme is conducive from the perspective of politicians who want to make people happy with continuous supply of water.

What about commercial users?

Major consumers in agriculture, the garment industry and tourism are encouraged to harvest their own water. They need uninterrupted water supply, so their motivation is strong to install their own systems to catch



Most people use a private tank to store drinking water.

and store water. You can see a lot of them on the island. But that doesn't solve the problems of private households, of course.

That sounds like a dead-end situation.

Yes, and it will even get worse. The demand will surely go up, so water shortages are set to increase. Reasons include population growth, more tourists coming to Mauritius and more foreigners settling here since they are now allowed to buy apartments. So the pressure on the water system will grow.

What about climate change? Does that play a role too?

It definitely does. The rains used to set in early in January. Now they start at the end of January. Climate change is shifting the seasons, and the dry period, in which we

have problems with the water supply, is getting longer. The other thing is that we now experience torrential rains more often than we used to. After two or three hours of heavy downpour everything is flooded. That is a new challenge. There is more rain, but on fewer days. Most of that water goes directly into the sea. We must find a way to capture it.

The floodings seem to be severe, causing a lot of damage and hardship. Is the drainage system up to task?

No, it is old and not well maintained. Open drains get blocked by debris when there is a storm. Too much urbanisation and too much land sealing play a role too. We Mauritians are not good at planning ahead; we just react to what happens, for instance, when there is a natural disaster. In 2013, we had severe flooding which caused the death of 11 people in Port Louis, the capital city. In response, the Natural Disaster Risk Reduction and Management Centre was established and a warning system installed. However, I don't think it is a state-of-the-art alert system. Digitalisation and advanced technologies must be applied to map water flows, understand ecological dynamics, assess vulnerability, forecast changes in land uses et cetera. Besides, the people do not check the warning system regularly. Episodes of flooding after every heavy rain prove the severity of this problem.

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Waterfalls in Chile's Queulat National Park: when glaciers are diminished, entire water-catchment basins feel the impacts downstream.

WATER CRISIS

Parched and privatised

Despite its location on the Pacific Ocean and its many rivers and lakes, Chile faces serious water shortages due to the climate crisis.

By Katie Cashman

Chile is in the tenth year of a mega-drought covering more than three-fourths of its territory. Citizens are facing shortages and paying ever higher prices for water. The country's main industry, agriculture, is suffering. Animals are dying in droves and once-fertile regions are turning into deserts.

The main cause of this catastrophe is climate change. Temperatures are rising steadily, and rain- and snowfalls are declining. Glaciers are melting away. Chile has declared agricultural emergency zones in six of its 16 regions.

The natural catastrophe is being aggravated by a policy problem: Chile's water-allocation system is market driven and only regulated lightly, so private-sector

companies are in control. The result is high consumer prices for water. Whether private firms should own this vital resource is the topic of heated debate. Unless Chile addresses both its climate problems and its water-allocation system, the long-running water crisis will continue.

Chile's Water Code of 1981 was established during the dictatorship of then President Augusto Pinochet. It declares that water rights can be owned and traded as property. Today, Chile's water utilities are owned by large multinationals, among them Suez Group (French), Aguas de Barcelona (Spanish) and Marubeni (Japanese).

One aim of privatisation was to attract investment and expertise from global companies. This has happened, but at a high cost to the people. The commodification of water has not only led to high tariffs, but it has also undermined the idea that access to water is a basic human right that cannot be traded away.

Under the current system, more than 40 government agencies are involved in managing water resources. This multitude results in weak and fragmented oversight. The General Water Directorate in the Ministry of Public Works is the main regulator. It

- maintains an information system known as the water cadastre,
- enforces national policy and
- awards water rights through an auction system.

This focus is on market supply. It is neither ensured that people have access to water nor that ecosystems are kept healthy around water basins.

The deficiencies in the current system have given rise to water activism. Citizens are fighting high water tariffs and protesting against shortages. For three decades, some political leaders have been trying to reform the Water Code. In 2014, senators tried unsuccessfully to renationalise water resources. Activists are currently campaigning to block mining companies from acquiring further water rights.

The water debate is part of a wider discussion on reforming the country's market-driven economic model. Chileans are debating a new constitution (see Javier Cisterna Figueroa in Debate section of D+C/E+Z e-Paper 2020/02). The idea is to rewrite the rules that have been in effect since the Pinochet dictatorship ended in 1990. Many advocates of a new constitution favour ending private control of water rights.

PAINFUL IMPACTS

While the debate rages, Chile's worsening water shortage is causing a wide range of negative knock-on effects. They concern the natural environment, the agriculture, fisheries and mining sectors and – above all – the people. According to the World Resources Institute (WRI), a non-governmental think tank based in Washington, Chile will be one of the world's most water-stressed countries by 2040. The WRI predicts the country will face severe competition for surface water, calculated as the ratio of local water withdrawal to renewable supply.

Citizens will feel the impact of scarce water most directly. Due to loss of water in the Maipo River, the availability of fresh drinking water in Chile's capital, Santiago, is predicted to fall by 40% by 2070. This will hurt the 40% of the country's population

who live in the metropolitan region. Water scarcity is already affecting the city's low-income communities brutally. They cannot afford the high price of water.

