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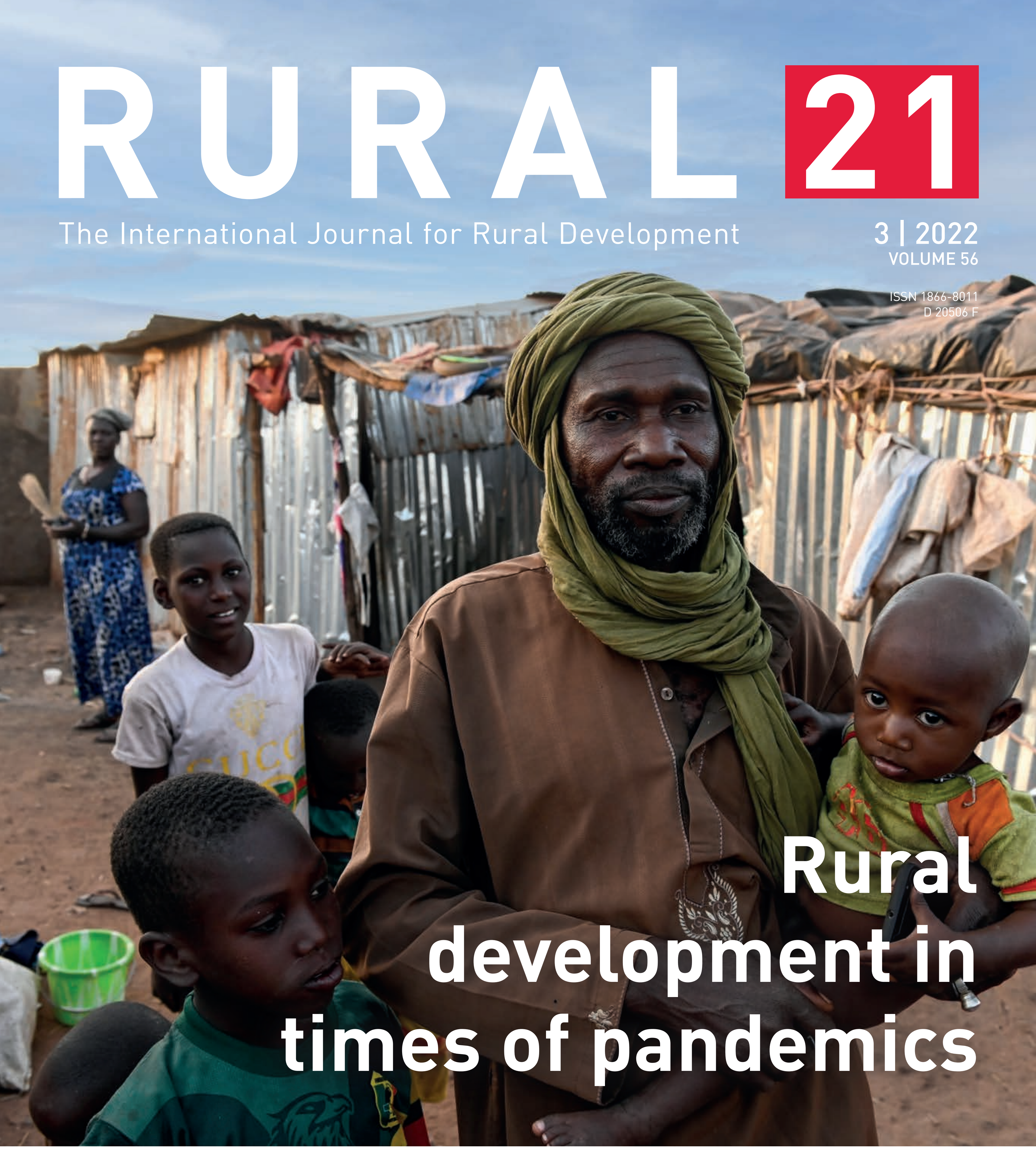

Rural development in times of pandemics

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Dear Reader,

We are living in times of multiple crises. Not only are the impacts of climate change manifesting themselves ever more dramatically, with record heat events, severe and prolonged drought, and devastating floods. For merely three years, the corona pandemic has held sway of our lives, with what are now more than 6.5 million deaths reported globally and millions of people who have fallen into poverty. And since the 24th February this year, we have once again become all the more aware that even in the 21st century, war, flight and displacement are by no means a plight solely affecting poor countries in the Global South.

Following the outbreak of the pandemic, the global economy fell into its deepest recession since World War II. Over 90 per cent of economies saw their gross domestic product fall, by a global average of 3.3 per cent in 2020. Extensive macroeconomic relief measures helped the world economy to achieve a slight recovery in 2021. However, this positive trend has again been nullified by the impact of the Russian invasion of Ukraine. The World Bank estimates that global growth, still at 5.7 per cent in 2021, will have dropped to 2.9 per cent by the end of the year.

The analyses of our authors regarding the impacts of the pandemic once again show that the most vulnerable – just like in any other crises – are disproportionately affected: poor people, discriminated groups, refugees and displaced persons, old and disabled people. And above all women and children. Here are just a few examples:

Rising food prices and falling incomes especially affect those who already have only little money anyway. They have to resort to cheaper food, which is often less nutritious – with devastating consequences for small children and expecting and breastfeeding mothers. With the school closures imposed at the beginning of the pandemic and lasting an average of six months, although some were even longer, millions of children were cut off from school feeding services. And from education. Unicef estimates that the current generation of students risks losing 17 trillion US dollars in lifetime earnings – the equivalent of 14 per cent of today's global Gross Domestic Product, as a result of school closures. And what is more, with the lack of school education, young people have often also lost the opportunity to learn about essential aspects such as water, sanitation and hygiene or reproductive health rights and family planning methods. This in turn can have a long-term impact on issues such as child marriage and infant mortality.

Even though we are not yet able to assess the long-term impacts of the pandemic, insights so far paint a rather sobering picture. Existing social and economic inequalities have become further aggravated, and the world's goal of ending hunger and poverty is getting further and further out of reach.

Given the enormity of the challenges humanity is now facing, the truism that every crisis also means an opportunity for a new start seems somewhat inappropriate. Nevertheless, the prospects for the international community to make concerted efforts to "build back better" – and be better prepared for coming crises – have probably never been better than they are now. We hope reading this Rural 21 edition will give you some feeling of hope.

Patricia Summa Silvia Richter

Partner institutions of Rural 21

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MULTIPLE CRISES ARE CHANGING THE WORLD

The onset of the Covid-19 pandemic triggered a severe loss of life, tipped millions into extreme poverty, dented investment prospects, and inflicted lasting scars on human capital through learning and job losses. In addition, there are the consequences of Russia's invading Ukraine. Our author describes the wide range of socio-economic impacts which these overlapping crises are having on the various world regions and calls on the international community to take common, determined action.

By Collette Wheeler

Following the outbreak of the pandemic, the global economy fell into its deepest recession since World War II, with gross domestic product (GDP) contracting 3.3 per cent in 2020. In response, governments rapidly deployed macroeconomic support, including by cutting policy interest rates, providing liquidity, and implementing substantial fiscal support that amounted to about 30 per cent of GDP in advanced economies and 7 per cent of GDP in emerging market and developing economies (EMDEs) in 2020.

Eventually, macroeconomic support and economic reopening gave way to a rebound in activity, with global output expanding 5.7 per cent in 2021. Despite this, global GDP remained about 3 per cent below pre-pandemic trends – in other words, below the level of output that would have been expected absent the pandemic. The recovery that emerged in 2021 was exceptionally uneven, with EMDEs experiencing weaker recoveries relative to advanced economies, partly owing to small-

Photo: shutterstock

er fiscal support packages and highly unequal vaccine access in EMDEs. Although output and investment in advanced economies were expected to gradually return to pre-pandemic trends, in EMDEs – particularly in small states and fragile and conflict-afflicted countries – they were anticipated to remain markedly below.

The global economy, still suffering from the effects of more than two years of pandemic, is experiencing yet another major negative shock. The Russian Federation's invasion of Ukraine in early 2022 has not only precipitated a humanitarian catastrophe but has also resulted in a deep regional slowdown and substantial negative global spillovers. These spillovers are magnifying pre-existing strains from the pandemic, such as bottlenecks in global supply chains, and intensifying volatility in commodity markets.

Global economy set to head for sharp deceleration

Against the backdrop of this significantly more challenging context, the global economy is expected to experience its sharpest deceleration, following an initial recovery from global recession, in more than 80 years. Global growth is projected to slow from 5.7 per cent in 2021 to 2.9 per cent in 2022 and average 3 per cent in 2023-24. The effects of the invasion have also caused a further reduction in policy space, which is now much more limited than at the onset of the pandemic, particular in EMDEs. Rising global borrowing costs are heightening the risk of financial stress among the many EMDEs that over the past decade have accumulated debt at the fastest pace in more than half a century *(also see pages 7–10)*.

In EMDEs, the economic rebound following the pandemic-induced recession of 2020 was already fading prior to Russia's invasion of Ukraine. Despite the fact that the recovery from the 2020 recession remains incomplete, activity in most EMDEs is forecast to slow sharply this year. EMDE growth is expected to roughly halve from 6.6 per cent in 2021 to 3.4 per cent in 2022. Investment, which was already expected to be subdued, is likely to be further weakened by soft investor confidence, higher interest rates and heightened uncertainty about growth prospects and policy, especially in economies perceived as less creditworthy.

The invasion and its spillovers are having different impacts on EMDE regions. Outside of Europe and Central Asia, the effects have weighed particularly heavily on regions with a large number of commodity importers, as well as in those with countries especially vulnerable to the increases in global inflation and investor risk aversion. The rising cost of food is likely to have particularly adverse near-term effects, especially in countries reliant on importing staple foods like wheat and corn *(also see pages 14–16)*. Spillovers from the invasion in the form of higher prices for energy and food are reducing incomes and increasing input costs, with particularly negative impacts on the terms of trade of South Asia. Forecasts for activity have also been downgraded this year in East Asia and the Pacific as a result of lockdowns in China and recent commodity price movements, while the forecast for sub-Saharan Africa has been downgraded if major energy exporters such as Nigeria are excluded. By contrast, some regions with large numbers of commodity exporters, especially in the Middle East and North Africa, are expected to benefit from the significant increases in the prices of energy, some agricultural commodities, and several metals. However, increased policy uncertainty, price volatility, higher input costs and weaker global demand are all expected to reduce new investment, including in extractive sectors.

Poverty and food insecurity in low-income countries will increase

In low-income countries (LICs), Russia's invasion of Ukraine is expected to further deepen poverty and worsen food insecurity. Food consumption in LICs accounts for over 45 per cent of total household expenditure, and diets remain heavily based on staple foods, including wheat. Disruptions to wheat imports from Russia and Ukraine, along with surging global food prices, are therefore expected to exert a strong drag on LIC growth and stall progress in poverty reduction, particularly in those economies where large shares of the population are already experiencing food insecurity (Democratic Republic of Congo, Ethiopia, Madagascar, Mozambique, South Sudan).

In fragile and conflict-affected LICs, elevated levels of violence and insecurity are reckoned to lead to an even further deterioration of food security. Agricultural production in a number of LICs is expected to remain subdued. A few countries have faced worsening drought conditions with delayed and below-average rainfall (Horn of Africa – Ethiopia, Somalia, Sudan, Uganda); others have experienced planting delays because of poor rainfall (Burundi, Madagascar, Malawi, Mozambique). In some LICs, higher prices of grains are expected to limit the ability of farmers, especially those dependent on subsistence agriculture, to purchase enough seeds for the new planting season and feed for livestock. The war in Ukraine has also markedly disrupted global fertiliser supply, with Russia the world's largest fertiliser exporter. Higher prices of fertilisers and fuels are expected to weigh heavily on farming output as well.

Negative effects of the pandemic, inflation and the war are mutually reinforcing each other

Globally, the combined effects of the pandemic, increased inflation, the war in Ukraine and country-specific factors are reckoned to lead to a net increase of 75 million people in extreme poverty by the end of this year relative to pre-pandemic projections, primarily in regions where poverty is already elevated. Per capita income is expected to be lower in 2023 than its pre-pandemic level in about half of the countries in East Asia and the Pacific (predominantly small island economies), the Middle East and North Africa, Latin America and the Caribbean, and sub-Saharan Africa. Within regions, the recovery in per capita incomes is set to be slowest in low-income countries and island economies dependent on tourism, where incomes remain deeply depressed relative to pre-pandemic levels. In tourism dependent EMDE small states (countries with populations under 1.5 million), most of which are in East Asia and the Pacific and LAC, per capita income will probably remain 7 per cent below its pre-pandemic level in 2022.

Although the pandemic is weighing less heavily on the near-term outlook for emerging market and developing economies, it is still expected to have lasting effects on long-term growth across countries, and many of these effects will be compounded by the war. The adverse impact on human capital, investor confidence, fixed capital formation and supply chains from these two crises will weigh on long-term growth prospects. As a result, EMDE potential growth is reckoned to be below 4 per cent over 2022-30, a sharp slowdown from about 5 per cent in the 2010s.

Many of the world's poorest countries are being left behind, and much remains to be done to reverse the pandemic's staggering human and economic costs and counter damaging headwinds from the invasion. Education systems across many EMDEs are experiencing the worst crisis in 100 years. Globally, about 131 million children missed three-quarters of their in-person learning from March 2020 to September 2021. Given long school closures and the varying effectiveness of remote learning, learning poverty in low-and middle-income countries has risen sharply – the share of children under ten who are unable to read and understand a simple text, which already exceeded 50 per cent before the pandemic, is expected to surpass 70 per cent *(also see pages 22–24)*.

The global community needs to ramp up efforts to mitigate humanitarian crises caused by the war in Ukraine and conflict elsewhere. International assistance will be needed to cushion the blow from surging oil and food prices, particularly in poorer nations facing acute food insecurity risks. The impact of the war alone could tip millions back into food insecurity over the next two years. Meanwhile, EMDE policy-makers need to refrain from implementing export restrictions or price controls, which could end up magnifying the increase in commodity prices. With rising inflation, tightening financial conditions, and elevated debt levels sharply limiting policy space, spending can be reprioritised towards targeted relief for vulnerable households.

> "Debt relief needs to be rapid, comprehensive, and sizable to minimise risks to growth prospects

The world has to become better prepared for pandemics

Efforts have to be maintained to end the Covid-19 pandemic, particularly in the poorest countries. Sustained collective action is required to bolster global pandemic preparedness and rapidly expand vaccination campaigns. Expanding vaccination coverage is a global priority, especially in LICs, where only not quite 20 per cent of people have been fully vaccinated owing to a combination of insufficient supply, logistical challenges and vaccine hesitancy *(also see pages 11–13)*. Much of the existing production capacity of vaccines continues to be allocated to vaccinations and boosters in higher-income countries.

Globally coordinated debt relief efforts, including the G20 Common Framework for Debt Treatments, are critical to help EMDEs where debt sustainability has sharply deteriorated amid weak growth, surging commodity prices and tighter financing conditions. Debt dynamics are especially unfavourable among LICs, about half of which were either experiencing or at high risk of experiencing debt distress prior to the invasion of Ukraine. The same is true for about one-third of EMDE small states. In the past, delays in resolving unsustainable debt have had severe economic consequences for affected countries. Accordingly, debt relief needs to be rapid, comprehensive, and sizable to minimise risks to growth prospects. International financial institutions can help by easing near-term debt service pressures.

Over the long run, policies will be required to reverse the damage inflicted by the dual shocks of the pandemic and the war on growth prospects, including preventing fragmentation in trade networks, improving education and raising labour force participation. To counter the risk of costs being pushed up by trade and financial fragmentation, policy-makers can put in place measures to enhance trade resilience and promote diversification. Moreover, reversing the scarring inflicted by Covid-19 on growth prospects will take substantial policy efforts, including investments in education and the enhancement of labour force participation through active labour market policies, especially for women. Remote and hybrid education, which became a necessity during the pandemic, has the potential to transform the future of learning if systems are strengthened and technology is better leveraged. Enhancing digitalisation and fostering connectivity are some of the steps that can increase the efficiency of education spending. Enhancing learning equality should also be promoted, including by channelling resources to disadvantaged pupils, such as those displaced by war and conflict. Finally, flexible programmes aimed at lifelong learning and reskilling the unemployed are also needed.

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Boosting the resilience of the global financial system

While the government response to the impacts of the corona pandemic alleviated the worst immediate economic impacts of the crisis, it also exacerbated a number of economic fragilities. Referring to analyses of this year's World Development Report, our authors maintain that policy-makers have to shore up the global financial system to support growth and an equitable recovery.

By Leora Klapper and Rita Ramalho

The Covid-19 pandemic triggered the most encompassing economic crisis in almost a century, the recovery from which has been complicated by a war in the heart of Europe. Inflation is rampant, poverty is increasing, and sovereign debt in some countries has reached record levels. These macro-economic signals are clear. Yet under them lie a number of less transparent, hidden risks on the balance sheets of governments and financial institutions that threaten to trigger a tipping point, especially in emerging market and developing economies.

Over 90 per cent of economies saw their gross domestic product fall in 2020. Global growth is projected to drop from 5.7 per cent in 2021 to 2.9 per cent in 2022. In emerging markets and developing economies (EMDEs), growth decreased from 6.6 per cent in 2021 to 3.4 per cent in 2022 – a level much lower than the averages of 4.9 per cent from 2011-2019. Global poverty increased for the first time in a generation, with disproportionate income losses among disadvantaged populations, such as low-income households, women, young adults and workers with lower levels of education.

Crisis response at a high cost

The government-sponsored economic support measures implemented to protect people and businesses from the worst impacts of the pandemic were unprecedented in their size and scale. They included direct payments and debt moratoria for households and businesses, forbearance policies for the financial sector and interest rate measures by Central Banks. Although they blunted the short-term economic impact of the pandemic, they came at a high cost given that many countries had to borrow to fund them. 2020 saw the largest single-year surge in sovereign debt in decades, a remarkable fact given that many low and middle-income governments were already facing record-high debt levels prior to the pandemic. The debt burden of the world's low-income countries rose 12 per cent to a record 860 billion US dollars (USD), while that of low- and middle-income countries combined climbed 5.3 per cent to 8.7 trillion USD.

The war in Ukraine has further tightened financial conditions globally. According to the recent *World Bank Global Economic Prospects* report, EMDEs face the tightest financial conditions since the inception of the pandemic. Sovereign spreads have increased – the delta is more significant for commodity importers than exporters. These tightening conditions are showing up in monetary policies, greater volatility and lower risk appetite, which combine to push borrowing costs higher. For low-income countries, the high costs of borrowing could further stall the progress in debt restructuring and could amplify the risk of default on local currency debt. The share of government debt that is non-concessional in the middle- and low-income countries has already risen from less than 60 per cent in 2010 to over 70 per cent today. As fiscal pol-

Shops closed during the lockdown in Mumbai, India.
Photo: Atul Loke/ NYT/ Redux/ laif

icy continues to tighten over the next couple of years, government debt in 2024 is likely to remain above 2019 levels in over two-thirds of EMDEs. High government debt, in addition to increased debt servicing costs, will limit public investment in social goods and to address development needs.

The pandemic response also stimulated a variety of hidden risks that represent as much of a challenge to the economic recovery as the rising levels of visible sovereign debt. South Asia, for example, is exposed to hidden debt owing to its mounting contingent liabilities. Its increasing leverage of state-owned-enterprises and state-owned commercial banks along with extensive public interventions during the Covid-19 pandemic helped accelerate inclusive economic development. But the region has largely ignored the negative repercussions of mismanagement of risks and inefficiencies. During the pandemic, when most private banks curtailed lending, state-owned commercial banks continued or even increased lending, enabled by capital and debt support from the government. However, evidence suggests that the capital was often misallocated to zombie firms. The war in Ukraine is further magnifying debt distress risks in Central European countries. For example, both the Kyrgyz Republic and Tajikistan are expected to experience output contractions, sharp currency depreciation, and wider fiscal and external current account deficits. Along with the growing cost of borrowing, these record high levels of EMDE debt may trigger a financial crisis similar to the one in the early 1980s.

The risk of hidden debt

We already see signs of unprecedented levels of hidden non-performing loans on the balance sheets of financial institutions across the globe. According to data collected from banks by the International Monetary Fund, non-performing loan rates remained flat between 2019 and 2020 in a sample of advanced and emerging economies that adopted credit forbearance policies. Yet data from businesses tells a different story. Permanent business failures rose nearly 60 per cent in 2020 compared to the pre-pandemic 2019 baseline, according to data on 165 economies from the Mastercard Economics Institute. Roughly 15 per cent of countries, mostly low- and middle-income, continued to see increases in permanent business failure in 2021. And more than 40 per cent of business respondents to the January 2021 *World Bank Pulse Enterprise Survey* of 24 low- and middle-income countries expected to be in arrears within six months, including over 70 per cent of firms in Nepal and the Philippines and over 60 per cent of firms in Turkey and South Africa.

Afghan currency exchange dealers wait for customers in Kabul, Afghanistan.

Photo: Saifurahman Safi Xinhua / eyevine / laif

The inconsistency in reporting between banks and private borrowers lies in the banking moratoria that many countries extended to private debtors during the early stages of the pandemic. Lenders were correspondingly permitted to not reclassify loans in moratoria to a higher risk category, since reclassification would require higher capital provisioning. The idea was that these policies would encourage banks to continue lending despite the pandemic uncertainty. That does not seem to have happened. Lenders in up to 70 per cent of countries began tightening their credit standards in 2020 in response to the first wave of economic pressures brought on by Covid-19. Many maintained tighter conditions throughout 2021, according to Central Bank surveys of bank loan officers. In 2022, European lenders in particular continued to tighten credit standards amidst the persistence of elevated inflation levels and the turbulence and uncertainty stemming from the Russian invasion of Ukraine. The unintended consequence, however, has been to silence the early warning signs of rising loan defaults. Now that supportive government policies have been withdrawn, many vulnerable households and businesses are left with debts they can no longer afford. A possible wave of loan defaults will dampen the already-weak economic recovery, as financial institutions slow lending to stay withing capital provisioning limits. The resulting credit crunch will fall hardest on low-income communities and smaller businesses, exacerbating pre-existing inequalities.

This problem is unlikely to stay contained within the private sector due to the tight interconnections between the balance sheets of households, businesses, financial institutions and governments. A large shock to one sector can generate spillover risks that destabilise the entire economy. For example, if banks end up having insufficient capital to cover the losses from high private loan defaults, governments may be forced to step in to recapitalise them. In this way, private debt transforms into public debt at a time when governments already face heavy debt burdens and strained budgets.

Managing and resolving distressed assets

The proactive recognition and management of distressed assets is an essential first step in addressing the hidden debt crisis to promote continued flow of capital to support the economic recovery and manage the emerging risks of the Russian invasion.

Efforts to re-establish bank portfolio transparency are a critical first step when combined with measures to strengthen capital buffers and improve bank capacity to deal with Non-Performing Loans (NPLs). Countries also need early intervention measures to turn around failing banks in the rare cases when banks are unable to manage the financial stress associated with rising NPLs. These include a legal regime that sets bank failures apart from the country's general insolvency framework and provides authorities with a wider range of intervention options. The toolkit should also include

The war in Ukraine has further tightened financial conditions globally.

Photo: Jennifer Tuero Blatty/ Redux/ laif

powers to allocate losses to shareholders and uninsured liability holders, thereby protecting taxpayers against financial sector losses. Private sector-led and -funded solutions should always take priority, leaving public money as a last resort after private sector solutions have been fully exhausted, and only to remedy an acute and demonstrable threat to financial stability.

Effective legal mechanisms to declare bankruptcy or resolve creditor-debtor disputes are another critical policy area to improve economic recovery. Insolvency reforms are associated with wider access to credit, improved creditor recovery, stronger job preservation, higher productivity and lower failure rates among small businesses. Yet many countries, especially low-income countries, lack robust insolvency systems. Cost-reducing reforms can also create the right conditions for nonviable firms to file for liquidation, which will facilitate the flow of credit to more productive parts of the economy.

The government of Serbia, for example, established a national NPL working group in May 2015 after the banking system's NPL ratio had risen to 23.5 per cent in the aftermath of the global financial crisis. The working group included participants from the public and private sectors to develop and implement a comprehensive strategy for the reduction of NPLs that led to a rapid decline in the NPL ratio to a historic low of 3.4 per cent in September 2020.

Special procedures for micro-, small-, and medium-sized enterprises (MSMEs) are particularly essential for making insolvency mechanisms more accessible. The historic benefits of specialised procedures for MSMEs can be seen in Southeast Asia, which experienced widespread debt distress in the 1980s and 1990s, with NPL rates exceeding 40 per cent in some jurisdictions. In response, the Republic of Korea, Malaysia and Thailand implemented reforms that defined separate procedures for large complex cases and for small firms. Korea reached restructuring agreements for about 80 per cent of registered cases, representing about 95 per cent of corporate debt.

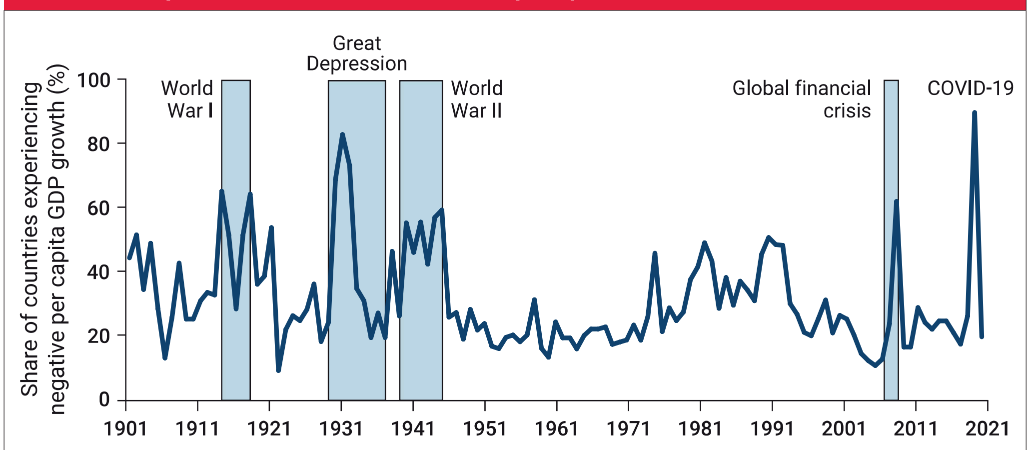
Managing credit risk to encourage lending

Another key area critical to promoting an active recovery lies in improving the ability of banks to assess and manage the risks associated with lending, and thereby mitigate the tendency to limit lending during times of economic uncertainty.

A further consequence of the pandemic and the government debt moratoria and forbearance policies has been to obscure the real economic status of certain households and businesses. In countries where banks weren't required to report on non-payments of loans subject to moratoria, credit bureau data is both outdated and incomplete, rendering it less effective as a tool for assessing the viability of a prospective borrower. There are also the millions of residents in low-income countries who don't participate in the formal financial system in a way that allows them to accrue a credit history. In the current environment of economic disruption – which alone tends to make lenders skittish – the lack of risk transparency contributes to widespread credit tightening, especially for higher risk, though viable, borrowers.

New technology-enabled mechanisms to improve risk visibility offers one opportunity. Efforts to integrate "alternative" data into risk calculations shows high promise for achieving a more current risk profile of all customers, including those who lack traditional credit histories. Examples of "alternative" data include utility bills, business receipts and other non-traditional sources that can be used to assess a borrower's ability to repay a loan. In Germany, researchers found that credit scoring models based on digital footprints were bet-

Economic impact of Covid-19 in historical perspective



Source: Holston, Kaminsky and Reinhart, 2021, based on data from Groningen Growth and Development Centre, Maddison Project Database 2020, Faculty of Economics and Business, University of Groningen, The Netherlands; https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database-2020; International Monetary Fund, WEO (World Economic Outlook Databases) (dashboard); https://www.imf.org/en/Publications/SPROLLS/world-economic-outlook-databases.
Note: Data are as of October 21, 2021.

ter at predicting creditworthiness than credit bureau scores. Loan data from a large fintech lender in India showed that use of mobile and social footprints can improve risk assessments for individuals with credit scores and be an effective indicator for individuals who lack credit bureau records. Research from South America found similar results from the use of call data records to predict credit repayment outcomes for individuals lacking a credit history. And research from China found that the use of such data to assess the probability of default led to increased credit access for borrowers who otherwise would have remained unbanked.

Another opportunity to improve credit risk transparency and limit the risks of default comes from embedded financing models that leverage technology to collateralise future sales. During the pandemic, the digital MSMEs lending platform Konfio in Mexico used electronic invoicing data and payroll information related to firms on its platform to more than double its monthly loan disbursement. Konfio focused on women business owners, who are less likely to receive traditional credit and more likely to benefit from non-collateral-based lending. Digital payments adoption also accelerated during Covid-19 social distancing restrictions, creating new opportunities to leverage financial technology solutions to lending.

The adoption of technology-enabled credit models – including algorithmic lending – requires regulators, supervisors and policy-makers to play a supportive role by facilitating technology-enabled innovation in a context of updated regulatory rules infrastructure and consumer protection policies.

Managing sovereign debt

The financial consequences of the pandemic and the likely Russian default is falling disproportionately on emerging markets and developing economies, which were already finding it harder to pay their debts before the pandemic, and where pandemic recovery has been mostly disappointing. Almost 50 per cent of the world's poorest countries eligible for the Debt Service Suspension Initiative that ended in 2021 are either in, or at high risk for, debt distress. About 40 per cent of countries in or at high risk of distress are in sub-Saharan Africa, including countries such as Gambia, Ghana, Kenya, Sierra Leone and Zambia. More risk-averse investors and rising international interest rates will make it more costly for them to attract new financing and service existing debt. According to the World Bank's International Debt Statistics, total external debt servicing relative to exports roughly doubled from 2010 to 2020 – a period of exceptionally low international interest rates.

The average total debt burden among low- and middle-income countries increased by roughly nine percentage points of gross domestic product (GDP) during the first year of the pandemic, compared with an average annual increase of 1.9 percentage points over the previous decade. Over-indebted governments are unable to pay for public goods such as education and public healthcare, thereby risking poorer human development outcomes and abrupt increases in inequality. Countries in debt distress also have limited capacity to cope with future shocks and may be unable to serve as the lender of last resort to private sector companies in need of public assistance.

The absence of a predictable, orderly and rapid process for sovereign debt restructuring is costly and creates uncertainty. The systemic debt crisis that significantly affected emerging economies in the 1980s illustrates the dire economic and social consequences that arise from delayed policy action: in many countries in Latin America and sub-Saharan Africa, inflation surged, currencies crashed, output collapsed, incomes plummeted, and poverty and inequality increased across regions. The 41 countries that defaulted on their government debt between 1980 and 1985 needed an average of eight years to reach pre-crisis GDP per capita levels. In the 20 countries with the worst output drops, the economic and social fallout from the debt crisis continued for more than a decade.

In countries at high risk of debt distress, proactive debt management can reduce the likelihood of default and free up resources to support economic recovery. That involves either debt re-profiling to push back payments or debt restructuring to decrease liabilities. Pre-emptive restructurings are resolved more quickly than post-default restructuring, leading to shorter exclusion periods from global capital markets and smaller output losses. Once a government is in debt distress, however, the options narrow. One primary tool at this stage is debt restructuring, coupled with a medium-term fiscal and economic reform plan. Restructuring requires prompt recognition of the extent of the problem, coordination with and among creditors, and an understanding by all parties that restructuring is the first step toward debt sustainability – not the last. Swift and deep restructuring agreements allow for a more rapid and sustained recovery, yet the historical track record shows that both countries and creditors resist going fast and cutting deep. Even when countries enter negotiations with creditors, they often require multiple rounds of debt restructuring to emerge from debt distress. Nigeria and Poland, for example, each underwent seven debt restructuring deals before finally resolving their unsustainable debts.

One challenge to comprehensive and proactive sovereign debt management in the current era is the complexity involved in sovereign liabilities. Creditors now include a larger share of commercial and non-traditional lenders, at the same time that off-balance sheet public sector borrowing from state-owned enterprises and special-purpose vehicles has also trended higher. Collectively, these developments reduce transparency and complicate coordination among creditors.

Beyond debt restructuring, governments at risk of or in debt distress must also pursue fiscal consolidation and structural reforms – such as improving government revenue streams and controlling the amount and quality of expenditure – to enhance debt servicing capacity. Greater debt transparency, contractual innovations, and tax policy and administration reforms will help facilitate granular debt management, debt renegotiation and access to capital markets over the longer term.

The crises unfolding now in Sri Lanka and a number of other emerging market economies are a wakeup call for the need to identify risk and act now to boost the resilience of the global financial system. Failure to do so will threaten the already fragile pandemic recovery and stoke even wider global inequality.

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We have never been in a better position to end the pandemic

For what is now nearly three years, the Covid-19 pandemic has had a firm grip on people's lives world-wide. Carla Drysdale, Media Officer and Spokesperson of the World Health Organization (WHO), reports on how important it is to take the right measures now, keeping the countries of the Global South in mind in particular, so that the pandemic can come to an end.

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Photo: Marta Soszynska, WHO

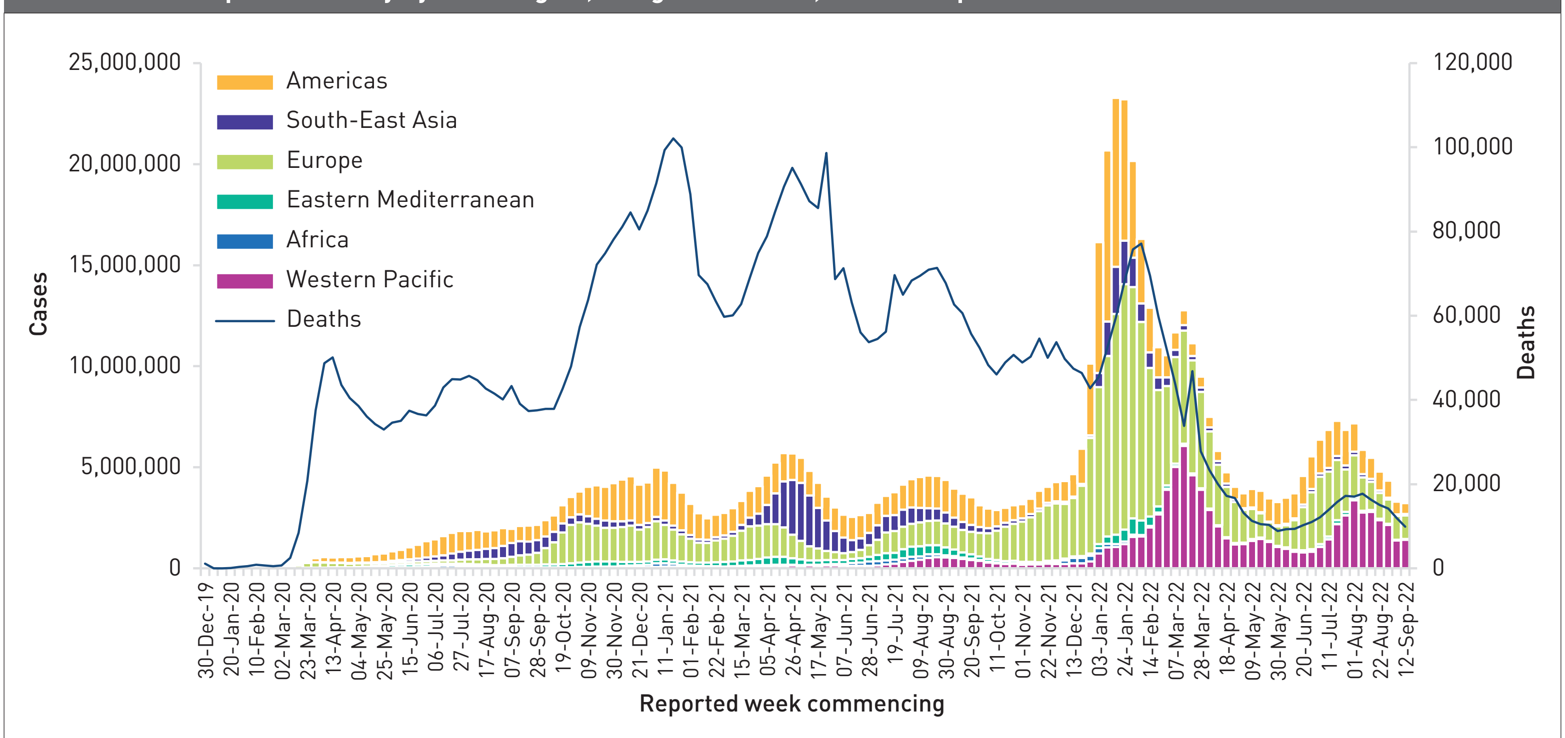
Ms Drysdale, what is the current trend globally concerning Covid-19 infection?

We are seeing a continuing trend of declining numbers of weekly deaths, so as of September 22nd, they are just ten per cent of what they were at the peak in January 2021. Globally, the number of new weekly cases remained stable during the week of the 12th to the 18th September 2022 as compared to the previous week, with over 3.2 million new cases reported. The number of new weekly deaths decreased by 17 per cent as compared to the previous week, with more than 9,800 fatalities reported. As of the 18th September 2022, over 609 million confirmed cases and more than 6.5 million deaths have been reported globally. At the regional level, the number of newly reported weekly cases decreased or remained stable across all six WHO regions. In many countries, restrictions are gone, but let's pause for a moment and remember that we are still seeing 10,000 deaths per week, which is a sobering statistic. Especially when you consider that most of those deaths could have been prevented.

WHO had demanded that by 2022, at least 70 per cent of the world population should be vaccinated against corona. How close have we already got to this goal?

As of the 5th September 2022, 32 per cent of the world's population have still not received a dose of Covid-19 vaccine. While 63 per cent of the total population across WHO Member States have completed their primary vaccination, only 18 per cent of people in lower-income countries (LICs) have. And out of 194 WHO Member States, eleven have vaccinated less than ten per cent of their populations and 63 less than 40 per cent. Thanks to the vaccinations performed in WHO Member States, an estimated 19.8. million fatalities were prevented in 2021. However, there is still much left to do. Three-quarters of the world's health workers and over-60s have been vaccinated, but the global numbers mask huge disparities between regions and income groups. The most at-risk groups are not optimally protected everywhere: for instance, LICs have vaccinated just 23 per cent of their elderly population, and on average, in these countries, just 37 per cent of healthcare workers have been vaccinated.

Covid-19 cases reported weekly by WHO Region, and global deaths, as of 18 September 2022



What has to be done here to improve the situation?

WHO calls on all countries that have not yet reached 100 per cent of health workers, over-60s and everyone at increased risk to do so with extreme urgency and to ensure that these populations receive booster doses per WHO recommendations. This is the most effective way to save lives, strengthen immunity, protect health systems and drive a sustainable economic recovery. WHO also asks countries to further proceed by vaccinating all adults to further extend health benefits and protect health systems, hence keeping society and the economy open. Finally, WHO calls on countries to continue building immunity towards the 70 per cent population coverage target for further disease reduction and protection against future risks. Beyond the 70 per cent target, it is crucial that countries continue to maintain overall immunity levels to keep their populations safe. WHO asks all countries that haven't yet started to roll-out booster and additional doses to do so immediately. Booster doses are essential to maintain the immunity of vaccinated persons and are particularly important for high-risk groups such as the elderly, healthcare workers, pregnant women and the immune-compromised. Globally, WHO continues to advocate for a step-wise population-based approach to rolling out vaccines, with adults receiving vaccines prior to younger populations being considered. WHO is updating the Global Vaccination Strategy, published in October 2021, which laid out the case for the 10 per cent, 40 per cent and 70 per cent targets. The strategy will establish new global goals and priorities to guide countries, policy-makers, civil society, manufacturers and international organisations in their ongoing efforts to respond to Covid-19.