High tariffs have led low-income neighbourhoods to rely on their own groundwater sources, which are becoming ever harder to access. From 1969 to 2001, the groundwater table in Santiago fell from 12 to 26 meters below the surface. Continued drought has made matters worse.

Agriculture and mining companies are also scrambling for this increasingly scarce resource. Chile's economy relies heavily on exports of avocados, wine and copper. In the metropolitan region of Santiago, agriculture accounts for 74% of water use. Copper and fruit exports alone mean that Chile is currently exporting 1,900 million virtual cubic meters of water per year. That is 1.4 times more than the annual amount of drinking water provided to Chileans.

The environmental impacts of the water shortage are harsh as well. In the Andes, the glaciers are slowly shrinking and snow lines are retreating. The big problem is that glaciers are an important mechanism for storing water. They replenish rivers, lakes and groundwater sources. When glaciers are diminished, entire water-catchment basins feel the impacts downstream.

Diminished river flows affect other ecosystems. In central and southern Chile, rivers are now discharging 25% to 75% less nutrients such as nitrates and phosphates into the Pacific Ocean in autumn and winter than before the extended drought began. The discharge of nutrients depends on how much fresh water reaches the coast. These nutrients are essential for the growth of phytoplankton (the first link in the aquatic food chain), which in turn is essential during spawning, larval development and feeding of fish and crustaceans. Some of those fish, such as anchovies and sardines, are of great economic importance for Chile.

Chile is normally considered to be water rich, especially in the south. However, the water resources are being diminished by the climate crisis. From 2010 to 2014, Chile's average and maximum temperatures were 0.5 to 1.5 degrees Celsius above the figures recorded from 1970 and 2000. Rising temperatures, of course, mean more evaporation. Scientists reckon, moreover, that human-made climate change is the cause of at least a quarter of Chile's decline in rain- and snow-



Environmentalists want a lake to be protected from pollution.

fall. Steady temperature increases and sharp changes in weather patterns are changing landscapes and ecosystems for the worse.

POSSIBLE SOLUTIONS

Chile's government, as well as foreign investors, are considering solutions to these problems. In his announcement of the proposed 2020 budget last autumn, President Sebastián Piñera announced plans for building 26 new water reservoirs, water desalination plants and innovative irrigation projects.

Some projects envision building desalination plants along the coast and transporting the water to cities. This approach however was tested in Antofagasta, a port city in northern Chile, and proved to be both expensive and potentially damaging to the environment because harmful effluent was pumped back into the sea.

Another proposed project would bring freshwater from the south – home to many fjords and inlets – to Chile's dry central and northern cities via a "water highway." However, the southern regions cannot see the benefit in taking water from their rivers and lakes. That would hurt fish populations and fishing economies. Indigenous peoples also oppose diverting water from the region.

Other solutions are more environment-friendly. Measures to adapt to climate change include harvesting water from fog, installing rainwater-catchment systems, as well as planting native trees which thrive despite scarce rainfall and improve soil retention. The latter approach would also store carbon and thus contribute to climate mitigation. In addition, experts are con-

sidering changing agricultural practices to reduce water use and greenhouse-gas emissions (see Susanne Neubert in Focus section of D+C/E+Z e-Paper 2019/11).

Finally, reformers advocate fundamentally changing the country's water allocation system – in effect renationalising water resources. Because water distribution is a business, companies focus more on producing and transporting water than on ensuring long-term sustainability by protecting ecosystems. Political debate is needed on how to include water-supply issues in the larger discussion of how best to deal with climate change. Water is not only a vital commodity. It is a core component of ecosystems and affects everything in the natural environment.

Encouragingly, Chile's National Climate Change Adaptation Plan highlights the need to strengthen measures to mitigate climate change and to adapt to the phenomenon across the country. It aims to improve the efficiency of water use in industry and agriculture as well as to better protect water basins, rivers, lakes and aquifers.

In view of Chile's worsening water shortages, this is just a beginning. Wide-ranging and decisive action is needed. Otherwise, the country will run dry in the decades ahead.



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A woman in Harare, Zimbabwe's capital city, bringing home water.

HOUSEHOLD CHORE

Gender injustice

In poor communities, it is normally the duty of women and girls to fetch water. The reason is that women tend to earn less money than men, so their time is considered to be worth less and families shy away from investing in girls' education. This self-perpetuating cycle must be broken.

By Sudeh Dehnavi

The UN defines “water security” as people’s capacity to safeguard reliable access to adequate quantities of acceptable quality water for different uses. In many places, water security is ensured by public utilities, commercial providers and formal cooperatives. In poor communities that lack such infrastructure and services, however, the household itself is in charge of the matter. Typically, women and girls are put responsible of the matter – along with other duties such as preparing food, taking care of the sick and nursing children (also see Dagmar Wolf in D+C/E+Z e-Paper 2020/04, Monitor section).

Indeed, water fetching belongs to several time-consuming, but not income-gen-

erating activities that are essential for a family’s survival. Female household members must find out where they can get water, walk long distances to get there and carry back heavy buckets. The water is mostly used for drinking, cooking and hygiene purposes. Sanitation is typically a huge challenge.