How is WHO now going to proceed here?

WHO's focus is now two-fold: first to support the countries that are furthest behind to turn Covid-19 vaccines into vaccinations as fast as possible, by working with them to drive uptake by getting vaccines to where people are, and urgently vaccinating those in the highest and high priority groups with a complete schedule. For example, COVAX (COVID-19 Vaccines Global Access) has delivered 14 million vaccination doses since the beginning of August. Second to support countries in preserving primary healthcare systems and to maintain and reduce the impact of Covid-19 on routine immunisation services. Countries need to use all available delivery platforms, including the Chronic Non-communicable Diseases (NCDs), Reproductive, Maternal, Newborn and Child Health (RMNCH) and other programmes, to increase Covid-19 vaccine uptake.

Only 18 per cent of people in lower-income countries (LICs) have completed their primary vaccination.

Photo: WHO/ Motherland productions

Let's talk about the side effects on other diseases. What is the impact of the Covid-19 pandemic on the management of other diseases?

The impact of Covid-19 has been profound for healthcare and with regard to other diseases. To take the example of malaria, the latest *World Malaria Report* shows there were an estimated 241 million malaria cases and 627,000 malaria deaths world-wide in 2020. This represents about 14 million more cases in 2020 compared to 2019, and 69,000 more deaths. Approximately two-thirds of these additional deaths (47,000) were linked to disruptions in the provision of malaria prevention, diagnosis and treatment during the pandemic. However, the situation could have been far worse. In the early days of the pandemic, WHO had projected that – with severe service disruptions – malaria deaths in sub-Saharan Africa could potentially double in 2020. But many countries took urgent action to shore up their malaria programmes, averting this worst-case scenario.

Are there any further impacts?

The pandemic also fuelled the largest continued backslide in vaccinations in three decades. In data published by WHO and Unicef in July 2022, the percentage of children who received three doses of the vaccine against diphtheria, tetanus and pertussis (DTP3) – a marker for immunisation coverage within and across countries – fell five percentage points between 2019 and 2021 to 81 per cent. Twenty-five million children missed out on one or more doses of DTP through routine immunisation services in 2021 alone. This is two million more than those who missed out in 2020 and six million more than in 2019, highlighting the growing number of children at risk from devastating but preventable diseases.

What was the reason for this?

The decline was due to many factors, including an increased number of children living in conflict and fragile settings where immunisation access is often challenging, increased misinformation and Covid-19 related issues such as service and supply chain disruptions, resource diversion to response efforts, and containment measures that limited immunisation service access and availability.

What impacts has Covid-19 had on the health systems?

In terms of essential health services in general, according to the third round of WHO's Global Pulse survey, 90 per cent of countries surveyed reported ongoing disruptions. Countries said there were disruptions across services for all major health areas including sexual, reproductive, maternal, newborn, child and adolescent health, immunisation, nutrition, cancer care, mental, neurological and substance use disorders, HIV, hepatitis, TB, malaria, neglected tropical diseases and care for older people. Additionally, even as Covid-19 vaccination has scaled up, increased disruptions were reported in routine immunisation services, not only among children, but also with adults. Findings from this latest survey, conducted at the end of 2021, suggest that health systems in all regions and in countries of all income levels continue to be severely impacted, with little to no improvement since early 2021, when the previous survey was conducted.

WHO is supporting Covid-19 preparedness and response for vulnerable Rohingya refugees and host communities in Cox's Bazar, Bangladesh. Photo: WHO/ Blink Media – Fabeha Monir

What differences by continent can be observed?

Going back to malaria, sub-Saharan Africa continues to carry the heaviest burden, accounting for about 95 per cent of all malaria cases and 96 per cent of all deaths in 2020. About 80 per cent of deaths in the region are among children under five years of age. Regarding immunisations, vaccine coverage dropped in every region, with the East Asia and Pacific region recording the steepest reversal in DTP3 coverage, falling nine percentage points in just two years. And going back to disruptions in essential health services, some variation was seen in the percentage of services disrupted across regions and income groups. Overall, countries in the WHO Region of the Americas reported the highest average percentage of services disrupted in each country (55 per cent in 27 countries versus 28 per cent in 23 countries in the European region) – although these findings should be interpreted with caution, given the varied response rates to the pulse survey across regions.

What are the lessons learnt regarding the Covid-19 pandemic? Are there any new approaches being pursued by WHO?

In light of the impact of the Covid-19 pandemic, WHO's 194 Member States established a process to draft and negotiate a new accord on pandemic preparedness and response. This was driven by the need to ensure that communities, governments, and all sectors of society – within countries and globally – are better prepared and protected, in order to prevent and respond to future pandemics. The great loss of human life, disruption to households and societies at large, and impact on development are among the factors cited by governments to support the need for lasting action to prevent a repeat of such crises. At the heart of the proposed accord is the need to ensure equity in both access to the tools needed to prevent pandemics – including technologies like vaccines, personal protective equipment, information and expertise – and access to healthcare for all people.

Isn't immense financial support required for all this, especially when you consider low- and middle-income countries?

Financial support is key to achieving this, of course. The new Financial Intermediary Fund (FIF) for Pandemic Prevention, Preparedness, and Response (PPR) will provide a dedicated stream of additional, long-term financing to strengthen PPR capabilities in low- and middle-income countries and address critical gaps through investments and technical support at the national, regional and global levels. The fund will draw on the strengths and comparative advantages of key institutions engaged in PPR, provide complementary support, improve coordination among partners, incentivise increased country investments, serve as a platform for advocacy, and help focus and sustain much-needed, high-level attention on strengthening health systems. The fund is a key measure to fill critical gaps in global defences against epidemics and pandemics. In its technical leadership role, WHO will advise the FIF Board on where to make the most effective investments to protect health, especially in low- and middle-income countries. The FIF was developed with broad support from members of the G20 and beyond. Over 1.4 billion US dollars in financial commitments has already been announced, and more is expected in the coming months. So far, commitments have been made by Australia, Canada, China, the European Commission, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, New Zealand, Norway, Singapore, South Africa, Spain, the United Arab Emirates, the United Kingdom, the United States, the Bill & Melinda Gates Foundation, the Rockefeller Foundation and Wellcome Trust.

Let's take a look at the future. What is WHO's assessment of further developments regarding the pandemic?

WHO's Strategic Preparedness, Readiness and Response Plan to end the global Covid-19 emergency in 2022 lays out three possible scenarios for how the pandemic could evolve this year. In the worst-case scenario, a more virulent and highly transmissible variant emerges, and people's protection against severe disease and death, either from prior vaccination or infection, will wane rapidly. Addressing this situation would require significantly altering the current vaccines and making sure they get to the most vulnerable. But based on what we know now, the most likely scenario is that the virus continues to evolve, but the severity of disease it causes reduces over time as immunity increases due to vaccination and infection. Periodic spikes in cases and deaths may occur as immunity wanes, which may require periodic boosting for vulnerable populations. In the best-case scenario, we may see less severe variants emerge, and boosters or new formulations of vaccines won't be necessary.

What has to be done in concrete terms for the pandemic to come to an end?

Moving forward, and ending the acute phase of the pandemic this year, requires countries to invest in five core components. First, surveillance, laboratories, and public health intelligence need to be stepped up. Second, vaccination, public health and social measures, and engaged communities remain vital. Third, clinical care for Covid-19 patients and resilient health systems must be ensured. Fourth, research and development, and equitable access to tools and supplies have to be maintained, and fifth, coordination is required as the response transitions from an emergency mode to long-term respiratory disease management. If these measures are taken to a sufficient degree globally, what Director-General Tedros Adhanom Ghebreyesus said on the 14th September can happen: "We have never been in a better position to end the pandemic. We are not there yet, but the end is in sight. If we don't take this opportunity now, we run the risk of more variants, more deaths, more disruption, and more uncertainty."

Interview: Patricia Summa

Global food systems in the wake of Covid-19

Research by IFPRI on the impacts of Covid-19 regarding global food security suggest that the poor are disproportionately affected. Furthermore, the pandemic appears to have pushed more people into poverty in rural than in urban areas. Analyses also address impacts which Covid-19 has had on supply chains. Our authors look at some of the findings and emphasise the role of policies in making food systems sustainable, resilient and inclusive.

By Johan Swinnen and Eleanor Jones

The world has been struggling to contain Covid-19 for more than two-and-a-half years. Many initial policy responses to the pandemic, including widespread lockdowns and border closures, had severe impacts on food security through a massive recession and major disruptions of global food value chains. Poor and marginalised communities were disproportionately affected by these measures, through loss of livelihoods and assets, and for women, diminished empowerment and opportunities. Covid-19 exposed the vulnerability of agricultural and food systems to multiple shocks, including climate change and now, the conflict in Ukraine. From 2020 to 2022, researchers from the International Food Policy Research Institute (IFPRI) published key insights and analyses on how the pandemic affected and is still affecting poverty, food security and nutrition, food trade and supply chains, gender, and employment. Two books, *COVID-19 & Global Food Security* (2020) and *COVID-19 & Global Food Security: Two Years Later* (2022) present these insights, recommend policy interventions and offer reflections on lessons to better prepare for future crises. Some of the findings are presented in the following.

Immediate impacts: income losses, value chain disruptions, increase in malnutrition

The impact of Covid-19 on global food security was heterogeneous – disproportionately affecting the poor as compared to richer populations. What are the reasons for this disparity? Rising food prices and falling incomes meant that people had less real income to pay for food, forcing them to adjust accordingly. This effect is stronger when one has less income to begin with, spelling more hardship for those who are already impoverished. The immediate impacts of the pandemic on supply chains centred on disruptions concentrated in labour-intensive nodes of these chains. A lack of workers hampered harvesting, while limited inputs, like seed and fertiliser, caused difficulties in planting. Reduced transport facilities restricted transportation, and lockdowns and social distancing interfered with market exchanges. These value chain disruptions hurt both consumers and producers, as there were fewer urban supplies and less farm-level demand. This is also demonstrated in an analysis by Ceballos and colleagues from IFPRI of the short-term effects of Covid-19 in the Western Highlands of Guatemala, one of the country's most vulnerable regions, which is already characterised by high poverty and stunting rates. The re-

With markets closing down because of the lockdown, many rural women have lost their sole source of income.
Photo: Atul Loke/ NYT/ Redux/ laif

gion experienced sharp decreases in incomes, a doubling of food insecurity and a decline in dietary diversity.

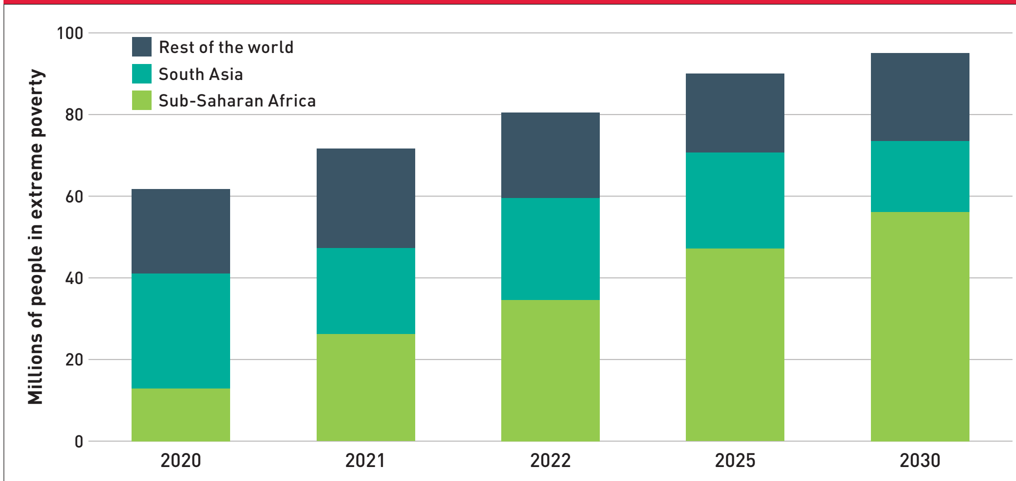
The income losses and disruptions to value chains affected dietary choices and have increased global malnutrition. When incomes decrease due to labour disruptions, lower-income households switch to cheaper and less nutritious foods at the expense of more nutrient-dense, albeit costlier foods. Low-income countries are the most vulnerable to the rise in international food prices, as food accounts for approximately half of consumption baskets and 20 per cent of imports. This shift in prices, and therefore consumer choices, ultimately limits dietary diversity and increases the risk of adverse health consequences. For example, Laborde and colleagues estimate that due to the pandemic, an additional 141 million individuals from low- and middle-income countries (LMICs) could not afford a healthy diet amid a slow global economic recovery. These disruptions could lead to an additional 9.3 million wasted children, 2.6 million stunted children, and 168,000 child deaths by 2022. Women are also disproportionately affected: 2.1 million additional women could potentially suffer from anaemia, and 2.1 million children could be born to mothers with a low body mass index (BMI), continuing the cycle of intergenerational malnutrition. In response to these numbers, our research projects that countries will need to spend between 762 million and 1.7 billion US dollars per year on nutrition interventions to combat the increased malnutrition brought on by the pandemic.

SDG 1 and 2 out of reach

Confirming the concerns expressed by this IFPRI report, the *State of Food Security and Nutrition in the World (SOFI) 2021* report estimated that over 300 million more people faced food insecurity that year compared with 2019. Our model assessing the pandemic's short- and long-term impacts between 2020 and 2030 shows sub-Saharan Africa experiencing an increase in the number of undernourished people – reaching 37 million in 2030, up from 25 million in 2020 (see upper Figure). These estimations and corresponding projections suggest two concerning trends: first, the pandemic will most likely have long-lasting impacts, setting back progress in reducing food insecurity, and second, the world's goals of ending poverty and hunger by 2030 may now be out of reach.

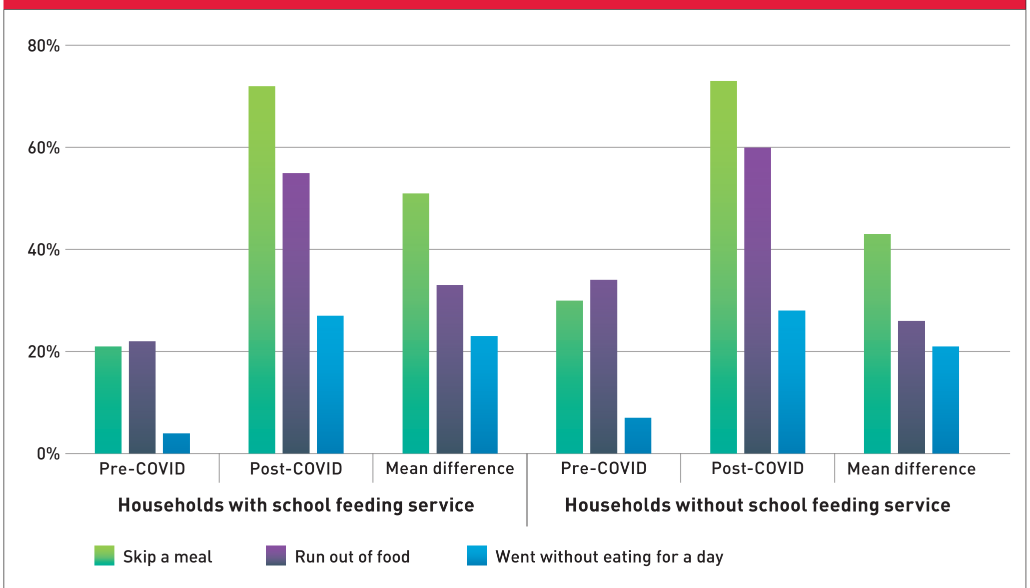
At the beginning of the pandemic, more than 190 countries implemented school closures

Impacts on global poverty – COVID-19 scenario (October 2021)



Source: Laborde et al., 2022

Differences in food security indicators across households with and without access to school feeding in Nigeria

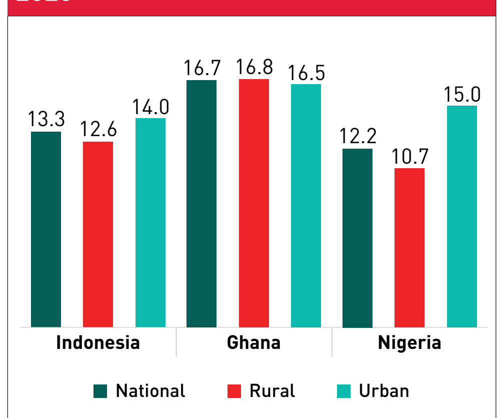


Source: Abay et al., 2022

which affected approximately 1.6 billion children around the world. These closures, in turn, impacted on household food security by interrupting school feeding services. For example, India's school closures led to the suspension of its school feeding programmes – one of the country's largest safety nets. Other safety nets were also affected, including nutrition programmes for pregnant women and lactating mothers. In early 2021, Unicef estimated that the provision of essential nutrition services, such as India's school feeding programmes, had fallen by 30 per cent.

As seen in the middle Figure, in Nigeria, the disruption of school feeding services increased the probability by nine percentage points that a household skipped a meal in the past month. Single mothers and poorer households were

Increase in poverty (percentage points – average per month of lockdown) – 2020



Source: Amewu et al., 2020; Baulch et al., 2020; Diao et al., 2020; Pradesha et al., 2020; Thurlow, 2020 more likely to report a higher probability of skipping a meal, as these households typically rely on school feeding services for accessing nutritious diets; therefore, these populations are more likely to be disproportionately affected by these closures.

Medium-term impacts highlight vulnerability of rural households

In 2020, IFPRI worked with local partners across 30 countries to develop models analysing measures to respond to the pandemic's impact on economic growth, food systems and livelihoods. Analyses using these models revealed the socioeconomic impacts of Covid-19 and countries' corresponding national restrictions. Researchers' review of 18 country studies showed median Gross Domestic Product (GDP) losses ranging from 6 per cent to 8 per cent based on faster or slower recovery scenarios in 2020. While the pandemic has had significant negative impacts on food security and poverty globally, there has been variation in impact on different social groups, since disadvantaged groups, such as women and low-skilled and informal workers, were disproportionately affected.

While the pandemic made all households worse off, rural and urban areas were affected differently. Non-agricultural and urban households experienced more severe employment and income effects, which ultimately narrowed the income gap between urban and rural and between poor and non-poor households. However, in most countries (with Kenya and Nigeria being exceptions), the greater proportion of people who became poor during the pandemic was rural, making apparent the comparatively higher vulnerability of rural households to shocks. As agricultural and rural households are typically poorer, income losses experienced by these households pose a significant risk for food insecurity. Poorer households spend a more significant proportion of their income on food, and the pandemic caused more disruptions in their food value chains as they are typically more labour-intensive. As public social and nutrition programmes are disrupted, these vulnerable communities have even less access to health services.

Multidimensional challenges make unresolved trade issues visible

Many low- and middle-income countries accumulated high levels of debt and low levels of foreign reserves after coping with the econom-

School feeding services are an important security net for poor households.

Photo: Jörg Böthling

ic shocks of the pandemic. Therefore, they are currently limited in their ability to respond to other shocks to their food systems and must make difficult policy choices when confronting multidimensional challenges.

Russia's invasion of Ukraine in early 2022 has created such a challenge. Even before the Ukraine conflict, inflation was already on the rise in 2021, with international food prices surging to levels only seen during the 2007/08 and 2010/11 global food price crises, further endangering food systems in low-income countries that are import-dependent. Unfortunately, the current food price crisis and the economic sanctions that the Ukraine conflict triggered have increased vulnerability and highlighted unresolved trade issues within our food systems, as developing countries struggle to meet agrifood needs.