Regardless of specific socio-economic, cultural and political contexts, traditions all over the world give women and girls responsibility for water matters. Indeed, 80 % of all households without on-premises water supply depend on women’s and girls’ efforts, according to UN data. According to estimates, women spend a collective 200 million hours per day fetching water.

There is a reason why this unfair division of labour persists in so many places. Women typically have fewer job opportunities. Moreover, they are paid less for the same jobs as men. This socio-economic imbalance means that women’s time is considered to be worth less than men’s. Since households are rational decision-making units, they allocate their available resources, including members’ time, in ways that maximise their benefits.

Finding and collecting water is mostly a non-income-generating exercise that consumes a lot of time. This work is therefore done by those whose time has the least value – the women. Girls are also sent to fetch water rather than boys. The reason is that the expected financial returns from their school attendance are lower. Indeed, they are often so low that families do not even consider relieving the burden on girls by investing in more expensive, but less time-consuming water provision.

Different developmental strategies focus on easing people’s access to water. They include:

- building pipe-based distribution networks,
- rainwater harvesting,
- setting up water treatment capacities in homes and
- offering microcredit to enable households to invest in safe water and sanitation solutions.

Research shows that these approaches make sense. They reduce the cost and time spent fetching water. They thus improve the opportunities of women, who will then do other work, and girls, who can then go to school. Unicef statistics show, for example, that reducing the time a Tanzanian girl spends fetching water from 30 to 15 minutes increases her school attendance by 12%.

The policy options listed above are helpful. However, they do not change the fundamental injustice. Women’s and girls’ time is still considered to be worth less than the time of men and boys. Unless that changes, women and girls will always end up doing the least rewarding chores. Women and girls deserve better opportunities at work and in education. The more they are enabled to earn money, the more willing families and communities will become to invest in more sophisticated water-provision systems. Making that happen is the precondition for women and girls tapping their full potential and make the most of their lives.



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UN PROGNOSIS

The climate crisis is exacerbating water stress

Global warming will impact the quality and quantity of water that is available to humanity. That is the prediction of a current report by the UN. Climate protection and adaptation measures are therefore needed.

By Sarah Josef

Sanitation services and hygiene require an adequate supply of clean and accessible water. Safe drinking water is essential for food security and health. Energy production, economic activity and ecosystems need water too. A current UN report therefore warns that climate change will alter the availability, quality and quantity of water.

The authors predict that the tropics will be particularly impacted – in other words, primarily low- and middle-income countries. However, Europe, the Caucasus and Central Asia will also receive less rain in the future.

According to the scientists, the greenhouse effect is making itself felt through the increasing frequency and magnitude

of extreme weather events like heat waves, droughts, extreme rainfall, thunderstorms and storm surges. Higher water temperatures and water pollution due to droughts or flooding impact water quality.

The report shows that extreme weather also poses a risk for sanitary facilities and hygiene. After flooding, damaged sanitation and wastewater systems often lead to the spread of faeces and viruses and increase the risk to health. Droughts and flooding also cause malnourishment due to food shortages.

The study explains that the economy and electricity production are negatively affected by water stress, which is being exacerbated by climate change. Power stations and plants could be shut down. That, in turn, would have consequences for supply chains as well as for facilities and equipment.

Ecosystems like forests and wetlands are also at risk. The authors warn of biodiversity loss and also caution that humanity will not be able to depend as much on ecosystem services like water purification or flood protection in the future.

In order to reduce these risks, the scientists recommend the development of strategies to adapt to and mitigate the effects of climate change. Adaptation measures include:

- better water storage and drainage systems,
- early warning systems in the event of imminent hazardous weather,
- awareness and education,
- conservation agriculture,
- cultivation of flood- and drought-resistant crop varieties.

Meanwhile, agricultural practices that capture CO₂, together with reforestation, are contributing to climate protection. Modern wastewater treatment could reduce greenhouse-gas emissions and supply biogas as a renewable energy source.

Given that climate-driven water problems impact society and the economy as a whole, the scientists recommend that more funding be made available for sustainable water management. Positive side effects would include job creation, improved health, less poverty and more secure livelihoods. Gender equality would be promoted as well, since women are generally responsible not only for collecting water, but also for their families' health and hygiene in their households.

At the same time, it is important to consider conflicts of interest and actively involve all relevant groups in shaping water policy. The UN report recommends participatory, multi-stakeholder approaches.

The authors emphasise that many of the Sustainable Development Goals (SDGs) are related to water. The climate crisis could therefore jeopardise the entire agenda. From the UN's perspective, decisive action is urgently needed.

SOURCE

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Rural women fetching water in Kenya. Having a better supply of water boosts health and gender equality.



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According to conventional economic wisdom, growth is the all-important policy goal. The two MIT scholars disagree.



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Covid-19 diary

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THUANY RODRIGUES

Covid-19 in the favelas

25 MAY

PAGE 26

RABSON KONDOWE

Sewing masks to fight corona

11 MAY

PAGE 30

KARIM OKANLA

Africa needs the WHO

19 MAY

PAGE 27

GILBERTO SCOFIELD JR.

Divisive pandemic response

7 MAY

PAGE 31

GERD MÜLLER

Global solutions required

18 MAY

PAGE 28

MARKUS LOEWE

Social transfers stabilise aggregate demand

5 MAY

PAGE 32

KATHRIN BERENSMANN

Debt relief for poorest countries

14 MAY

PAGE 29

MONIKA HELLSTERN

Gender implications of Covid-19

1 MAY

PAGE 33



Not much space for social distancing: favela residents waiting for food supplied by a non-governmental organisation.

25 MAY 2020

Covid-19 in the favelas

The Covid-19 outbreak worries communities in Rio de Janeiro. Extreme crowding, poor hygiene, bad nutrition and limited access to health care contribute to high infection rates.

By Thuany Rodrigues

While Brazil's President Jair Bolsonaro continues to downplay the Coronavirus crisis (see Gilberto Scofield Jr. on p. 31 in this e-Paper), his country has amassed the world's fourth-largest number of confirmed cases. By 20 May, Brazil's Federal Government recorded over 270,000 cases and some 18,000 deaths, according to Worldometer, a reference website providing real-time statistics.

Things are particularly bad in the favelas as the informal urban settlements of poor people are called. There are more than 6,300 of these slum areas. An estimated 700 are in Rio de Janeiro, Brazil's second-most populous city with 6.7 million residents.

In mid-May, the city had more than 20,000 Coronavirus cases, according to municipal data. The authorities do not collect statistics specifically for the favelas. However, Voz das Comunidade, a community

newspaper based in one of the big favelas, collects data on the spread of the virus, using city data and its own sources. The newspaper's database comprised only 13 favelas in mid-May. But even this limited number gives a good impression of the seriousness of the outbreak. The Voz database listed more than 440 confirmed cases and 159 deaths in the 13 communities alone.

It is obvious that the numbers for all favelas taken together must be much higher. Brazil has 13.6 million people living in favelas, according to Data Favela, a research institute. The data are from the "Favela Economy – Income and Consumption in Favelas" survey by Data Favela institutes 2020. Data Favela, a research institute, reckons that 2 million favela residents live in the state of Rio de Janeiro, and two thirds of them are black.

Favela residents are aware of the risks. "We know of some people who died of this disease here in the favela," says Dulce dos Santos, 47, who lost her job as a domestic worker due to the disease. "A neighbour has been infected. I avoid leaving my house."

High rates of infection and death do not surprise favela residents. "You don't

see much social distancing here, especially since businesses in the favela have not closed," says William Rodrigues, 30, an unemployed favela resident. "The government is hardly present here." Indeed, state presence all too often only means violent intrusion by heavily armed security forces.

Favela communities feel let down in other ways too. Rodrigues says: "I also don't see any government efforts to help people with food or other basic necessities. Only a few non-government organisations come in to distribute baskets."

In view of the health crisis, the national government has promised 600 Brazilian Reals (about €95) to unemployed Brazilians. Many favela residents, however, cannot claim the money because they lack the required personal-identification document. This is particularly true of homeless people.

Brazil's Unified Health System, known by its Portuguese acronym SUS (Sistema Único de Saúde), is overloaded, particularly in the slums. Some favelas suffer water shortages, which promote proliferation of the disease due to poor hygiene. Many residents continue to work – often in close proximity to others. They have no choice.



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18 MAY 2020

Africa needs the WHO

US President Donald Trump's decision to stop funding the World Health Organization (WHO) is likely to hurt many Africans. This continent cannot afford to see less money being made available for fighting malaria, HIV/AIDS and polio. Sub-Saharan health systems were underfunded even before the pandemic started.

By Karim Okanla

As Africans see it, neither China nor the USA has acted convincingly in the current pandemic. Had China responded faster and in a more transparent way, the novel coronavirus might have been contained. The US administration, in turn, has clearly failed to get a grip on its spread and is looking for scapegoats. The growing enmity between the two superpowers is scary. It makes international cooperation more difficult.

President Trump accuses the WHO of mismanaging Covid-19, covering up the problems and taking sides with China. To punish the international agency, he has discontinued the USA's contributions to it. His critics see this step as part of his scapegoating efforts. Anyone who has paid attention to his statements knows that the WHO approach to the novel coronavirus has been more coherent and convincing than his.

Anger at Trump's decision was expressed fast – and even in Washington itself. Lawrence Gostin, a professor of global health at Georgetown University, said: "Without a WHO that's empowered there will be many, many more deaths, and not just as it marches through sub-Saharan Africa, which is next, but also here in the United States."

The National Council of Guinean Civil-Society Organisations (CNOSCG) has called Trump's decision "irrational". Stanley Okolo, the director of the West African Health Organization, sees things in a similar light. He warns that countries in this region may soon be in a worse position to fight dangerous diseases such as polio, HIV/AIDS and malaria. In particular, immunisation campaigns are likely to suffer.

Okolo's agency belongs to the Economic Community of West African States, but things are similar in other parts of Africa. South Africa's foreign ministry has ex-

Omar Dieng, a Dakar-based reporter, states clearly: "Trump is undermining the WHO and its various programmes." He wonders whether it plays a role that Tedros Adhanom Ghebreyesus, the head of the WHO, is from Ethiopia. Dieng thinks that the White House would probably not defund a leader from the USA. It is fine to criticise WHO shortcomings, he says, but in the current crisis, this UN agency must be made stronger, not weaker.