Looking ahead, trajectories of recovery differ significantly across countries and income groups. The recession was less severe in high-income countries, thanks to their fiscal resources; aggregate incomes in these rich countries are projected to rebound by 2025. In contrast, economic activity in developing and low-income countries is projected to remain well below the pre-pandemic growth.

The increasing prevalence and intensity of shocks and crises call for a paramount reshaping of how food is produced, traded, and consumed. The elevated frequency of shocks reveals the urgency to diversify where and how food and fertiliser needs are sourced. The pandemic responses from the past two-and-a-half-years provide valuable insights into how to increase the sustainability, resilience, and inclusivity of global, regional and national food systems.

The role of research and policies in creating better food systems

IFPRI, a member of CGIAR, the world's largest agricultural innovation network, and partners around the world are conducting research that contributes to "building back better" local and global food systems. This research is achieving a better understanding of different sources and levels of vulnerability affecting people and the commodities or value chains in which they operate. Building back better requires research on the specific obstacles facing small to medium-scale actors forming the majority of the food systems in low- and middle-income countries, including women, youth and informal sector workers. Researchers are paying particular attention to how different parts of the food system react to and mitigate shocks, including climate change, adverse weather events, food price volatility, conflict and more.

Ultimately, policies can play an effective role in building sustainable, resilient and inclusive food systems. Evidence-based policies can implement and scale up effective emergency response interventions, including expanding social safety nets, setting up early warning and monitoring systems to intervene in any future shocks quickly and effectively, and coordinating food system actors to build up livelihoods, produce food sustainably and safely, and ensure high-quality, nutritious and diverse diets. Using the lessons learned over the past two years of shocks, we can implement these valuable insights into creating better food systems, especially for those most vulnerable.

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References: **www.rural21.com**

The poorest are worst hit

To understand the impacts of Covid-19 on the most vulnerable people in a selection of their partner countries, Alliance2015 members interviewed some of the poorest households in selected countries in late 2020 and early 2022. The responses, as variable as they may be, confirm one assumption: the pandemic has reinforced existing inequalities.

By Chris Pain, Patrice Fyffe, Paulo Rodrigues and Rupa Mukerji

It is clear that the Covid-19 pandemic is nowhere near over, and that its impacts, and some of the policies put in place to address it, will be felt for many years. While attention has rightly been drawn to those who have been slipping back into poverty, those who were already the furthest behind, lacking even the most basic of assets, find themselves particularly badly affected. To dig deeper into some of the issues faced by this group, members of the Alliance2015 initiated a series of surveys in 25 countries in late 2020 and repeated the exercise in 18 countries over a two-month period between March and May 2022. The survey drew on programme participant lists from Alliance2015 member organisations. While this means the data is not representative of the entire population in the different countries, it potentially reflects the perspectives of the worst-off members of society. The tool used contained 89 questions and was administered using computer assisted personal interviewing techniques. It was designed to draw out information on the financial impact of the pandemic and changes in food security, health and education. The 2022 survey had 8,461 respondents, 55 per cent of them female; 30 per cent were under 30 years of age and 61 per cent between 31 and 60 years. Slightly over two thirds (69 %) lived in rural areas, 20 per cent in urban and 11 per cent in peri-urban areas. Just under one in ten described themselves as living in a camp setting. In terms of the households' primary source of income, agriculture dominated (with 48 % of respondents giving this response), followed by petty trading and casual trading (16 % each). Key findings from the survey are summarised below.

Nutrition education provided by Welthungerhilfe. The worsened food situation brought on by the pandemic is affecting women and children in particular.

Photo: Welthungerhilfe

More than half in worse financial situation

Our research included questions on people's ability to earn an income, their perception of changes in the price of food, and the quantity and quality of food available to them, since the start of the pandemic.

Describing the change in the financial situation of their household since the start of the pandemic, 36.7 per cent of the respondents said that it had got a little worse, with 27.1 per cent claiming it had got a lot worse, while slightly more than one in eight felt that their situation had improved (14.2 %). (In late 2020, 34.6 % of respondents said the financial situation of their household had declined slightly, with 38.8 % saying they had experienced a significant negative change.) We see a greater proportion of those living in peri-urban areas (31.6 %) saying the financial situation of their household had got a lot worse since the start of Covid (in rural areas 27.1 % gave this answer, while in urban areas 24.5 % did). Similarly, those who depended on external support from government or NGOs (45.2 %) or on casual labour (35.1 %) as their main source of income were more likely to give this response than those in formal employment (22.6 %).

The country where the greatest proportion of respondents said that their household's financial situation had got worse since the start of the pandemic was Bolivia (86.6 %), although over three quarters of respondents in the Central African Republic (CAR – 76.1 %), Peru (76.6 %), Syria (82.3 %) and Zambia (77.5 %) also gave this response. The lowest proportion of respondents identifying the situation had worsened was in Honduras and Chad – although this may be a reflection of their precarious pre-Covid financial position.

Almost two thirds (66.3 %) of all respondents said that Covid-19, and related restrictions, had created difficulties, or challenges for how their household currently earns an income. This can be seen across all occupations, settlement types, gender and age groups, although it has particularly affected those living in peri-urban or camp setting and those dependent on casual work or petty trade.

We also asked respondents whether the total income of the household met its food needs and other basic needs such as housing, transportation, health and education. Overall, 57.1 per cent of respondents said that their income was not sufficient to meet their food needs, 44.8 per cent that it was meeting some of their other basic needs, and 46.5 per cent that it was not meeting their basic needs.

These overall figures hide a huge variation between countries – for instance, in Uganda (90.3 %), Niger (84.4 %), CAR (84.4 %) and Syria (81.0 %), a vast majority say their income is not able to meet basic food needs of the household, while in Bolivia (15.1 %) and Nepal (16.3 %), a much smaller percentage of households report such distress *(also see Table on this page)*.

Huge challenges in accessing food

The survey followed-up by asking whether respondents had "observed any change in food prices since the Covid-19 crises started, and if so, what was the change?" Over half (50.6 %) stated that prices had more than doubled, with a further 28.6 per cent saying that they had increased by between 50 and 100 per cent, and 14.5 per cent maintained that they had increased by less than 50 per cent *(also see Figure)*. Respondents living in peri-urban areas were much more likely to say that prices had more than doubled than those who lived in rural areas (65.9 % against 48.7 %). Those who depended on external support, such as that provided by government or other non-governmental actors, were most likely to say that prices had more than doubled.

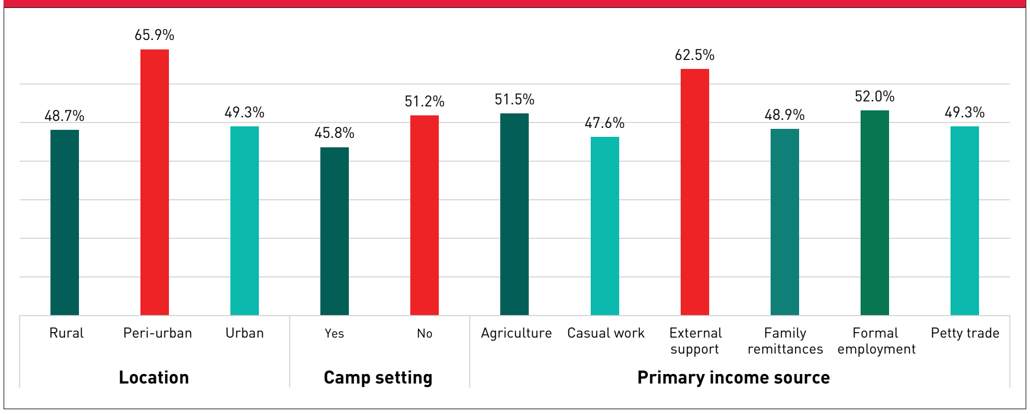
Out of all those interviewed, just over two-thirds (67.8%) identified they had experienced other challenges in accessing food. The most frequently identified problem amongst this group was a reduced quantity of food available in the market, given by 53.9 per cent of respondents, followed by the reduced quality and variety of food available in the market (given by 32.7 %), and difficulties in accessing markets because of ongoing restrictions or fear of contagion (given by 32.6 %).

With challenges faced in terms of ability to earn an income and with the price of food as well as other challenges in terms of the availability of food in the market, the survey dug deeper into the question on whether the quantity of food consumed in the respondent's household had changed since the start of the pandemic. Just under two in three of those interviewed (62.6 %) felt that their household was eating less. This compares to 40 per cent of respondents saying their household had reduced

Financial situation of households

	Total income of the household ...		
	does not meet the food needs of the household	meets some, but not all, (non-food) basic needs	does not meet basic needs
Bolivia	15.1 %	46.7 %	17.4 %
Burkina Faso	76.6 %	28.1 %	70.7 %
Burundi	45.0 %	56.4 %	33.8 %
CAR	84.4 %	25.6 %	73.8 %
Chad	64.1 %	39.2 %	57.9 %
DRC	69.3 %	50.4 %	39.7 %
El Salvador	64.7 %	49.4 %	44.4 %
Georgia	39.0 %	42.0 %	54.0 %
Liberia	74.0 %	53.1 %	45.3 %
Mali	69.6 %	42.1 %	52.4 %
Nepal	16.3 %	45.1 %	17.5 %
Niger	84.4 %	26.8 %	70.7 %
Peru	41.4 %	42.1 %	45.8 %
Sierra Leone	23.9 %	72.1 %	23.5 %
Syria	81.0 %	53.5 %	44.5 %
Uganda	90.3 %	29.9 %	68.2 %
Zambia	73.3 %	28.8 %	65.6 %
Honduras	32.9 %	58.0 %	28.4 %
Total	**57.1 %**	**44.8 %**	**46.5 %**

Percentage of respondents saying prices have more than doubled



the quantity of food consumed in the earlier 2020 exercise. There are large variations across countries, with over 70 per cent of those interviewed giving this answer in eight countries – Central African Republic, Burundi, DRC, Zambia, Burkina Faso, Liberia, Uganda and El Salvador. Across all countries, respondents who described themselves as living in peri-urban areas or camp settings were more likely to say the quantity of food consumed by their household decreased than those living in urban and rural areas, or non-camp setting. This response was more frequently given by those whose primary income source was petty trade (67.4 %), than amongst those who depended on formal employment as their main income source (at 41.8 %).

Respondents were also asked whether there were specific types of food their household was eating less of since the start of the pandemic. Amongst all respondents, the largest reductions were in terms of meat and fish, with 55.8 and 42.3 per cent saying their households had reduced their consumption of these foodstuffs, while 28.8 per cent said they were eating less fresh fruits and 24.1 per cent less fresh vegetables *(also see upper Table on next page)*.

We subsequently asked whether the respondents felt that the quality of food their household consumed had changed since the start of the pandemic. In reply, 51.6 per cent were saying that this had got worse – again a higher proportion than had given this response in the exercise carried out in late 2020, when 42 per cent said this was the case. Those who lived in peri-urban areas (59.8 %) were more likely to give this answer than those in rural (51.5 %) or urban (47.2 %) areas. Those in formal employment were less likely to say that the quality of the food their household consumed had got worse (31.2 %), when compared to those who

Percentage of all respondents saying their household is eating less of specific foods	
Meat	55.8 %
Fish	42.3 %
Milk, yogurt and other dairy	29.2 %
Fresh fruits	28.8 %
Eggs	27.0 %
Cereals	27.0 %
Fresh vegetables	24.1 %
Beans, peas, groundnuts and cashew nuts	21.1 %
Tubers and roots	14.1 %

Duration of reported school closures

<3 months	3–6 months	>6 months
Burkina Faso	Central African Republic (CAR)	Bolivia
Burundi	Democratic Republic of Congo (DRC)	El Salvador
Chad	Georgia	Honduras
Mali	Niger	Liberia
Syria	Sierra Leone	Nepal
	Zambia	Peru
		Uganda

depended on petty trade (53.8 %), agriculture (56.5 %) or casual labour (53.8 %).

We also asked respondents to think back over the past three months and identify whether there were times when they had to reduce food expenses to the extent that anyone in the household went to bed hungry. Overall, one third of respondents (33.4 %) said this had happened. This response was most commonly given in CAR (by 85.0 % of those interviewed), followed by Sierra Leone (58.4 %), DRC (56.2 %) and Niger (50.7 %). This response occurred more frequently among those living in peri-urban areas (40.2 %) than among those living in rural (34.3 %) or urban (26.8 %) areas; similarly those living in camp settings were much more likely to give this response than those who did not (48.3 % against 31.7 %). This response was least frequently given by those in formal employment (11.2 %), and most frequently by those involved in agriculture (38.8 %), casual labour (35.3 %) and petty trading (34.7 %).

Respondents were asked a further question to ascertain the regularity with which this was happening. Amongst those who responded "yes" to the previous question, 29.0 per cent said somebody was going to bed hungry at least once every month, with 43.3 per cent stating this was more than once a month. Again, it was in CAR where this appears to have been most severe, with 83.6 per cent of respondents saying that when this occurred, it was happening more than once a month. Of those who said somebody in their household went to bed hungry in the previous three months, 70.2 per cent said this was happening more frequently since the start of the Covid-19 pandemic. Amongst all respondents, the greatest proportion giving this response was in CAR (where 62.5 % said this had increased since the start of Covid-19), followed by DRC (where 46 % of all respondents gave this response).

With almost two-thirds of all respondents feeling that Covid-19 had created challenges for how their household currently earn an income, and over a half feeling that prices had more than doubled, it is no surprise to see that such a high proportion of people feel this has impacted on both the quantity and quality of food consumed, with the result that household members were going to bed hungry. While these difficulties are seen across all occupation groups, settlement types, gender and age groups, it has been particularly pronounced

Changes in healthcare visits

	Respondents or any other person in household have delayed, skipped or been unable to complete needed healthcare visits in the last 6 months	If yes, why?			
		Fear of contracting Covid-19 at the facility	Facility had restricted opening hours because of Covid-19	Facility had restricted the type of services provided since Covid-19 response started	Facility had restricted the number of people at the facility since the start of Covid-19
Bolivia	31.6 %	38.8 %	6.9 %	4.3 %	10.3 %
Burkina Faso	26.6 %	43.7 %	14.1 %	4.4 %	3.0 %
Burundi	19.2 %	24.4 %	0.6 %	0.0 %	18.8 %
CAR	80.7 %	1.6 %	0.0 %	1.2 %	0.4 %
Chad	25.6 %	8.8 %	0.0 %	3.8 %	0.0 %
DRC	40.2 %	9.7 %	3.8 %	3.5 %	3.2 %
El Salvador	34.2 %	72.4 %	8.1 %	19.5 %	13.8 %
Georgia	35.0 %	19.0 %	1.4 %	0.5 %	0.5 %
Liberia	27.8 %	35.2 %	7.2 %	4.8 %	3.2 %
Mali	19.2 %	16.9 %	7.8 %	10.4 %	11.7 %
Nepal	30.0 %	53.3 %	19.7 %	14.8 %	11.5 %
Niger	41.3 %	0.5 %	0.0 %	0.0 %	0.0 %
Peru	40.2 %	46.5 %	10.7 %	18.1 %	12.3 %
Sierra Leone	37.4 %	4.1 %	2.4 %	1.2 %	1.8 %
Syria	17.7 %	10.9 %	1.8 %	0.0 %	0.0 %
Uganda	29.9 %	12.7 %	3.2 %	3.2 %	3.2 %
Zambia	6.7 %	7.4 %	3.7 %	7.4 %	14.8 %
Honduras	15.2 %	39.1 %	15.6 %	3.1 %	7.8 %
Total	**30.8 %**	**23.3 %**	**5.3 %**	**5.4 %**	**5.7 %**

Food is distributed to Venezuelan refugees in Peru. More than half of those interviewed stated that their income was not enough for food.

Photo: Helvetas

amongst those living in a peri-urban or camp setting with limited access to services, and those dependent on casual work or petty trade, who have less protection for their income.

Almost a third neglected healthcare visits

Respondents were also asked whether they, or any other person in their household, had delayed, skipped or been unable to complete necessary healthcare visits in the previous six months. Over 30 per cent (30.8 %) said this had been the case, with the highest share in CAR (80.7 %) and the lowest in Zambia (6.7 %).

When asked why certain health services were not availed of, those surveyed said that they were too costly (53 %), the facilities were too far or costly to get to (26 %), they were afraid of contracting Covid-19 at the facility (23 %), there were long waiting times (22 %), the facilities were understaffed (11 %), and there were restrictions on timing, or facility capacities were limited. While Covid-19 has undoubtedly affected people's access to health services, many of these responses are indicative of pre-existing shortfalls in access or services that pre-date the pandemic. For instance, longer waiting times was the most frequently cited reason by respondents from Bolivia, Liberia, Peru and Zambia *(also see lower Table on page 19)*.

The 30.8 per cent who responded that they had delayed, skipped or been unable to complete necessary healthcare visits in the last six months were also asked: "Which kind of assistance would you have needed?" These were in-patient care (37 %), followed by outpatient care (28 %) and Covid-19 vaccinations. Many respondents cited pre- or post-natal treatment as the next most likely healthcare service to be missed. The periods before and after childbirth are some of the most critical stages of life for both mother and child and are a significant factor for maternal and neo-natal mortality.

A "lost generation" in education

The impact of Covid-19 on schooling has the potential to be multigenerational, raising concerns about a "lost generation" in education. Unicef suggests that the current generation of students now risks losing 17 trillion US dollars in lifetime earnings at present-day values, the equivalent of 14 per cent of today's global Gross Domestic Product (GDP), as a result of school closures. In low- and middle-income countries, due to the long school closures and the varying quality and effectiveness of remote learning, the percentage of children living in learning poverty will potentially rise to 70 per cent. The pandemic has significantly set back past progress in education. Young people who have missed out on schooling have also, in some cases, lost the opportunity to learn about their reproductive health rights, family planning methods and WASH (water, sanitation and hygiene). These deprivations would have long-term impacts on issues such as child marriage, pregnancy and infant mortality rates, too.

Respondents to this study identified that schools were closed for an average of six months due to Covid-19, with considerable variability in the responses *(also see second Table on page 19)*. For example, respondents in Uganda reported children to be out of school for 22 months, during which time they received books and listened to radio programmes to supplement their learning. The proportion of respondents who said any of the children of school going age in their household had permanently dropped out of school since the start of the pandemic ranged from 5 per cent to 18 per cent, depending on the age group. However, in Syria, schools were closed for around two months, and the children's learning was supplemented by other, unspecified means, while the proportion of respondents who said any of the children of school going age in their household had dropped out permanently was much higher, ranging from 21 per cent for children under 11 years to as high as 81 per cent for girls aged 16 years and above.

The survey identified whether there were boys or girls in the household of primary, lower secondary and upper secondary school age, and then if any of these children had permanently dropped out of school since the start of the pandemic. More children in the lower grades were likely to return to school, and there was little difference between the proportion of girls and of boys who had returned to school. However, older children were less likely to return, and this was more pronounced for girls at upper secondary level than for boys.

For children and youth at risk prior to the pandemic, the closure of schools may have exac-

Income was ...

53%
negatively affected by Covid

56%
not enough for food

46%
not enough for basic needs

erbated further inequalities that existed both within society and between schools which pre-dated the pandemic. Families with the fewest resources were unable to maintain consistency in their children's learning when more pressing needs, such as maintaining a source of income, took precedence.

Only 45 per cent of respondents who had children of school-going age in their household reported that the children had access to any kind of learning support while they were at home from school. Of them, 48 per cent said the learning support was home schooling by parents or siblings, 41 per cent said they had access to digital or online learning, and 35 per cent used books provided by the school during the closures.

In less than half of the households interviewed did the children and youths have access to any kind of learning support during the lockdown.