Underfunded health-care system: a doctor examining a pregnant woman in Congo-Brazzaville long before the pandemic.

pressed alarm: "The decision is made amid a global health crisis that requires a full-capacity WHO to provide support in combatting the deadly Covid-19 pandemic."

It is clear that African health-care systems are generally underfunded even in normal times (see Focus section of D+C/E+Z e-Paper 2020/02). African health systems can rely to some extent on support from the Bill and Melinda Gates Foundation, the World Bank or bilateral donors. However, they are unlikely to make up for the entire shortfall.

So far, Covid-19 has claimed comparatively few lives in Africa, but that may change. The health challenges the continent was grappling with were huge even before this new disease began to spread. In African eyes, the WHO is indispensable.



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18 MAY 2020

Global solutions required

Either we beat the Coronavirus worldwide or we will not beat it at all. That is the opinion of Gerd Müller, Germany's federal minister for economic cooperation and development.

By Gerd Müller

The scale of the current crisis is dramatic – not only in Germany or in Europe. It is developing countries and emerging economies that are being hit the hardest. Once again we are learning that global problems need global solutions. It is in our own interest to fight the virus worldwide because, apart from it being our humanitarian duty to help, if we do not, the virus will return to us. We therefore need to be looking beyond Germany and Europe. And there is a lot to be done:

- There are 4.2 billion people who have no access to adequate sanitation. That is why the risk of infection is three times higher in many developing countries than it is in Europe.
- Developing countries have inadequate or insufficient laboratories, intensive care beds and ventilators.
- The situation is especially precarious in densely populated urban areas, slums and overcrowded refugee camps.

But beyond the immediate health consequences, developing countries are suffering economically because of the lockdowns imposed by the various governments and because of the abrupt halting of the world economy and the breakdown of supply chains, many of which have their starting point in Africa, Asia or Latin America. Countries with no or with insufficient social security systems – especially in Africa – are now feeling the enormous consequences:

- Millions of people are facing the total loss of their livelihoods as a result of the breakdown of global supply chains.
- Government revenue is declining by a dramatic 20 to 30 %.
- Nearly \$100 billion in capital has already been withdrawn from developing and emerging economies.

- There are 20 million jobs that have been lost in tourism alone. In Bangladesh, 4,000 textile factories, which usually employ four million workers, were obliged to close temporarily.



Coronavirus test in Lagos, Nigeria.

We need to successfully fight the pandemic and its social and economic consequences globally. We therefore have to improve the availability of testing, ventilators and protective gear, as well as strengthening national health systems. In addition, we must not lose sight of the need to continue our fight against other diseases such as AIDS, malaria, tuberculosis, et cetera.

At the same time we need to help our partners by sharing the burden of the economic impact. While western countries have set up a protective shield for their economies worth trillions of euros, developing countries are being suffocated by their debt servicing obligations. Our efforts to achieve the Sustainable Development Goals – SDGs (especially SDGs 1 and 2) are being challenged.

Finally, as the Secretary General of the United Nations has put it: “We simply cannot return to where we were before Covid-19 struck, with societies unnecessarily vulnerable to crisis. We need to build a better world.” We need to change the design of globalisation. We must make sure that this health crisis does not undermine our efforts to fulfil the 2030 Agenda and combat climate change.

That is why we have gone ahead: In 2020, we are funding a one-billion-euro Emergency Covid-19 Support Programme by restructuring the budget of the German Development Ministry (BMZ) and increasing our efforts in the following seven areas:

1. Health and pandemic control
2. Food security and basic food services to prevent famines
3. Stabilisation of fragile regions affected by displacement
4. Social protection and securing jobs in global supply chains
5. Additional economic support for enterprises in key industries such as textiles and tourism
6. Government liquidity
7. International cooperation

Covid-19 is also a global wake-up call that cries out for international cooperation and solidarity. We need to combine forces and mount a joint response under the leadership of the United Nations.

The Corona crisis is also a stress test for multilateralism. The debt moratorium by the G20 and the Paris Club (and also China), for the poorest countries is a first encouraging signal. However, bearing in mind that this is a global challenge – we cannot leave it at that. Either we win this fight by working together globally or we will not win it at all.

LINK

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 is Germany's federal minister for economic cooperation and development.
www.bmz.de

14 MAY 2020

Debt relief for poorest countries

Poor countries with heavy debt burdens need debt relief to cope with the Covid-19 crisis. The funding provided by the international community so far is not enough. More is needed than the suspension of debt servicing which public lenders have agreed on.

By Kathrin Berensmann

Even before the pandemic started, about half of the world's low-income countries were heavily indebted according to the In-

ternational Monetary Fund (IMF) and the World Bank. Covid-19 will plunge yet more countries into debt. Left to themselves, they will not be able to cope with the crisis. Their government revenues are plainly too small (see Stefanie Rauscher in Focus section of D+C/E+Z e-Paper 2018/01).

lion to emerging markets and developing countries in the next 15 months. The IMF's Rapid Credit Facility is providing interest-free credit worth \$10 billion to low-income countries.

The problem is that these huge sums simply will not do. The countries concerned will still lack liquidity. And the loans – including concessional ones – will further increase their debt burden.

All bilateral public-sector lenders have agreed to the suspension of the poorest

Nonetheless, more extensive debt relief is necessary. For good reason, Gerd Müller, Germany's federal minister for economic cooperation and development, has also advocated debt relief for the poorest countries in his "Emergency Covid-19 support programme" (BMZ 2020).

To ensure that individual creditors do not benefit disproportionately to the detriment of other creditors, all public and private creditors should participate in debt relief equally, and that in turn will require that they all make the conditionalities of their loans publicly transparent (Berensmann 2020). Since debt relief should only be granted to heavily indebted countries, moreover, a maximum debt limit needs to be defined.

We must consider, moreover, that debt relief only heals the symptoms of indebtedness, but does not tackle the underlying reasons. Debt relief must therefore be linked to beneficiaries investing in poverty reduction, infrastructure development and better debt management.

Those who have granted the credits, moreover, must assume responsibility too. One reason many low-income countries are now heavily indebted is that they were given loans at market conditions. Between 2007 and 2016, the share of market-based debt in total public debt doubled. In 2016, it was 46 percent in low-income countries. As debtors and creditors share responsibility for the debt, they also share responsibility for resolving the debt crisis.

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Sharing responsibility: graffiti in Nairobi, Kenya's capital city.

ternational Monetary Fund (IMF) and the World Bank. Covid-19 will plunge yet more countries into debt. Left to themselves, they will not be able to cope with the crisis. Their government revenues are plainly too small (see Stefanie Rauscher in Focus section of D+C/E+Z e-Paper 2018/01).

The international community is making substantial funding available – partly concessional, for example, in subsidised loans. The World Bank will hand out financial support worth about \$160 bil-

countries' debt servicing from May to December 2020. The implication is that in the short run more funds are available to deal with the corona crisis, but repayment is only postponed.

The only solution in this precarious setting is debt relief for developing countries. The IMF has recently reformed the Catastrophe Containment and Relief Trust which serves the purpose of relieving debt-servicing. More countries can now benefit from it at the same time and on short notice.



Masks4AllMalawi
has already
produced over
3 million masks.

11 MAY 2020

Sewing masks to fight corona

As the coronavirus continues to wreak havoc, there is a massive global shortage of face masks. This has inspired people around the world to start making their own. Malawians have joined the mask-making campaign.

By Rabson Kondowe

An army of volunteers across the country are busy sewing masks from locally available materials such as cotton, clothes and other pieces of fabric. This non-profit campaign is running under the banner #Masks4AllMalawi.

So far, over 3 million masks have been produced, and a production rate of half a million masks per week has been reached. They are being made available free of charge to people throughout the country.

The face masks are not medical grade or N95 respirators, that filter particulates such as the coronavirus and meet a certain US standard. But they have been approved by the country's Ministry of Health now that medical masks are in short supply.

There continues to be a debate around the efficacy of the cloth masks. They are not meant to protect the person who wears them from infection, but the people around him or her. Doctor Gama Petulo Bandawe, the chief medical virologist of the #Masks4AllMalawi campaign, says universal mask usage has a potential public-health benefit towards curbing the virus despite the absence of proven scientific data.

#Masks4AllMalawi is being powered by an international network called the Hestian Project, a programme which normally promotes the use of cleaner cook stoves to reduce exposure to household air pollution. Conor Fox, one of the campaign organisers and a co-founder of the Hestian Project, said the masks are being distributed through various channels including via the network of 3,000 stove producers across 200 villages which has reached over 3.5 million Malawians.

"We are a group of over 40 consultants, experts and volunteers, including medical epidemiologists and virologists working on a campaign to help people in

Malawi respond quickly to the coronavirus," Fox explains. The Hestian Project has managed to raise half a million euros for the mask project and got money donated by the general public.

The country has now recorded 56 Covid-19 cases with three deaths. In April, the Malawian government announced a 21 day lockdown which was met by a stop order from the High Court (see Raphael Mweninguwe in the Covid-19 dairy in D+C/E+Z e-Paper 2020/05). The judges acknowledged small-scale traders' worries, who were afraid to lose their livelihoods. Citizens are now asked, not ordered, to act in ways to prevent the spread of Covid-19.

About 90% of Malawians work in the informal sector which means a lot of people operate on a hand-to-mouth basis. Therefore, such lockdowns would put the food security of the poor at high risk.

LINK

#Masks4AllMalawi:

<https://www.masks4allmalawi.org>



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Divisive pandemic response

Brazil's President Jair Bolsonaro's disrespect for science is now evident in his response to Covid-19. It fits his pattern of climate denial and aggressive disinformation. The resignation of Sergio Moro, who served as his justice minister, has weakened Bolsonaro's grip on power.

By Gilberto Scofield Jr.

Bolsonaro has a track record of rejecting reports of human action heating up the climate and refusing to accept that deforestation in the Amazon region is one of the causes. Now he is taking a similar stance in view of one of the worst pandemics seen by humankind in a century. The nefarious consequence is that disinformation can kill.