Photo: Unicef

What needs to be done

The poorest and most vulnerable women and men have seen the pandemic and related restrictions worsening their economic situation. The survey once again shows that the most vulnerable people in our societies are exposed to multiple shocks simultaneously. While government programmes can offer support and alleviate suffering, these were often not accessible to the poorest due to mobility issues, lack of timely access to information or the use of complex technology to submit necessary information online. Looking forward, addressing this requires a concerted action by all actors, using all the instruments of engagement at their disposal, both short- and medium-term, such as strengthened safety net programmes, programmes designed to help children catch up on the education lost, and a renewed emphasis of agriculture and local economic development. Furthermore, a focus on inclusion would lead to the design of alternate approaches that leverage the presence of local institutions, actors, channels of communication and authentication. While digital technology has been a large enabler during the period of restricted mobility due to prevalent Covid-19 regulations, it has also resulted in the exclusion of many who are less familiar with its use while possibly most in need.

As well as prolonged school closures, additional interventions that typically target learners living in poverty, such as school feeding, safe transportation, and sanitation, all of which ease the financial burden on families and make the environment more conducive to learning, have seen some of the most extended disruptions. Among respondents who noted that the state of education got a lot worse, the top reason specified was that schooling was unaffordable because of their families' financial circumstances. Services to reintegrate students and encourage dropouts to return to school need to be established and, where they have started, further strengthened. National budgets for education have to be adjusted, and measures must be implemented that help ease the financial burden on families.

We see a similar challenge in the health sector, where our results point to healthcare becoming unaffordable during the pandemic, potentially compounding pre-existing issues. In this respect, we call for attention to be placed on strengthening health systems overall, and in a manner that specifically addresses the needs of the most vulnerable women and men, addressing inequalities exacerbated by the pandemic. National Covid-19 recovery plans need to prioritise these actions with adequate funding, coordination, and alignment of aid.

The slight shift observed in people's primary source of income, away from agriculture and formal employment to casual labour and petty trade, suggests people are being forced into more precarious sources of livelihoods, with large proportions of those interviewed unable to earn enough to cover their basic needs. As the survey was conducted before the start of the conflict in Ukraine and its impacts on world food prices, the situation is likely to have deteriorated further, and the outlook for 2023 remains bleak. While many of the survey respondents were positive about their short-term financial outlook, their hopes will be tempered by events over the past few months.

Against this background, it is essential for governments, donors and NGOs to continue to promote resilient, sustainable, inclusive and equitable food systems that put vulnerable people at the centre. This can be done through scaling-up support to community-led approaches that promote locally and regionally anchored food systems, and that are focused on the needs of vulnerable producers and consumers, while investing in initiatives that incentivise small-scale food producers, farmers, pastoralists and their organisations to become economically and ecologically sustainable producers.

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Twelve-year-old Khushi earns money digging for mica in northeast India.
Photo: terre des hommes

Children are losing hope

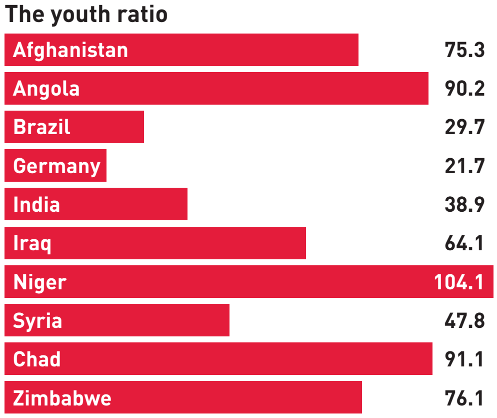
The corona pandemic is fuelling the vicious circle of poverty, hunger and exploitation which millions of children had already been exposed to before the first lockdown was imposed. Our author shows what we know (and what we don't know) about the pandemic's impacts on the life situation of millions of children, and why policy course corrections are urgently needed, also regarding development cooperation.

By Barbara Küppers

Cute was 16 years old when the first lockdown hit her life in the small town of Seke in Zimbabwe. "From one day to another, there was no income," she recalls. "My mother sells vegetables in the small market, which is what we were living on. The market was closed down." Cute is active in the Citizen Child Youth Media project. With the support of the child relief organisation terre des hommes, it is giving children and youths voice and enabling them to represent their interests. Cute reported on her situation for two years. In late 2021, she wrote that nothing had changed since the year's first lockdown. "During the lockdowns, the schools were closed," she reported. "Everyone was talking about online lessons. But for this you need a smartphone and money to pay for Internet access. For me and my fellow pupils, this is just an illusion, and I know that here, most young people are in the same situation. We simply can't afford it. One year on, and online lessons are still unaffordable for most of us."

Instead of learning, Cute helped with daily chores such as fetching water. She got up at four o'clock in the morning to join the queue by the well. She and her friends were afraid of catching diseases in the crowds of people. But this is the only way to get clean water in Seke. The wardens take advantage of the situation. "The men supervising the queues often demand sexual favours from us girls," Cute says. "Then you can jump part of the queue. Those who don't join in only have the option to spend what little money we have on water instead of food." She mentions a further topic that is making life difficult for the girls. If the families run out of money, the girls can no longer buy sanitary pads. "I started a small survey when many of my friends said they couldn't buy sanitary pads," Cute explains. "I found out that nine out of ten girls couldn't afford pads. In despair, they used any kinds of rags – unhealthy material. One might be looked down upon for pointing out this problem to the whole world, but for girls who are growing up, sanitary pads are an absolute must."

The youth ratio



The youth ratio states the relation between children (from 0 to 14 years of age) to people of a working age (15 to 64 years). Example: In India, there are 38.9 children for every 100 youths and adults.
The higher the ratio, the higher government spending ought to be on child-relevant services and infrastructure.

Source: CIA World Factbook, 2020

Hunger took command in just a few days

Cute experienced the lockdowns during the pandemic aggravating already existing problems in just a few days' time. "We're in a desperate situation, and most children have lost all hope," she says. "People the world over are speaking of lockdowns to avoid infections and possible death. But what is the point of this for children who don't know whether there will still be something to eat tomorrow, and who are afraid of starving to death?"

The corona crisis has impacted on a situation in which billions of people do not have any

For many children, having water and soap to wash your hands regularly is anything but commonplace.

Photo: terre des hommes

protection against economic shocks for even a few days. The World Bank estimates that half of the households in developing countries and emerging economies are unable to afford food, water and housing costs for more than three months without income. However, among poor families who already had too little to live on before the pandemic, hunger set in after just a few days. Migrant workers and day-labourers, domestic staff and women factory workers lost their jobs overnight. Women smallholders were no longer able to sell their produce, for the markets were shut down and transportation forbidden. Neither was there any support from relatives working in the major cities or abroad. Only a minority of people world-wide can reckon with aid in the form of unemployed benefits or insurance covering health costs. Fifty-three per cent of the world population, more than four billion people, have no social security at all. None of these people had anything to counter the economic impact of the pandemic.

What we know about how the pandemic affects children …

Just like in any crisis, the most vulnerable groups of the population are those hit hardest: poor people, discriminated groups, refugees and displaced persons, old and disabled people. Since children are still maturing physically and mentally and are more dependent on care provided by others, they are particularly vulnerable. Covid-19 has more rarely severely affected children and youths. According to the United Nations International Children's Emergency Fund (Unicef), 17,200 children and young people under the age of 20 years world-wide died from a Covid-19 infection. This represents 0.4 per cent of corona mortalities of a total 4.4 million people. However, the social and economic effects of the pandemic hit children harder than adults; by now, nearly all indicators referring to the situation of children are showing a dramatic worsening:

- Already before the pandemic, children – understood here as all people under the age of 18 years – had been disproportionately highly affected by poverty: children account for a third of the world population, but more than half of the extremely poor, those having to live on less than 1.90 US dollars a day. As a result of the Covid-19 pandemic, the number of children in extreme poverty has risen by around 150 million to 725 million girls and boys.
- Together with economic anxieties and isolation in lockdowns and quarantine, stress in families increased, too. In all countries throughout the world, domestic violence against women and children rose. Help was hardly available, for the advice and shelter facilities were closed.
- Public healthcare, already insufficient, especially in rural areas, was no longer accessible for many people. This had dramatic and long-term consequences. Pregnant women and infants were not cared for, while vaccination campaigns against polio or measles were suspended.
- During the peak of the lockdowns, in 2020, according to Unesco, 1.5 billion children were unable to attend school. Around 463 million of them could not make use of digital learning services. For 365 million schoolchildren, school closures also meant the suspension of free school meals, often enough the day's only nourishing meal.

Families in need resort to coping strategies at the expense of their children, who then have to join in working. Girls are married earlier, with hopes that their husband's family will care for them better.

- In June 2020, the International Labour Organization (ILO) noted that after two decades of progress and declining numbers of children in labour, significantly more children were having to work. The increase in wars and conflicts and the impact of the corona pandemic are responsible for this. Now there are studies on the situation in Ghana, Uganda, Nepal, Afghanistan, Bangladesh, India and Myanmar, which show

After two years of pandemic, Cute from Zimbabwe demands education and clean drinking water for all children as well as secure jobs for adults.

Photos: terre des hommes

that during the lockdowns, significantly more children were working, many of whom did not return to school. Girls and boys who had already contributed to family income before the pandemic have frequently slipped down further into even poorer working conditions. For example, they have to work longer or harder, as the *Child Labour Report 2022* demonstrates. More children are working in bonded labour and in slavery or in prostitution. Already in the early stages of the pandemic in May 2020, terre des hommes partner organisations from the Philippines reported that the demand for young girls for webcam child prostitution was on the increase. At the same time, Europol stated that the demand for child pornography in the Internet had strongly increased since the beginning of the lockdowns.

- Unicef estimates that the number of girls forcibly married before their 18th birthday has risen by 10 million to a total 100 million child brides owing to the corona pandemic.

… and what we don't know

However, just how and to what extent the pandemic is impacting on children can only be partly demonstrated, for the data base is poor. One of the reasons for this is that gathering data depends on having the necessary means and knowhow, which are often lacking. But another reason is that children are not at the focus of interest in society and politics. This applies in particular to children in poor families and from marginalised and discriminated groups, in rural regions, and in war and crisis areas, as well as to refugee and displaced children. Furthermore, children are often left out in data collection – not only when statistics are not broken down into age groups, but also because interviews often follow a fixed pattern. Heads of families are interviewed – often the men, while the children's perspective is not revealed. For example, owing to a lack of data, it is not clear whether and how the collapse of health systems due to the pandemic is affecting child mortality (mortality of newly born and under-five-year-olds). According to Unicef, two thirds of the developing countries and emerging economies cannot provide reliable data on child mortality.

The middle- and long-term consequences of the pandemic are only going to become apparent over the next few years. For example, how will undernourishment during the lockdowns take effect? Hunger and malnutrition of women during pregnancy, of babies and infants, often damage children's entire lives, for they impair brain growth and lead to delayed development and stunting.

Will children who have experienced falling into poverty or violence, or lost parents or relatives in the pandemic, be capable of creatively and self-consciously developing their lives in difficult circumstances? How is lagging behind in education going to impact children? Will there be an increase in mental diseases? How many families have run into debt to pay doctors' bills and medicine? Who is going to work off debts in times in which there are huge food price hikes owing to failed harvests, following flooding or droughts and the consequences of the war against Ukraine?

Placing children at the centre of policies

Cute from Zimbabwe calls for free-of-charge and good-quality education for all children, secure employment for adults and better drinking water supply. Her demands can only be fulfilled if politics and the economy are fundamentally reoriented. The international community urgently has to invest more in areas which are particularly important for children and can strongly improve their situation: food security, healthcare, clean drinking water, education and protection from violence and exploitation. The development of social security systems is crucial to making families more resilient towards crises.

Children and youths account for 30 per cent of the world population, while 2.35 billion people are younger than 18 years. In many developing countries and emerging economies, children form the largest population groups. The international community has often promised significant improvements for children. It is high time to listen to children, involve them in decisions and put their interests centre stage.

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References: **www.rural21.com**

Poverty, conflict, pandemic – the example of Iraq

Zainab is twelve years old and lives together with her sisters and grandmother in Ramadi, about 110 kilometres west of Baghdad. She lost both her parents in the armed conflicts over the last few years. When the school was closed because of the corona lockdown, Zainab lost her one and only opportunity to leave the house. She became depressed and started to inflict injuries on herself.

Lasting 63 weeks, the school closures initiated by the Iraqi government and the Kurdistan-Iraq regional government were among the longest in the world and affected eleven million children. Re-openings of schools were not uniform and were interrupted several times. Around 7.4 million children were unable to attend digital education services because they had neither smartphones nor computers nor Internet access. Before the pandemic, every fifth child in Iraq had been living in poverty. With the lockdowns, unemployment continued to rise in an already fragile economy. Today, 40 per cent of the children in Iraq are living in poverty. Domestic violence has increased strongly, as have negative coping strategies: dropping out of school, child marriages, child labour. According to the UNHCR, refugee and displaced children are especially hard hit.

Where children's rights are enshrined

The United Nations Convention on the Rights of the Child (UNCRC) was adopted in 1989 and ratified by all the world's nations with the exception of the USA. The Convention defines a child's rights to protection, support and participation. Supplementary conventions stipulate the rights of children in armed conflicts and protection against child trafficking and sexual exploitation as well as an individual complaints procedure. At regular intervals, the United Nations Committee on the Rights of the Child reviews how governments comply with the Convention and presents recommendations.
The protection of children against exploitation is defined in ILO Convention 182 on the "Worst Forms of Child Labour" for the ILO member states.

Strengthening food markets across the rural-urban continuum

The importance of maintaining functioning food markets in the face of global food supply chain vulnerability and disruption has brought new attention to markets that support local and territorial food systems. Drawing on lessons from Covid-19 impacts on rural and urban regions and their populations, our author presents proposals for these markets – formal and informal alike – to cope with future shocks.

By Thomas Forster

The world has been living through the Coronavirus pandemic (Covid-19) since early 2020 with differing impacts and responses between rural and urban areas. The pandemic began in cities and spread to rural areas over the course of 2020, and continues to evolve as new variants keep spreading. Local and national governments, the private sector, civil society, donors and the UN system pivoted in 2020 to analyse impacts of Covid-19 and, based on new evidence, apply interventions to address the most Covid-vulnerable. The capacity to understand and respond to protect populations in poorer countries has been uneven and far more challenging in rural areas, especially in the Global South.

Rural and urban Covid response through a food systems' lens

The early surges of the Covid-19 virus, with higher levels of severe illness and death, led cities across the world to close all venues in which people were crowded together, including schools, restaurants, food canteens and institutional feeding programmes of all kinds. Food markets and their workers were deemed essential in most countries, but many of them shut down or had their operations dramatically curtailed as food supply chains collapsed. Emergency lockdowns or stay-at-home orders required the isolation of entire urban populations in their homes and social distancing when in public. Such were the primary emergency measures across Europe and North America that then were adopted in many countries, including the least developed poorer ones.

These measures were much harder to apply and enforce in the urban areas of low-income countries, especially in the crowded conditions of urban slums that are home to one billion globally. Lockdowns and social distancing in many cities in Africa, South Asia and Latin America were simply not possible. In addition, one critical source of food for settlements from villages to towns and cities is informal street vendors and public food markets, often found parallel to more formal farmers and wholesale markets. These markets were essential for many urban dwellers.

Rural impacts of the pandemic varied from being more extreme than urban impacts to being more diffuse, depending on degrees of isolation from urban areas, with variable impacts on different ethnic groups. For example, the impacts were much more severe for the poor and for Indigenous Peoples in many parts of the world. Much of the focus in public media has been on health disparities of rural access to testing and later, to vaccines. Through the lens of the food system, the lockdowns of urban areas had a huge impact on rural areas. Many rural producers lost market access either because transport was restricted or the markets they relied on were closed for public health reasons.

For the livelihoods of two very large groups of food producers and food workers in rural areas, the impacts were especially severe. A majority of farmers in many low-income countries are women and Indigenous Peoples who grow and often sell food in the informal markets of many cities in Africa and Latin America. To them, urban lockdowns and social distancing, coupled with market shutdowns, are continuing to exacerbate challenges that preceded the pandemic but were made far worse by Covid-19.

Migration flows putting pressure on rural economies

The second large group is farm, food and other workers who migrate to work for their livelihoods. In many regions, international and domestic migrant workers were unable to travel for seasonal farm work. Migration from rural to urban areas for not only food but all forms of work in urban areas saw a massive reversal from urban back to rural areas of origin for millions of workers. The magnitude of the reverse flows to rural areas in 2020 had significant impacts on rural economies and placed great stress on public services and social protection systems where they existed. These reversals may or may not be fully turned around to flow from rural to urban, putting pressure on rural economies and service provision for years to come.

At the height of the first pandemic surge in 2020, the International Labour Organization (ILO) reported that 94 per cent of the world's workers resided in countries with some form of closure measure.

In many low-income countries a majority of farmers are women and Indigenous People who often sell food in the informal markets.

Photo: Jörg Böthling

ILO reported that there were 164 million migrant workers world-wide. Beyond the immediate severe needs in rural areas for families that suffered from loss of livelihoods and markets, the impacts and needs of rural communities would be felt for many years.

Creating new alliances between farmers and market actors

Local and national governments, international organisations, civil society and the private sector turned from the emergency phases of response to Covid-19 to medium- and longer-term efforts to protect health and livelihoods from this and other shocks. Out of the many lessons from the pandemic in 2020 and 2021, one area of renewed focus has been on the future of food markets that are at the centre of urban-rural linkages as critical components of sustainable and resilient food systems. Here, territorial market systems that bring urban communities closer to rural communities are finding renewed interest in connection with building more sustainable and resilient food supply chains. A territorial market system that has different types of functional markets addresses rural economic development through access to markets for smallholders, and urban food security though access to healthy foods that are important products of sustainable agro-ecosystems. Here it is important to bear in mind that the markets that many smaller and medium scale farmers and food businesses rely on include informal street markets and vendors, farmers markets, and public wholesale and retail markets. What the pandemic has shown, among other things, is that when markets are disrupted or collapse, opportunities do arise to form new alliances between farmers and market actors to create new or alternative distribution channels and "last mile" food delivery. Informal market vendors, farmers' market managers and wholesale market operators have demonstrated that rapid adaptive measures can be taken to work around disrupted market channels. This market innovation and adaptation was not limited to Europe or North America, but occurred in all regions (also see Box).

What came through the many studies, dialogues and exchanges of pandemic food prac-

Towards a systemic approach

In April 2022, a technical consultation was organised on market systems at the centre of urban-rural linkages. This virtual event hosted by UN-Habitat brought together networks of wholesale and farmers markets, NGOs working in poorer countries to support their informal and farmers' markets, global networks of cities and regions, as well as the UN Food and Agriculture Organization (FAO) and UN-Habitat. Based on this consultation, a broader networking event on the same topic was organised for the 11th World Urban Forum in Katowice, Poland, in June.
Taking examples from Bangladesh, Vietnam, Uganda, Ghana, South Africa and Portugal, countries and cities have presented promising approaches. In Johannesburg, for instance, small-scale farmers participate in the formal wholesale market. The collaboration between market actors supports small farm supply for the local food bank and the formation of farmers' cooperatives to use the market facility for packing and distribution. In Cape Town, where 40 per cent of the city's produce flows through the wholesale market, efforts are underway to improve cold storage, transport, retail hubs and services for both farmers and buyers. These measures help move more volumes of product from smallholders and address some of the barriers to smaller producers. In Portugal, the wholesale market system has been modernised in close coordination with farmers' groups and with municipal governments. In order to support farmers' presence, specific areas for local farmers are maintained, and technical assistance is provided in addition to logistical support linking famers, wholesalers and retailers.

There was broad consensus at these events that the markets which directly bring rural and urban communities together through shorter supply chains in urban and territorial food systems need far more support from governments, from donors, and from academic researchers. As part of comprehensive food systems approaches, markets need to be better understood as "market systems" linking informal and formal retail markets, farmers' markets and wholesale markets.

Passengers at Andohatapenaka Bus Station in Antananarivo, Madagascar. They are leaving the capital to return to their home town due to lack of livelihood because of a prolonged lockdown.

Photo: World Bank / Henitsoa Rafalia

Wholesale markets should also provide access for small farmers.

Photo: FAO/ Maxx Valencia

tices during the early surges and then during the 2021 United Nations Food Systems Summit is that certain pre-existing conditions greatly helped processes which unfolded with the results that farmers' livelihoods were preserved and urban consumers, especially those most at risk for infection, could receive adequate and nutritious foods directly delivered. Among general conditions for an integrated rural-urban approach are the following:

- In countries and subnational regions where territorial approaches to development have linked urban and rural needs and priorities, there are relationships at institutional and governmental levels that are pre-existing and can facilitate rapid response to crisis or shocks.
- Cities and local governments are on the front lines of crisis response and can rapidly redirect policies and programmes where mechanisms for interagency or cross-jurisdiction collaboration exist across the rural-urban continuum.

Inclusive and resilient market systems need fresh thinking

Covid-19 and conflict-induced price volatility have reinforced the importance of addressing both informal and formal markets across the urban-rural continuum and their interaction to promote synergy, fairness and inclusion. Market systems are where urban and rural communities intersect on a daily basis, exchanging goods, services, information, and social and monetary capital, and these linkages are essential for resilience and sustainability for cities and territories. A new narrative linking rural and urban components and actors in a holistic approach to market systems can help to assess markets and provide evidence for policy to address challenges and improve fresh food markets for affordable and equitable access to healthy diets for all.

Public sector support for market infrastructure needs to be adapted to the new fragility of supply chains and support a more complex web of markets for resilience in food systems. Processes of dialogue and policy formation for all markets critical to feeding human settlements need investment and capacity development. Public and private sector investment in markets and market actors should be balanced between support for larger formal wholesale and retail markets and support for informal and farmers markets. Small and intermediary cities are vital to market systems as hubs for aggregation of small and medium size farms and food enterprises to supply larger markets and cities. Informal markets are a major source of food supply for the urban and rural poor, and their importance has been especially evident during the pandemic. Small, medium and large farmers, traders and other intermediaries need fair and transparent economic conditions and governance frameworks for functional and mutually prosperous interaction.

Market actors, together with local and national government agencies and support from non-governmental actors, should plan for coming shocks and challenges by collaborating to:

- improve technical capacity and invest in roles of different market actors, such as farmers, small traders, direct market retail, market associations and organisations, and small and medium scale enterprises (SMEs). Even actions of some larger businesses and local authorities are necessary for unlocking the potential of territorial food markets;
- strengthen food governance at the centre of work on market and food systems, including across urban and rural jurisdictions and levels of governance (local, regional, national, and international);
- support new coalitions of countries and international organisations emerging from mobilisation around the UN Food Systems Summit related to market systems, including the World Farmers Markets Coalition, the Urban Food Systems Coalition and a Coalition for Territorial Food System Governance;
- support new alliances between actors who have been invisible to international organisations or were perceived to be in competition rather than complementary parts of a holistic market ecosystem;
- improve public policies and programmes for food system sustainability and resilience in the long term.

In conclusion, and to realise the five goals above, here are five concrete steps that actors can all take to implement them and strengthen both informal and formal markets across the urban rural continuum:

- Co-create crosscutting principles for inclusive and resilient market systems (with market actors, international partners, local and national government representatives, non-governmental, civil society and private sector actors).
- Assess and map market systems based on shared principles and practices through participatory processes across the urban-rural continuum.
- Develop capacity in government and market actors to manage market system improvement.
- Deliver conclusions for policy and programmes to local and national governments and partners.
- Design and implement finance measures through appropriate governance mechanisms.

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Multipurpose cash-based assistance in Covid-19 humanitarian assistance – an experience from Nepal

When the Covid-19 pandemic threatened the livelihoods of billions of people world-wide, Nepal was no exception. Cash-based assistance proved to be affective in helping one of the most socially excluded communities meeting their most immediate needs and helping women taking their first step toward financial inclusion.

By Akriti Rana and Hari Gurung

In many low and middle-income countries of the world, the impacts of economic fallout adopted as containment measures for prevention of Covid-19 transmission were much more severe than the disease itself. This has also been evident in the case of Chamar, Dom, and Musahar communities in Kshireshwornath Municipality of Nepal; even when the infections soared up in April 2021, driving the second wave of the pandemic in the country, none of the members of the 1,265 households from these communities reported a positive case. The reasons for zero infection among this community are debatable. Focus Group Discussions and interviews with the community members revealed that fear of being isolated in quarantine and of not being able to be present for the family if labelled as positive were some reasons why they avoided getting tested. But the pandemic had undeniably worsened their already dire socio-economic situation.

As Terai Dalits, Chamar, Dom and Musahar communities belong to the lowest rung of the centuries-old but widely prevalent hierarchical caste system. Although caste-based discrimination has long been prohibited by the Nepalese legal system, these communities have faced the brunt of historical exclusion and marginalisation as it has continued to hamper their socio-economic well-being and has perpetuated poverty. They are confronted with multidimensional aspects of poverty; a majority of them are land-poor or landless, sustain their family with a daily income of one to two US dollars, have a literacy rate below 30 per cent, and are deprived access to basic facilities such as water and sanitation. In the course of the Covid-induced lockdown from April to September 2021 during the second wave, more than eight out of ten households who relied on daily wage labour for their day-to-day survival lost their sole source of income, and over 80 per cent of them became unable to afford even minimum food consumption. Without any access to formal safety nets, more than 80 per cent of the community members had begun resorting to negative coping mechanisms such as borrowing money from informal money lenders at an alarmingly high interest rate. Thus, Chamar, Dom and Musahar communities are among the groups most adversely affected by the socio-economic consequences of Covid-19.

Government action and international cooperation going hand in hand

In Nepal, after the promulgation of the Constitution in 2015, the Disaster Risk Reduction and Management Act was enacted in 2017 which states that disaster management (including non-natural disasters such as pandemics like Covid-19) is the responsibility of local governments and also a concurrent area for local, provincial and federal governments. In accordance with the act, many local governments had already formed Covid-19 management committees at local level during the first wave of the pandemic in 2020 and made use of their resources for managing quarantine centres, screening the returnee migrants, spreading awareness on precautionary measures for Covid-19, distributing relief packages to the most needy and managing vaccination campaigns. However, relief packages provided by most governments was largely an in-kind relief package which mainly included food items and soap. After the onset of the second wave of the pandemic in Nepal in mid-April 2021, it became clear that such relief measures were not enough for the entire lockdown period of more than two months, starting in May 2021.

All tiers of government now requested support from the non-governmental organisations to better respond to the crisis. To complement the local government's efforts, Helvetas, with the support of Swiss Solidarity, facilitated a multipurpose cash-based assistance of 169 US dollars (20,000 Nepalese rupees) to 1,221 households in Kshireshwornath Municipality from June 2021 to December 2021. The programme was meant to enable the communities to uphold their dignity by reducing their hunger woes and help them meet their most basic needs in the time of crisis. The reason for the selection of unrestricted multipurpose transfer modality was to empower the beneficiaries, as this people-centred approach provides the communities with flexibility and enables people to make choices based on their needs during this humanitarian crisis.The amount for assistance was determined based on the minimum wage set by the government (from 2018 to July 2021, the government had set the minimum monthly wage amount at NPR 13,450 – approx. 114 USD), and the amount was calculated to help the community members meet their immediate needs for a lockdown period of six weeks. While Swiss Solidarity provided 80 per cent of the budgetary support for the project, Helvetas contributed to the remaining budget and led the overall project implementation, which involved but was not limited to providing backstopping to the local level partners, coordinating with the local government, designing and monitoring the project.

Bank officials supporting women opening bank accounts in the ward offices.

Photos: Helvetas Nepal

Devrain Devi Mahara's family was one out of the 1,221 households receiving cash support. Right before the pandemic struck, her family had taken a loan to send Devrain's husband to Qatar for foreign employment. As companies in Qatar started shutting down, he lost his job and due to the high airfare charge, even though he was jobless, he was stuck there for eight months. The Mahara family were one of the 15 per cent of households in their community who had a family member abroad in the course of foreign employment. After taking several loans from her relatives, friends and local money lenders, Devrain finally succeeded in purchasing her husband's return ticket and getting him back, but with ballooning debt, the couple were further impoverished and unable to sustain their family of five. Just as they were bracing themselves to take another loan from the moneylender, they heard information about the cash assistance programme for members of their community from their ward member. "Receiving cash at such a critical time was like receiving a blessing from God," says Devrain.

Typical houses and settlement area of Musahar community in the municipality.

A discussion with community members during Post Distribution Monitoring.

A step towards financial inclusion

Studies have shown that financial inclusion has the potential to bridge the gap between cash transfers and a community's long-term resilience. Correspondingly, the rationality for the chosen modality of bank transfer through beneficiaries' bank accounts was to promote financial inclusion of this community as a large majority of the population (88 %) were unbanked and lacked access to any formal financial channels. In order to bring about a positive effect on their financial decision-making within the household, women from the selected households were considered as the primary recipients of cash. The project partnered with an A-class commercial bank who provided these women from the most underprivileged sections with the assistance required to open an individual bank account. As a result, the project facilitated the linkage of 1,180 women from the community with a financial institution through the opening of their bank accounts, and nine out of ten households reported making joint decisions regarding the expenditure of the cash.

While the opening of bank accounts has initiated one of the most disadvantaged communities gaining access to financial services, it must also be acknowledged that financial inclusion needs to go beyond account opening and is not the only inidicator for financial inclusion. Financial literacy was not in the scope of this response project, but new and existing programmes in the area should make considerable efforts to include a component on the missed opportunity and to help contribute to the development of financial stability of these households.

Success factors: trust, transparency, complementarity

Often, in cash and voucher assistance-related programmes targeting specific groups can ignite tensions and disputes within the community. Hence the municipality was supported in conducting a baseline survey, and community leaders and municipal officials were engaged and consulted in finalisation of the targeting criteria and beneficiary selection. Helvetas partnered with a local NGO who mobilised enumerators to conduct the baseline survey that provided crucial information about the status of the beneficiaries and to identify the beneficiaries. It was found that a majority of households belonging to Dom, Chamar, and Musahar communities had lost their source of income and had no means to support their livelihood during the lockdown.

The assistance programme was implemented in a responsive and transparent manner via the ward and municipality officials. A decentralised decision-making process was adopted at municipality level which further helped gain the trust of the community members. Those who felt that they were being treated unfairly were able to address a grievance-handling committee comprising the mayor, municipality officials and ward-level government officials.

Aligning any humanitarian response project to complement or fill the gaps in coverage of social assistance provided by governmental social protection programmes is of utmost importance and also reflects the important core humanitarian principle of complementarity. Furthermore, the cash-based assistance has proven to be an appropriate means of supporting livelihoods and accessing essential services. It has helped to further affirm that people in crisis have a preferred inclination towards cash to meet their most immediate needs. A Post Distribution Monitoring Study that was also conducted to measure the impact of the assistance revealed that almost all (98 %) of the beneficiaries believed that the cash transfer helped them meet their most pressing needs, with 98 per cent using it to purchase food, 24 per cent to pay back the loans they had incurred to cope with the lockdown and a considerable proportion to pay their medical bills.

The example of Chamar, Dom, and Musahar communities in Nepal shows how international assistance can successfully cooperate with local governments holding information about the household level. The governments' ownership of the project was not just beneficial in its effective implementation but also helped the community members receive support directly from their local government and experience the essence of federalism. This reflects upon how the local governments should be further strengthened so that they can provide swift and effective responses at community level in times of crisis.

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New tailwind for rural tourism

The Covid-19 pandemic dealt the tourist industry a devastating blow, although it has been showing clear signs of recovery this year. Furthermore, changes in tourist behaviour are opening up new opportunities for the industry which can benefit sustainability, also for rural communities. Our author looks at some of these new developments.

By Antonio López-de-Ávila

Before Covid-19, world tourism was experiencing remarkable growth, becoming an important global engine of economic activity and diversification. Data from the World Tourism Organization (UNWTO), the United Nations agency entrusted with the promotion of responsible, sustainable and universally accessible tourism, indicate that in 2019, tourism reached 1,500 million international travellers and directly represented four per cent of the total global Gross Domestic Product (GDP). But the pandemic caused unprecedented disruption to the industry, with a massive fall in international demand amid widespread lockdowns and travel restrictions put in place by countries in order to contain the spread of the virus.

This resulted in huge economic and social impacts, placing over 100 million direct tourism jobs at risk, especially in micro, small and medium-sized enterprises (MSMEs), which represent 80 per cent of the sector and employ a high share of women and young people.

International travel plunged by 72 per cent in 2020, the worst year on record for tourism, resulting in 1.1 billion fewer international tourists (overnight visitors) world-wide, putting the number of travellers back to levels 30 years previously, and was still 70 per cent below pre-pandemic levels at the end of 2021. Data for 2022 shows a significant recovery, with international tourist arrivals standing at -43 per cent compared to 2019 in the first seven months of the year.

Tourism trends like nature travel and the search for immersion in the community can advance the role of tourism as driver of sustainable rural development. Photos: UNWTO

Changing tourist behaviour

Throughout this pandemic, profound changes were accelerated in tourism patterns, where a much more digitised tourist prevails, demanding more accurate and easier to reach information. The pandemic also brought a more "conscious traveller" who values the importance of creating a positive impact on local communities and the environment. We see new emerging trends within travel and tourism like nature travel, digital nomads, well-being, authenticity and local hood travellers (seeking immersion in the community).

This represents both a challenge and an opportunity to advance the role of tourism as a driver of sustainable development for rural communities. Also, the current situation offers an immense opportunity for countries to formulate, adopt and implement new policies that would ensure resilience and economic prosperity for rural areas thanks to tourism.

A lifeline for rural communities

Tourism is a lifeline for many rural communities. It has a high potential to stimulate local economic growth and social change because of its complementarity with other economic activities, its contribution to GDP and job creation, and its capacity to promote the dispersal of demand in time (fighting seasonality) and along a wider territory. UNWTO defines Rural Tourism as "a type of tourism activity in which the visitor's experience is related to a wide range of products generally linked to nature-based activities, agriculture, rural lifestyle/culture, angling, and sightseeing. Rural Tourism activities take place in non-urban (rural) areas with the following characteristics: i) low population density, ii) landscape and land-use dominated by agriculture and forestry, and iii) traditional social structure and lifestyle."

Travellers' demand for new experiences around nature, local culture and products, as well as community engagement in the post-Covid-19 context, encourage creativity and innovation. These opportunities may support communities, both in the short term, as they recover from the impact of the pandemic, and in the long term, to promote sustainable and inclusive growth. The integration of youth, local communities and women in the tourism sector will also promote tourism resilience and effective governance which contribute to the creative economy and the preservation of natural and cultural heritage. Boosting gender and the role of women constitutes the backbone of gender equity and empowerment, adding to the stability of local economies and the development of sound socio-economic policies.

Ollantaytambo, Peru

The district of Ollantaytambo is located 94 kilometres away from the city of Cusco. Throughout its history, it has managed to remain a living Inca village and is an important pillar of the Quechua culture. It is famous for its Archaeological Park of Ollantaytambo (PAO), declared Cultural Patrimony of the Nation, which was built by the Inca Pachacutec on two mountains, which constituted a military, religious, administrative and agricultural complex and a strategic site for astronomical observation. Through public and private organisations, various projects and initiatives have been developed for the protection of the cultural heritage and Inca heritage.

The rural communities of Ollantaytambo actively participate in the Queuña Raymi, a reforestation activity organised annually by the Association of Andean Ecosystems (ECOAN) with the aim of conserving the native natural flora and fauna and protecting the headwaters of the basins, to minimise the effects of climate change. Taking traditional ancestral techniques into consideration, farmers are creating sustainable solutions to produce a greater variety of potatoes, avocado crops and fruits such as strawberries, which were previously unavailable. This allows not only a diversification in the diet of the locals but also a wider offer for tourists.

The Archaeological Park of Ollantaytambo is declared Cultural Patrimony of the Nation.

Thanks to the cooperation of the local government, private companies and schools, the women of the Huilloc community are strengthening their leadership and participation in decision-making by learning to use technological tools, diversifying the handicraft offer with innovative products, and taking on roles of responsibility. During the pandemic, young professionals designed more than 70 tourist and commercial premises in Ollantaytambo. In addition, students developed a comprehensive proposal to strengthen the Ollantaytambo brand, which is gradually being implemented.

Fostering inclusive community development

In 2020, the Year of Tourism and Rural Development, UNWTO pointed out that the sustainability of tourism in rural areas will only be possible if a global and inclusive planning strategy is adopted and executed, based on a participatory approach that has multiple actions with all stakeholders. The UNWTO Recommendations on Tourism and Rural Development aim to help governments at their various levels, as well as the private sector and the international community, to promote tourism in rural territories in a way that contributes to inclusive, sustainable development. To achieve this, tourism development and recovery plans in rural communities should encompass the key aspects of investment, capacity building, access to finance, infrastructure development, digital transformation, sustainable development, impact assessment, improving governance, and the empowerment of women and youth.

Afterwards, under the leadership of the 2020 G20 Saudi Presidency, the World Tourism Organization and the G20 Tourism Working Group developed the AlUla Framework for Inclusive Community Development through Tourism to help fulfil the sector's potential to contribute to and achieve inclusive community development and the Sustainable Development Goals (SDGs). The Framework provides guidance and inspiration to all governments, as well as all other key stakeholders in the tourism sector – including regional and local governments, the private sector, industry associations, civil society, communities and tourists – with the aim of fostering a truly holistic and integrated approach to inclusive community development through tourism.

Making tourism a driver of rural development and well-being

In 2022, inspired by the Recommendations and the AlUla Framework, UNWTO launched the Tourism for Rural Development Programme, designed with the vision of making tourism a driver of rural development and well-being. It was assigned with the mission to advance the role of tourism in valuing and safeguarding rural villages along with their associated landscapes, knowledge systems, biological and cultural diversity, local values and activities, and to promote innovative and transformative approaches to the development of tourism in rural destinations that contribute to the three pillars of sustainability – economic, social, and environmental – in line with the SDGs. The Programme will be implemented to achieve several objectives, such as: reducing regional inequalities in income and development, fighting depopulation, progressing gender equality and women's and youth empowerment, advancing innovation and digitalisation, improving connectivity, infrastructure, access to finance and investment, innovating in product development and value chain integration, promoting sustainable practices for more efficient use of resources and a reduction of emissions and waste, or enhancing education and skills.

The programme is developed around four main pillars: the Best Tourism Village Initiative, Knowledge Creation (Observatory), Skills Development (training and mentors' programme), and On the Ground projects (pilot projects and the Small Grants Initiative). The Best Tourism Village Initiative, created in 2021, has so far recognised 44 villages for their commitment to tourism as a tool for sustainable development.The villages are an example that tourism, developed under the canons of sustainability and inclusion, can contribute significantly to the recovery and conservation of the territory's natural and cultural heritage, while being a key factor in retaining the population and in attracting new residents. Some examples are presented in the Boxes.

Aligning sustainability with rural tourism is a necessary and intelligent strategy to face the future. It will bring important benefits, both economic and environmental, and will allow faster recovery from the economic downturn caused by Covid-19. Many experiences and success stories within the Best Tourism Village Network demonstrate the multiplier character that tourism has in the sustainable development of rural areas.

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Nglanggeran, Indonesia

Located on Java Island, the village of Nglanggeran has developed the concept of community-based tourism, offering visitors natural and cultural experiences. Since the initiation of the Nglanggeran Youth Working Group in 1999, there has been a development of ecotourism around the Ancient Volcano. The organisation has built community awareness to care for the environment by planting trees on 48 hectares in addition to capacity building, infrastructure development, and promotion from the local tourism office. Furthermore, cultural activities are becoming an interesting learning package that highlights local tradition in the form of Javanese cultures, such as how to dance Jathilan (traditional dance), how to play gamelan (Javanese traditional music), or a batik mask workshop in addition to tree planting and batik eco-painting.