Since the beginning of the crisis, Bolsonaro has been moving in the opposite direction of what scientific authorities are recommending. In the eyes of the president, who has likened the illness to a "cold sore" or "little flu", keeping the economy going is the top priority. He is disregarding the recommendations of the World Health Organization (WHO), which calls for social distancing and staying at home because health-care systems lack the capacities to treat millions of infected people at the same time. His rhetoric suggests that caution in view of an infectious disease is somehow unmanly.

Bolsonaro has made several statements in which he sought to minimise the impacts of the pandemic. People are speaking of his "misinfodemic". The good news is that Brazil is a federal republic like the USA or Germany. The state governors have considerable power, and they are responding more responsibly than the president. Moreover, their lockdown policies were endorsed by Luiz Henrique Mandetta, the federal health minister – until Bolsonaro fired him on 16 April. Mandetta and the state governors have seen their popularity surge in opinion polls, but Bolsonaro's has dropped. To a large extent, Brazilians prefer scientific advice to populist agitation in the midst of a global pandemic.

Mandetta is not the only cabinet member Bolsonaro has lost. At the end of April, Sergio Moro, the minister of justice and public security, resigned, accusing the president of wanting to manipulate police work in an unconstitutional way. The background was that Bolsonaro intended to appoint a new

a co-author of the bestseller "How democracies die" has stated: "I cannot say whether Bolsonaro's decision not to hear what the world scientific community is saying almost unanimously is a political calculation or a tremendous error. But it is amazing to see a leader endanger the lives of what may be, in the worst case scenario, thousands of his citizens".

Around the world, right-wing populists in positions of power are currently taking one of two approaches. Some, like Narendra Modi of India or Victor Orbán of Hungary are leveraging the pandemic to



President Bolsonaro (right) grew tired of Health Minister Mandetta's expert advice. This picture was taken before Covid-19, in summer 2019.

police chief. Instead, the police is now running corruption investigations against Bolsonaro's family. Moro was perhaps the most important cabinet member. Serving as a judge before joining the cabinet, he had sentenced former President Lula da Silva to jail because of bribery. While the Lula case is controversial, Moro has a strong rule-of-law reputation from which Bolsonaro benefited. To avoid impeachment, the president now must find new allies in Brazil's Congress.

Medical officials from Brazil and abroad have expressed disapproval of the president's misinfodemic. Political scientists are bewildered too. Steven Levitsky,

boost their power. Others, like Bolsonaro or US President Donald Trump are belittling this public health crisis. Neither approach serves their respective nations well. What is needed now is not the stoking of divisions. We need effective and constructive cooperation across party lines to save as many lives as possible.



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Social transfers stabilise aggregate demand

The Covid-19 crisis is a good opportunity to test models of a universal basic income (UBI). They can prevent poverty and stimulate recession-hit economies at the same time.

By Markus Loewe

The current downturn is a result of the Covid-19 pandemic. Prosperous people are losing a share of their wealth and income. In contrast, poor people's livelihoods disappear when they lose their jobs or when their informal business activities become impossible. The current crisis threatens to erase in one fell swoop the progress made in long years of fighting poverty.

Hundreds of millions of people will drop below the poverty line again, and they are likely to stay below it for a long time. Many must take loans simply to survive, and they will struggle to repay the debt for a long time. People will sell land, livestock and other assets, destroying the livelihoods they relied on before the crisis. They will accept disastrous jobs in mining, chemicals production or prostitution, to the detriment of their health and their future productivity. They will take their kids out of school so they can earn some money now, undermining their future earning capacity.

It is, therefore, not only necessary to bail out enterprises in attempts to cushion the impacts of the coronavirus crisis. The poor must urgently get support too. Large social strata must not be plunged into poverty because the devastating impacts would include the erosion of purchasing power, more malnutrition, undernutrition and even starvation and ultimately the destabilisation of societies and political systems.

Wherever possible and as fast as possible, the poor should get social transfers. The transfers could go on for a while, or only be dispersed once. Either way, every household should get at least six months' worth of the respective national minimum wage. Should

the crisis last longer, more money may be needed.

At this point, there is no sensible alternative to a UBI, though government employees, who all over the world are likely to keep their jobs, can be excluded. Means testing would take too long, so it is impossible to only let the most vulnerable groups benefit

programmes or widened their outreach (Egypt, Brazil, Indonesia and Columbia are examples). Others have created new programmes (as Argentina, Bolivia and Turkey did).

A UBI, moreover, would also stimulate domestic demand and rescue many small businesses. It would thus serve as a counter-measure against the downturn and a macro-economic stabiliser.

Low and middle income countries that now want to introduce a temporary UBI deserve generous support. Indeed, safeguarding the purchasing power of poorer nations would serve the interests of high-income countries by helping to mitigate the global recession and contributing to stabilising political systems around the



Many informal businesses become unviable in lockdown conditions: tea seller in Cairo in fall 2019.

from the transfers. And public works programmes are no alternative either because they tend to be discontinued during lockdowns. Making people apply for transfers in governments' welfare offices is the only way to reduce the number of applicants since prosperous families may shy away from queuing there.