In Nglanggeran, activities for tourists include taking part in a batik mask workshop.

The tourism industry provides stimulus to other sectors as well as added value and additional income to the community but does not completely replace existing occupations in agriculture (the majority of the population of Nglanggeran work as farmers, plantation workers and ranchers), craftsmanship or other sectors. For instance, farming tours offer visitors learning about rice and cocoa cultivation and cooking. This chosen approach is ensuring resilience in times of crisis and proved successful during the Covid-19 pandemic.

Nkotsi, Rwanda

Nkotsi is a small village located in the south-western area of Musanze, a town in the Northern Province of Rwanda. It is one of the villages forming part of Volcanoes National Park, an internationally recognised Unesco Biosphere Reserve and home to 30 per cent of global population of mountain gorillas. Gorilla sighting is the main tourism attraction of Rwanda. To diversify the existing range of offers and to assure that tourism is a sustainable source of income for the population, local people are brought together in programmes related to environmental conservation, arts and culture, education as well as community health & food security initiatives.

Not only does the village preserve the culture and indigenous knowledge, but it is also a place where tourists can come and personally experience the heritage transmitted from generation to generation and slip inside the local culture and tradition. This creates employment opportunities for women and youth through arts and culture experiences focused on conservation and skills sharing through workshops. One example is the Red Rock Cultural Festival, where everyone is welcome to botanical garden tours, debates about medicinal plants, dancing, drumming and more, always in line with preserving the balance of this small ecosystem.

Through Red Rocks Initiatives for Sustainable Development (RRSD), local community members can access a variety of educational paths, designed to build practical skills which are in line with the tourism development. The courses are particularly delineated to let people understand the value of their resources and the importance of conservation. The Igihoho project, which started in 2016 with the aim of reducing the use of plastic bags, is a further venture on environmental protection and the conservation of natural resources. The project currently involves 20 women who produce and market eco-friendly seed bags made from banana barks. In this way, the project is meeting the consumer's demand for sustainable products while generating revenue.

Arts and culture experiences for tourists create employment opportunities for women and youth.

Development for large and small alike

By 2030, Senegal's national biogas programme has pledged to supply around 50,000 households with biogas plants. However, the country is still a long way short of this target. Local start-ups and Ziguinchor University scientists hope to change this for the better.

By Klaus Sieg

There is little visible sign of the biogas plants in the villages around Richard Toll, a town in the north of Senegal on the bank of the River Senegal. On the other side of the mighty river is the desert state of Mauritania. But even around Richard Toll, the countryside beyond the irrigated fields is dry and barren. The brick-built feed inlets of the mainly underground biogas plants are barely noticeable between the pale colours of the dusty soil and the simple stone houses. Yet unobtrusive as they are, they have brought considerable change to people's lives. "In the past, if we didn't have money for propane, we always had to cut firewood for cooking. It took several hours every day," says Maimouna Nwian, tweaking her colourful headscarf. "Sometimes I even had to go out twice a day." It only takes a glance at the environs of her village, Ariwele, to see why searching for firewood took so long. A herd of gaunt zebu cattle cluster around the sturdy, grey trunk of a gnarled baobab, one of the few shade-giving trees in the landscape. "There used to be more trees, but so many were chopped down for firewood," explains Maimouna Nwian. Most people in her village kept having to fall back on the already scarce resource, even after it was banned a few years ago. And a further drawback is that smoke from the fires is a health hazard. "I always had bad coughs and my eyes stung." But once they secured financing for a biogas plant through the national biogas programme PNB-SN four years ago, things fundamentally changed. Maimouna Nwian and her husband Mahmadou Bathouly haven't needed to buy propane gas nor cook over a wood fire ever since.

Cow manure is the main substrate used in the biogas plants around Richard Toll.

Biogas secures family incomes

In the 18-cubic-metre digester beneath the dusty soil beside their house, the dung of their 22 cattle is now fermenting, mixed with rice straw, water, and sometimes kitchen waste. The plant produces at least five cubic metres of methane a day, and that's enough, even on the regular occasions when people other than their own five children show up at mealtimes. "We have lots of relatives; the group swells to fifteen hungry mouths in next to no time," says Mahmadou Bathouly. After just five years the family had paid off the plant, which cost the equivalent of 1,400 euros. Now not only do they save around 10 euros per month on propane gas, but the fermentation residues they remove from the plant are also selling well. "They earn us the equivalent of around 200 euros a month," explains Mahmadou Bathouly on his way to the trader's collection point, where he himself tips the fertiliser into a filling plant and packs it into sacks. Even more than rice and vegetable production on his three hectares of fields, selling the fertiliser has become an important source of income. The buyer is the *Compagnie Sucrière Sénégalaise* sugar factory in Richard Toll. It wants to convert ever more of its 11,200 hectares of sugarcane fields to this organic fertiliser. So there appears to be guaranteed demand. "Another thing is that our village has become really clean, because people collect the droppings of their mostly free-ranging animals to use in their own biogas plants or to sell to other plant operators," Mahmadou Bathouly explains on our way back along the dusty tracks.

The masonry-built biogas plant is robust and easy to operate. Now, with a few years' experience, Maimouna Nwian and Mahmadou Bathouly know how much rice straw and water they can add, and also that they need to check the salt content. They have even trained their cattle to deposit their manure as close to the plant as possible. Funny as that sounds, it makes a vital difference, especially in the dry season. Others in the village complain about the lack of substrate because, due to the drought, the cattle herds need an ever larger radius to find enough fodder. This makes it all the more difficult to collect their manure. One more reason why there are biogas plants using alternative feedstocks, like that of the Thilene Women's Association on the road to the coastal city of Saint Louis. In the yard, a machine is shredding bundles of reed grass into knots of fine, light green fibres. "We mix them half-and-half with cow manure. It works very well in the biogas plant," explains Khoudia Diop, the woman in charge. Since two dams were built between the sea and the Senegal River to stop the salinisation of the fields, reed grass has been overgrowing the riverbanks and fields in the region. That poses a threat to flora, fauna and agriculture. Work crews equipped with sickles are dispatched to keep the reed grass at bay. "We pay one of them out of the revenues from selling fertiliser from the biogas plant," explains Khoudia Diop. The women use the biogas to cook, dry and roast rice, millet and vegetables. There is also a biogas electricity generator which can power a packaging machine. "There would be enough biogas to produce 50 kilograms of our products every day, only we don't have a market for them yet, unfortunately." So far there are just two shops in nearby Saint Louis which the women have been supplying. Hence, the gas meter next to the tiled production room shows just 314 cubic metres. The ten-cubic-metre plant installed in December 2020 could have generated four times that volume. Today once again, the women in their pristine white aprons are filling the plant for demonstration purposes only.

Research to find the optimal substrate

Although the use of alternative substrates to cow manure, as the example in Saint Louis shows, will not get things going by itself, it is important nevertheless. It is therefore the subject of Omar Kata Faye's research at Ziguinchor University. In a small building on the edge of the university grounds, the PhD student demonstrates his experimental set-up, consisting of water-filled PET bottles, plastic tubes and a small plastic barrel that serves as a digester. He uses the water levels to measure the quantity of biogas, and a gas analyser to measure its methane, carbon dioxide and hydrogen sulphide content. He is experimenting with mango waste, residues from cashew juice production, rice husks, and cow and donkey manure in various mixing ratios. Cashew fruit pulp is delivering very promising results. Every year, 25,000 tonnes of cashew fruit are processed into juice in Senegal, generating 18,000 tonnes of pulp. "This could potentially yield 360,000 cubic metres of biogas," explains Omar Kata Faye as he walks across campus, passing a seminar room where some 20 students in blue overalls are poring over their final exams. The practical exams will take place that afternoon. With support from Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Ziguinchor University is training an annual cohort of renewable energies technicians. The majority find work in the solar sector, but biogas would also give them plenty to do. "Many plants in Senegal are not working all that well, especially many of the ones that were installed through the national programme," says Professor Lat Grand Ndiaye, the head of the university department. "The smallholders with micro biogas plants need better training, as do the tradespeople who install them."

Mahmadou Bathouly next to his fertiliser filling plant.

Transport sacks for biogas.

Omar Katar Faye in his laboratory.

Plants need to be smaller and more flexible

Madiara Diop takes the same view. He also welcomes the research being done at Ziguinchor University on different substrates. "In Senegal, we focus far too much on cow manure without factoring in the potential of kitchen waste from households and restaurants, waste from market stalls, slaughterhouses and fish processors, and other organic residues." Dressed in his boubou, the traditional male robe, Madiara Diop sits in his house in a suburb of the capital, Dakar. With his laptop on a plastic chair in front of him, he is surrounded by a bustling family life. He cannot yet afford an office for his young company, Afrique Biogaz Environment Dakar. An economics graduate, until very recently he lived in Paris but now wants to realise biogas projects in Senegal. He has just concluded a contract with a municipality in the south of the country. Spread across several villages, it involves installing 500 small domestic plants and four 20-cubic-metre plants supplied by the German manufacturer (B)-Energy on central sites in the villages, to be fed with the municipality's organic waste. Financing will be provided by the national biogas programme – at least, Madiara Diop has filed an application. But there are some things he wants to do differently. Instead of permanent masonry-built systems, which are relatively large, he favours small, flexible plants from (B)-Energy and a Chinese manufacturer. "A family can cook for two hours a day with just two cubic metres of biogas so there's no need for plants of ten cubic metres or more." Added to that, he finds that permanent plants are often badly built and allow biogas to leak into the atmosphere. Flexible systems made from robust membranes are considerably lower in cost, suitable for all kinds of substrates and easier to operate and maintain, he says. "And the small models can simply be placed in the sun to kick-start fermentation." Even (B)-Energy's 20-cubic-metre plants are fabricated from membranes and plastic components. And who are the intended consumers of their output? "Using lightweight one-cubic-metre sacks that can be strapped on like backpacks, households, restaurants or bakeries can pick up biogas themselves or have it delivered," Madiara Diop explains.

Papa Assane has already realised one such plant to the south of Dakar, in the picturesque coastal town of Popenguine. It supplies gas for the kitchen of a children's education centre. There are days when the kitchen is quiet. On other days, meals must be cooked for 100 children. But almost every day, the long plastic bag measuring 2 x 8 x 1.5 metres in the courtyard of the former hotel is filled to bulging with around four cubic metres of biogas. So it's just as well that the transport sacks are on hand. A restaurant in the town buys up the biogas. "Alongside self-sufficiency, this creates a business model," says Papa Assane. Part of the revenue might then be used to fund the purchase of substrate – for example, to collect organic waste from market stalls or fishermen. This in turn would benefit the environment. Organised waste disposal is the exception in Senegal. Most of it ends up untreated in the natural environment, polluting roads, fields and beaches. And it releases methane.

Assane's company Methanizer, which has eight employees, has already realised over 200 projects in Mali, Niger, Benin, Cameroon and

Côte d'Ivoire, ranging from a 200-cubic-metre installation that works on a dairy farm with its own cheese dairy in Tunisia to small domestic plants from the Israeli supplier Homebiogas. Woulinnata Tambedu, who lives in a house on the outskirts of Yenne, operates one of the latter. Full to the brim and covered with a layer of dust, it occupies a sunny spot beside the entrance door. Sandbags on the inflated biogas plant exert the necessary pressure on the pipe that runs indoors into the kitchen. The installed plant cost the equivalent of approx. 1,050 euros. "We recouped that money after about six years, because we no longer have to buy propane gas even though I cook for my husband and our five children every day," says Woulinnata Tambedu. The family will also go on to save a lot of money in future, the equivalent of nearly 160 euros per year, for based on the quality workmanship of the flexible plant, Papa Assane expects it to have a 20-year service life.

Members of Thilene women's association crushing reed into fibre material.

Photos: Martin Egbert

An electrical engineer by training, he has installed only 50 plants in Senegal altogether. The 37-year-old entrepreneur sees the national biogas programme as rather an impediment to his work. Applicants are required to work with contracted firms whose unduly low prices undermine the free market. Insisting on masonry-built systems – which are often excessively large, to boot – is another mistake in his view. "How are we supposed to wall them up underground on rocky terrain, for example?"

Ramping up the support programme

The national biogas programme launched in 2009 was actually supposed to have installed 10,000 plants by 2020. Currently there are 2,300 in Senegal. It is not exactly a success story. "There is still a lot to be done," admits Malick Gaye, the programme's coordinator, from his darkened office in Dakar. On the wall behind him is a portrait of the president. "This year alone we want to build 2,000 plants, rising to 4,000 next year." This holds out the only hope that the newly adopted target of 50,000 installations by 2030 might be achieved. What went wrong in the past? "Initially we supplied the plants for free, but they didn't work because people didn't take care of them. That was enormously damaging for the technology's image." Now the operators have to pay off the plants in instalments, but by selling fertiliser they can earn money, too. "Things have got better ever since." The strategy will be opened up with regard to technologies as well, meaning that the programme could also be used to finance flexible systems. And the coordinator expects a further boost from cooperation with the Swiss Foundation for Climate Protection and Carbon Offset, KliK.

And what about industrial biogas plants? Senegal is regarded as a stable state that aspires to the status of a newly industrialised country, where agriculture, fishing, food production, wastewater and organic waste would offer potential enough. Adjacent to the slaughterhouse of the capital city, there was once a very promising plant with a capacity of 4,000 cubic metres, the largest in the country. It had been funded by the United Nations Industrial Development Organisation (Unido), among other sources, and constructed by the Senegalese company Thecogaz. Methane derived from slaughterhouse waste and wastewater was passed through a combined heat and power (CHP) plant to generate electricity and heat. The latter ensured that the digester was kept at high enough temperatures, while the electricity powered the cold storage rooms, the offices and the lighting in the slaughterhouse. Unfortunately the plant had to make way for the extension of a railway line. Today, Thecogaz's successor company SB2-4ALL predominantly builds small plants but hopes to win the contract for a larger one from *Compagnie Sucrière Sénégalaise* in Richard Toll. Its tender for a pilot project to ferment molasses and other organic residues from sugar production is currently being reviewed by the refinery. Initially the plant is intended to supply the company's works canteen with cooking gas, which would be a good start.

Meanwhile, the state-owned water authority L'Office National de l'Assainissement du Sénégal (O.N.A.S.) is thinking big. O.N.A.S. is currently building a vast wastewater biogas plant – a contender for the largest in Africa, no less – in Dakar. The facility will be able to clean 92,000 cubic metres of wastewater to a quality suitable for irrigating productive farmland. "It will be 37,000 cubic metres per day to begin with, but we expect to need more than double that capacity by 2035," says Abdoulaye Gueye, head of technical development at O.N.A.S. The Dakar metropolitan region is growing apace. Three 610-kilowatt CHP units will produce 90 per cent of the electrical energy needed by the wastewater treatment plant itself. That will save O.N.A.S. the equivalent of around 900,000 euros per year in electricity costs. But even more importantly, "by using the biogas, we avoid the emission of 3,000 cubic metres of methane per day," enthuses Abdoulaye Gueye, pushing his white construction helmet back off his forehead. In the future, O.N.A.S. wants to build biogas plants at all five of Dakar's sewage works.

The plant at the wrestling stadium is due to start operating in December 2022, and is already impossible to overlook – unlike the domestic plants belonging to Maimouna Nwian and Mahmadou Bathouly in Ariwele village, in the arid north of the country. For the development of Senegal and its people, however, both types are important.

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"We simply can't rely on young people being only producers of food"

Africa's burgeoning youth population can play a key role in contributing to sustainable development. Our author argues that while young people do face barriers, agriculture holds many potential opportunities for them – including some reaching way beyond merely producing food.

By Dennis Rangi

It's a startling statistic, but by 2050, Africa's population is expected to double to around 2.6 billion. This creates greater pressure to feed so many mouths amid the challenges of economic, political and societal instability let alone the impacts of climate change. When one considers that in 2019, almost 60 per cent of Africa's population was under the age of 25, making Africa the world's youngest continent, it becomes clear that Africa's youth holds the key to the continent's very survival and the burden to sustain wider global development. In 2019, more than a third of the population was aged between 15 and 34. By 2100, Africa's youth population could be equivalent to twice Europe's entire population. According to the UN, the median age in Africa was 19.8 in 2020. Throughout the continent, Mauritius is expected to have the highest median age, 37.4, and Niger the lowest, 15.1.

However, in youthful Africa, just 56 per cent of the population is of working age, which translates to about 1.3 people of working age supporting every dependant (mostly youth) – versus a global average of two workers to every dependant. This in essence is the 'youth bulge', and addressing it has never been more of an urgent task.

According to the World Bank, in 2020, 14.5 per cent of 15- to 24-year olds in sub-Saharan Africa were unemployed. This is among the lowest rates globally among young people in this age bracket. But the International Labour Organization says most of them work informally, are underemployed or stay in poverty because of low wages. Quite simply, growing youth unemployment and underemployment – especially in developing countries – is one of the greatest challenges of the 21st century.

Agriculture is the most important business opportunity for youths

Agriculture has long been the dominant sector in much of Africa in terms of output, employment and export earnings. Indeed, this sector is arguably the most important business opportunity for our young people to embrace. As such, any meaningful change in the continent's future must involve agriculture.

A 'revolution' in agribusiness involving Africa's youth is therefore required so that they can capitalise on the sector's contributing around 25 per cent of the continent's Gross Domestic Product and 70 per cent of its employment. With our support, they need to meet these challenges head on so that they can leave a lasting and sustainable legacy for their own children and their futures.

Africa's youth are the lifeblood of the continent's future, with a mission to help feed its growing population while mindful of increasing the productivity of crops and livelihoods sustainably and amid the challenges of political instability and climate change.

Photo: CABI

This is especially true when thinking of young people's roles in agricultural value chains. We need to take a 'two-pronged' approach to enhancing their skills not only in producing safer foods free from crop pests and diseases but also in helping to involve them as village-based advisors – giving crucial information to help increase yields. It may also be that they can combine both roles as part of a dual approach to the ever-increasing food crisis.

The time is ripe for Africa's youth to lead the technological realisation of digital agriculture – recognising this a key driver for economic development within the agricultural sector. This is particularly so in Kenya, where digital innovations have eased trading barriers in certain value chains by providing trade platforms that directly connect farmers to traders enabling them to get competitive returns on their yields. The African Centre for Women, Information and Communications Technology (ACWICT)-led Maudhui Digiti (Digital Content) project, for example, recently assessed the access and use of digital content. This included evaluating opportunities for women and young people's employment in the digital sphere for farmers, particularly the underserved agricultural communities and organisations in Laikipia County in Central Kenya.

Youth can catalyse the realisation of digital agriculture in sub-Saharan Africa

Youth play a pivotal role in agriculture and rural transformation. One of the findings in a book recently published by the Centre for Agriculture and Biosciences – CABI – entitled *Youth and the Rural Economy in Africa* recommends a targeted technology promotion aimed at young people, most of whom are "digital natives". These youths can catalyse the realisation of digital agriculture in sub-Saharan Africa thanks to their innovativeness and fast adoption of new technologies.

One example where CABI has extensively supported agricultural production, especially amongst smallholder farmers including the youth in Africa and beyond, is the Good Seed Initiative. It ran in East Africa from 2013 to 2016 and sought to promote good production of quality of African Indigenous Vegetable (AIVs) seeds and vegetables so as to improve the income of seed producers. It also aimed to contribute to food and nutritional security of smallholder farmers and other actors in the seed and vegetable value chains of seeds.

The project enabled women and youth in Uganda and Tanzania to engage in market-driven profitable value chains that required minimum capital, capital and other factors of production. This was achieved by empowering women and youth with requisite skills for seed entrepreneurship of indigenous vegetables which continued to be in high demand.