A UBI would obviously be a big step into the unknown. Governments would have to be courageous to act this way. Several countries, however, are already taking action. They have extended social-transfer

world. By temporarily funding UBI models, European governments could prove that they are serious about the global common good and care about the welfare of people everywhere.



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Gender implications of Covid-19

The Covid-19 crisis is disproportionately affecting women and girls. An OECD study argues that it may therefore hamper the achievement of gender-related Sustainable Development Goals (SDGs). Governments should modify policies accordingly.

By Monika Hellstern

The Organisation for Economic Co-operation and Development (OECD) identifies three main reasons why women are hit harder than men by the coronavirus pandemic:

- They are often responsible for taking care of sick family members and children on top of unpaid housework. These duties go on during a lockdown, and actually get more burdensome.
- Women are more likely to suffer economically as their incomes and employment are less secure. Moreover, industries that mostly employ women are likely to be affected more.
- More women are likely to suffer domestic violence due to confinement measures.

The health care response to Covid-19 heavily relies on women. Worldwide, women make up almost 70 % of the health care workforce and about 85% of nurses and midwives, according to the OECD. Hence, women are more likely to be infected while treating patients.

In addition, women work a “second shift” at home. According to the OECD, women spend about two hours per day more on unpaid work than men. As schools and childcare facilities close and people stay at home, women’s childcare and housework burdens will increase.

According to the study, women’s employment is often less secure than men’s. In developing economies, many women work in the informal sector where they lack social and legal protection. Much informal activities take place in the streets and are discontinued during a lockdown.

Moreover, some industries which employ mostly women will be hit harder. For example, three-quarters of workers in the

garment industry are women – up to 85% in Bangladesh. They lose their income when factories and retail stores close.

On average, women’s income and wealth are lower than men’s. Thus, crisis-induced income loss may increase female poverty.

Violence against women is likely to spike during the crisis. With public spaces closed and people asked or forced to stay home, women and children have limited options to escape dangerous situations. Women often lack access to legal support. Lockdown restrictions exacerbate this problem.

The OECD recommends specific policies.

- Governments should provide support to parents doing essential work. Options include public childcare, direct financial support or the promotion of flexible work schedules.
- Governments should support workers facing job loss. Access to unemployment benefits and other social transfers should be extended and made easier. People in need could also be given one-off payments. Evictions from homes and utility or mortgage payments should be suspended.

- Governments should provide support to victims of gender-based violence. They should make sure protective services are available and raise awareness for abuse being unacceptable.

The OECD insists that gender-specific data and research are needed. It points out that official development assistance (ODA) is essential in the pandemic response, but aid in the health-sector normally does not address gender inequality adequately. The OECD wants donors to work with women’s rights organisations and movements that know the local context.

The OECD predicts that women’s poverty levels, maternal mortality as well as adolescent pregnancies and related school dropouts will rise. Covid-19 is thus putting in jeopardy the achievement of gender-related Sustainable Development Goals (SDGs).

LINK

OECD, 2020: Women at the core of the fight against COVID-19 crisis.

https://read.oecd-ilibrary.org/view/?ref=127_127000-awfnqj80me&title=Women-at-the-core-of-the-fight-against-COVID-19-crisis



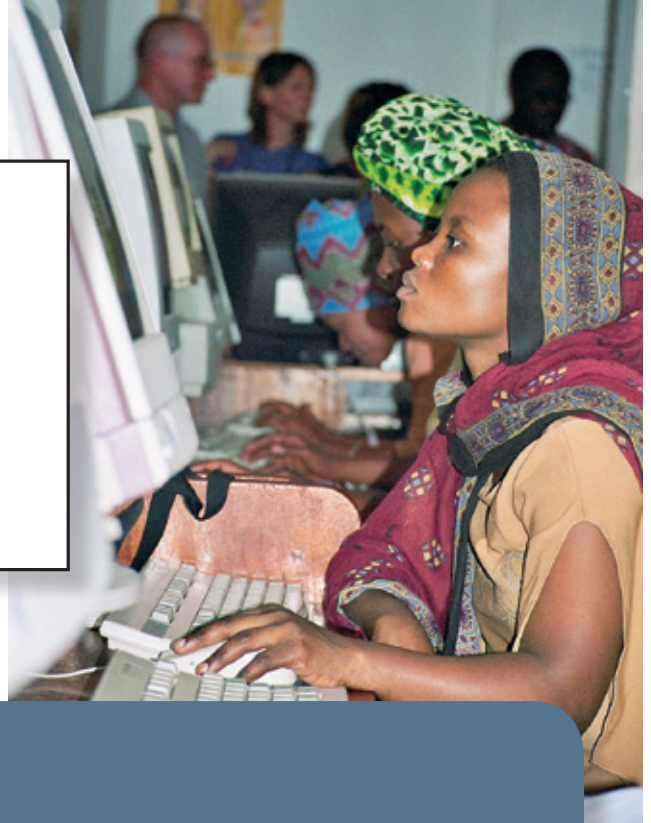
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Garment factory workers in Dhaka, Bangladesh, have been sent home as factories have been closed.

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