In research conducted by CABI which focused on Zambia and Vietnam, we sought to understand the nature of youth participation and identify barriers and opportunities for youth engagement in agriculture and agribusiness in Lusaka, Zambia and Vinh Phuc, Hung Yen, Dak Lak and Tien Giang in Vietnam. We found that while a majority of youth were engaged in agriculture – primarily production – few were involved in input supply, trading, transportation and the provision of advisory services. For instance, the study in Zambia found that almost all the youth (99 %) worked engaged in farm production, producing crops and animals for home consumption and local markets – yet hardly any were involved in valuable extension services.

This is where initiatives such as the CABI-led PlantwisePlus global programme can engage youth in non-formal extension services and help fill in the missing linkages within the agricultural value chain. In partnerships, through the preceding Plantwise programme, CABI has trained millions of professionals in 34 countries over ten years. This includes extension staff, agro-dealers and quarantine officers to provide improved quality services to farmers.

In Uganda, where 70 per cent of those unemployed are youths, CABI partnered with the Zirobwe Agaliawamu Agri-business Training Association (ZAABTA) in Luwero district. This was to skill youths to enable them to provide various services in major agricultural and profitable value chains in the country. Implemented under PlantwisePlus, the training sought to increase the supply of safer food through enterprises driven by women and youth to meet the growing demand by consumers in rural, urban and peri-urban markets.

We believe helping to enable youth to provide services as 'village-based advisers' in this way will be an attractive option to them and call for it wholeheartedly – even if they wish to engage in this activity alongside regular farming activities.

We simply can't rely on young people being only producers of food. They may also need to be involved in ensuring the safe production of it in the first place and be part of a 'knowledge exchange'.

In terms of open access learning, CABI's 'plant doctor' training modules have been adopted by various academic institutions across the world. Plant doctors work at 'plant clinics' held in communities to help farmers diagnose their plant health problems and suggest remedies so that their crops can grow more successfully. In Uganda, for example, CABI's practical hands-on course on field diagnostics and plant clinic operation is giving good recommendations to farmer to students at various years of study. The course was first introduced in Makerere University, Uganda, in 2013 and is now offered by Uganda Christian University, Bukalasa Agricultural College, Busitema University and Gulu University.

We need to build our capacities and strengths in partnership to help address the 'youth bulge', and also the growing demand on youth and their role in agriculture to feed the rising population.

Dennis Rangi, Director General, Development, has over 20 years' experience as a project entomologist and is currently responsible for overseeing CABI's agricultural and environmental projects across all of CABI's three themes (Commodities, Invasive Species and Knowledge for Development) around the world.
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A community forestry awareness campaign in a primary school of Butisongo, Democratic Republic of Congo.

Photo: Axel Fassio/ Cifor-Icraf

Adapting agriculture for a safe planet

The Agriculture, Forestry, and Other Land Uses (AFOLU) sector accounts for almost a quarter of global greenhouse gas emissions, provides a carbon sink and renewable resources for substitution of fossil fuels, offers several co-benefits and has synergies with the Sustainable Development Goals. Despite its immense potential for climate mitigation at low cost, the lack of climate financing and other barriers are preventing the sector from realising its full potential for reducing greenhouse gas emissions.

By K. N. Ninan

The Sixth Assessment report of the Intergovernmental Panel on Climate Change (IPCC) depicts a gloomy picture of the climate situation with the last decade from 2010 to 2019 recording the highest decadal absolute increase in greenhouse gas (GHG) emissions since 1850. Global net anthropogenic GHG emissions in 2019 were on average around 59 gigatonnes of carbon dioxide equivalent ($GtCO_2$-eq.), of which 64 per cent was due to carbon dioxide (CO_2) emissions from fossil fuels and industry, 11 per cent due to net CO_2 emissions from land use, land use change and forestry, 18 per cent from methane (CH_4), 4 per cent from nitrous oxide (N_2O) and 2 per cent from fluorinated gases (F-gases). Without accelerated mitigation actions by countries, the world is most likely to overshoot the goal of limiting global warming to the 1.5°C or 2°C above pre-industrial levels agreed at the Paris Climate Summit in December 2015, with median global temperatures likely to rise to 2.2–3.5°C by 2100. If this happens, it will aggravate the frequency and intensity of natural disasters and extreme weather events, with adverse consequences for human and natural ecosystems, human well-being and good quality of life. What is distressing to note is the gross inequalities in emissions. The global wealthiest 10 per cent contributed about 36–45 per cent of global GHG emissions. The share of developed countries to these emissions (excluding net CO_2 emissions from land use, land cover change and forestry) in 2019 was as high as 57 per cent, as against just 3.3 per cent by least developed countries (LDCs).

The AFOLU sector

In 2019, the Agriculture, Forestry and Other Land Uses (AFOLU) sector contributed almost a quarter of global GHG emissions (22 %), next to the industrial (23 %) and energy (34 %) sectors. Besides, the AFOLU sector (managed land) is an important carbon sink, absorbing almost a third of global anthropogenic CO_2 emissions, and provides biomass resources that can substitute for fossil fuels. The sector is noteworthy for emitting non-CO_2 gases, namely methane (CH_4) from enteric fermentation by ruminant livestock and nitrous oxide (N_2O) from manure application, nitrogen deposition and nitrogen fertiliser use in the agricultural sector which increased by around 4.2 $GtCO_2$-eq. per year and 1.8 $GtCO_2$-eq. per year respectively during the period 2010–2019. Land also plays an important role in climate through albedo effects – incoming sunlight reflected back into space – and evapotranspiration, although the role of these two factors in total climate forcing is unclear. The sector provides several co-benefits, such as enhancing biodiversity and ecosystem services, and has synergies with the Sustainable Development Goals (SDGs).

According to the Sixth Assessment Report of the IPCC, the AFOLU sector can provide 20–30 per cent of global mitigation potential needed for a 1.5°C or 2°C pathway towards 2050. About 30–50 per cent of the estimated mitigation potential can be achieved at below 20 US dollars (USD) per tCO_2-eq. But despite its potential for climate mitigation at low cost, co-benefits and synergies with the SDGs, the lack of climate financing, and institutional, social and other barriers are preventing the sector from realising its full potential in reducing GHG emissions.

Mitigation achievements and potential

The AFOLU sector's contribution to global net mitigation has so far been modest. It delivered about 0.65 $GtCO_2$-eq. per year of mitigation from 2010 to 2019, which is around 1.4 per cent of global total GHG emissions during this period. Forestry-related measures accounted for the major share (>80 %) of this emission reduction. The total emission reductions or offsets attributed to the AFOLU sector over the period 2007–2018 were 7,897.4 $MtCO_2$-eq. (metric tonnes of carbon dioxide equivalent) from mitigation measures such as Clean Development Mechanisms (CDM), voluntary carbon standards, compliance markets and reduced deforestation. Of this, reduced deforestation/ REDD+ accounted for 6,894.5 $MtCO_2$-eq., i.e. 574.5 $MtCO_2$-eq. per year out of a total of 658.1 $MtCO_2$-eq. per year. Mitigation measures such as establishing and respecting tenure rights and community forestry, improved agricultural and forest management, biodiversity conservation, payment for ecosystem services, joint regulatory efforts, etc. have contributed to this modest achievement. So far, 0.7 billion USD per year has been spent on mitigation in the AFOLU sector, which is well below the 400 billion USD per year – an amount less than current subsidies provided to the agricultural and forestry sectors – needed by 2050 to deliver about 30 per cent of the global mitigation effort.

In the nationally determined contributions (NDCs) pledged by countries to the United Nations Framework Convention on Climate Change (UNFCCC), AFOLU mitigation measures have been assigned an important role. As per the IPCC report, the sector can deliver close to a third of the global mitigation needed for reaching the 1.5°C or 2°C pathway target towards 2050, with the largest share of the economic potential being contributed by forests and other natural ecosystems, followed by agriculture and demand-side measures such as shifting to healthier diets and reducing food loss and waste.

Most options are available and ready to deploy

Based on integrated assessment models (IAMs) and global sectoral studies, the Sixth Assessment Report of the IPCC estimates the likely

Estimated technical and economic potential for selected mitigation options in the Agriculture, Forestry and Other Land Uses (AFOLU) Sector up to 2050

Mitigation options	Technical potential – mean and range in $GtCO_2$-eq. per year up to 2050	Economic potential – mean and range in $GtCO_2$-eq. at USD 100 per tCO_2-eq.	Confidence level
Forest and other ecosystems			
Reduce deforestation and degradation	4.5 (2.3-7)	3.4 (2.3-6.4)	Medium
Afforestation/ reforestation/ forest restoration	3.9 (0.5-10.1)	1.6 (0.5-3.0)	Medium
Improved forest management	1.7 (1-2.1)	1.1 (0.6-1.9)	Medium
Fire management of forests, grasslands, savannahs	0.1 (0.09-0.1)	0.05 (0.03-0.1)	Low
Conservation of grasslands and savannahs	0.2 (0.1-0.4)	-	Low
Conservation and restoration of peatlands	0.8 (0.4-1.7)	0.4 (0.2-0.6)	Medium
Conservation and restoration of coastal wetlands	0.5 (0.05-3.1)	0.1 (0.05-0.1)	Medium
Agriculture			
Enhanced soil carbon management in croplands	1.9 (0.4-6.8)	0.6 (0.04-0.1)	Medium
Enhanced soil carbon management in grasslands	1.0 (0.2-2.6)	0.9 (0.3-1.6)	Medium
Biochar	2.6 (0.2-6.6)	1.1 (0.3-1.8)	Medium
Agroforestry	4.1 (0.3-9.4)	0.8 (0.4-1.1)	Medium
Enteric fermentation	0.8 (0.2-1.2)	0.2 (0.1-0.3)	Medium
Improved rice management	0.3 (0.1-0.8)	0.2 (0.05-0.3)	Medium
Crop nutrient management	0.3 (0.06-0.7)	0.2 (0.05-0.6)	Medium
Manure management	0.3 (0.1-0.05)	0.1 (0.09-0.1)	Medium
Bioenergy and BECCS	5.9 (0.5-11.3) #	1.6 (0.5-3.5) #	Medium
Demand-side measures			
Shifting to healthier diets	3.6 (0.3-8.0) 1.7 (1-2.7) @	2.5 (1.5-3.9)	Medium
Reduce food loss and waste	2.1 (0.1-5.8) 0.5 (0.0-0.9) @	-	Medium
Improved and enhanced use of wood products	1.0 (0.04-3.7)	0.4 (0.3-0.5)	Medium

$GtCO_2$-eq. = gigatonnes of carbon dioxide equivalent; tCO_2-eq = tonnes of carbon dioxide equivalent; USD = US dollars. Since greenhouse gases (GHGs) consist of different gases such as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O) and other gases, they are converted into carbon dioxide equivalent using the global warming potential (GWP100) of the different gases estimated over 100 years.
BECCS = Bioenergy with Carbon Dioxide Capture and Storage
@ Feasible potential if you consider diverted agricultural production
# Refers to net carbon dioxide removal (CDR) in BECCS
Source: Gert-Jan Nabuurs et al. (2022). Agriculture, Forestry and Other Land Uses. Chapter 07 in J. Skea, P. Shukla et al. (eds.). Climate Change 2022: Mitigation of Climate Change Report, IPCC, Geneva, Switzerland.

range of global land-based mitigation potential at around 8–14 $GtCO_2$-eq. per year between 2020 and 2050 at 100 USD per tCO_2-eq. which is half of the technical potential. Between 30 and 50 per cent of this potential can be achieved at less than 20 USD per tCO_2-eq. Most mitigation options are available and ready to deploy. The economic potential is estimated to be the highest in tropical countries due to the large potential from reducing deforestation and sequestering carbon in forests and agriculture.

Among mitigation options reducing deforestation and degradation, afforestation/ reforestation and improved forest management have an immense potential for mitigation. In the NDCs, reducing deforestation has been assigned a major role for realising the Paris climate goals. In the agricultural sector, enhancement of soil carbon management in croplands and grasslands, biochar, agro-forestry, enteric fermentation, improved rice, crop nutrient and manure management can contribute significantly to mitigation. Options for areas with a significant potential are referred to in the Table on page 39.

Carbon stock measurement in mangrove forests.

Photo: Aulia Erlangga/ Cifor-Icraf

Unsustainable agricultural and soil management practices have led to a deterioration of soil quality, productivity and their carbon holding capacity. An IPBES assessment on land degradation and restoration by Luca Montanarella et al. in 2018 notes that over the past two centuries, soil organic carbon, an indicator of soil health, has seen an estimated 8 per cent loss globally (176 gigatonnes of carbon, GtC) from land conversion and unsustainable land management practices. Projections to 2050 predict further losses of 36 GtC from soils, particularly in sub-Saharan Africa. These losses are projected to come from the expansion of agricultural land into nature areas (16 GtC), degradation due to inappropriate land management (11 GtC), the draining and burning of peatlands (9 GtC) and melting of permafrost. Improved agricultural management practices such as shifting to improved crop varieties, crop rotation, use of cover crops, perennial cropping systems including agro-forestry systems, integrated production systems, crop diversification, agricultural technology, reduced tillage intensity and residue retention, improved water and rice management, biochar application, management of vegetation, livestock and fire can enhance soil quality, productivity and soil carbon storage.

Biochar can enable carbon dioxide removal (CDR) and emissions reduction as well as enhance soil properties, productivity and resilience to climate change. Land management practices such as agro-forestry, which seek to combine growing of trees with agricultural crops and livestock rearing, have several co-benefits, with an estimated economic potential of around 0.8 $GtCO_2$-eq per year at up to 100 USD per tCO_2-eq.

Unlike other sectors, the AFOLU sector generates non-CO_2 gases such as methane and nitrous oxide, whose global warming potential is higher than that of CO_2. Emerging technologies like vaccines or inhibitors have the potential to substantially increase the CH_4 mitigation potential beyond current estimates. Poor implementation of mitigation measures can however result in maladaptation with adverse consequences for biodiversity and ecosystems, water and food security, lives and livelihoods.

Barriers

The effective implementation of AFOLU mitigation measures can be inhibited by a wide range of factors. Here are some examples:

Socio-economic and cultural factors: Lack of resources and providing alternative incomes and livelihoods to rural communities who depend on forests, agriculture and other ecosystems are major constraints for implementing AFOLU mitigation measures. Poverty and rising inequality pose a big challenge for making agriculture climate-resilient. A study of climate change and rural poverty trends in India by the author noted that climate change will not only lead to a decline in crop yields but also aggravate poverty levels. In their NDCs, 82 parties to the United Nations Framework Convention on Climate Change (UNFCCC) cited poverty, inequality and other social issues as constraining the implementation of mitigation measures. Tradition and cultural values as well as local contexts can hamper efforts to shift to sustainable and healthy diets that have a low carbon footprint.

Governance and institutional factors: Weak governance, accountability and institutional barriers pose a challenge for implementing mitigation measures. Lack of property rights, insecure tenure, lack of participation of indigenous and marginalised communities in decision-making and governance failures at different levels can undermine incentives to increase productivity and incomes, and discourage the adoption of forest and farm conservation practices. Although climate-smart agriculture was promoted with a view to make agriculture sustainable and climate resilient, experience with climate-smart cocoa production in Ghana indicates that a lack of tree rights and other barriers discouraged cocoa growers from undertaking land improvement measures, which affected the successful implementation of the project (see Box).

Technological factors: Monitoring, reporting and verification is another barrier. There is need to improve methods to measure changes in tree and carbon density on site using satellite data. Monitoring and verification of soil carbon storage projects are difficult.

Ecological factors: Mitigation measures need to be carefully implemented by considering their likely impacts on biodiversity and ecosystem functioning, environmental quality, water and food security, livelihoods and human well-being. The loss of biodiversity and ecosystem services will affect the resilience of ecosystems to climate change and make them more vulnerable to natural disasters and weather-related climate extremes. Coastal afforestation can lead to re-acidification and damage aquatic biota.

Risks, trade-offs and synergies: There are risks, trade-offs and synergies with ecosystem services and the SDGs. Mitigation policies should try to minimise trade-offs and maximise synergies as well as consider scale and contexts. While mitigation measures such as reforestation and conservation of forests and other ecosystems may enhance biodiversity and ecosystem services, others, like large-scale deployment of bioenergy crops, may be detrimental to biodiversity, food and water security, livelihoods and rights of local and indigenous communities in areas where they compete with land used for food production and other livelihood activities.

Without accelerated mitigation the world will miss reaching the Paris global climate goals. If this happens, global GDP is likely to decline by 1.3-4.2 per cent by 2050, make us more vulnerable to natural disasters and weather-related climate extremes, and jeopardise achievement of the SDGs.

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References: **www.rural21.com**

Climate-smart cocoa production in Ghana

The climate-smart cocoa (CSC) production programme was introduced in Ghana in 2011 and implemented by Ghana's Forestry Commission and the national cocoa board (Cocobod) in partnership with the private sector (Touton) and NGO representatives (Nature Conservation Research Centre) with the aim of reducing cocoa-induced deforestation and GHG emissions and improving productivity, incomes and livelihoods of smallholder cocoa producers in the country. It brought all stakeholders together, i.e. the government, private sector, local farmers and civil society or NGOs, to facilitate the sustainable intensification of cocoa production. The creation of a community-based governance structure was expected to promote benefit sharing, forest conservation, adaptation to climate change and enhanced livelihood opportunities.

The programme involved distributing shade tree seedlings that can protect cocoa plants from heat and water stress, enhance soil organic matter and water holding capacity of soils, and provide other assistance with agroforestry, giving access to extension services such as agronomic information and agro-chemical inputs. The shade tree seedlings were distributed by NGOs, government extension agencies and the private sector free of charge or at subsidised prices, and were expected to reduce pressure on forests for growing cocoa plants. The CSC programme was mainly targeted at small farmers who constitute about 80 per cent of the total farm holdings in Ghana. Although the government extension agency undertook mass spraying or mass pruning of cocoa farms they found it difficult to access the 800,000 cocoa smallholders spread across the tropical south of the country.

Critical enablers

The role assigned to local government mechanisms such as Ghana's Community Resource Management Area Mechanisms (CREMAs) was expected to give a voice to smallholders, who are an important stakeholder in Ghana's cocoa sector. CREMAs are inclusive because authority and ownership of natural resources are devolved to local communities who can thus have a voice in influencing CSC policy, thereby ensuring equity and adapting CSC to local contexts. However, ensuring the long-term sustainability of CREMAs will help to make them a reliable mechanism for farmers to voice their concerns and aspirations, and ensure their independence as a legitimate governance structure in the long run. The private

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sector was assigned the important role of popularising climate-smart cocoa production in Ghana. However, whether this will work to the advantage of smallholder cocoa producers remains to be seen.

Critical barriers

The policy intervention overlooks the institutional constraints characteristic of the cocoa sector in Ghana, where small farmers are dominant and have skewed access to resources and markets. Lack of secure tenure (tree rights) where the ownership of shade trees and timber vests with the state as well as bureaucratic and legal hurdles to register trees in their cocoa farms are major constraints that impede the realisation of the expected benefits of the CSC programme. This is a great disincentive for small cocoa producers to implement CSC initiatives, nurture the shade tree seedlings and undertake land improvement measures.

The state marketing board has the monopoly in buying and marketing of cocoa beans including exports which impeded CREMAs or farming communities from directly selling their produce to multinational corporations (MNCs) and traders. However, many MNCs have been involved in setting up CREMAs or similar structures, extending premium prices and non-monetary benefits (access to credit, shade tree seedlings, agrochemicals) thus indirectly securing their cocoa supply chains. A biased ecological discourse about the benefits of climate-smart agriculture and sustainable intensive narrative, complexities regarding the optimal shade levels for growing cocoa and dependence on agrochemicals are issues that affect the success and sustainability of the project intervention. Dominance of private sector players, especially MNCs in the sector, may be detrimental to the interests of smallholder cocoa producers.

The example is based on the findings of a study entitled "Climate-smart Cocoa in Ghana: How ecological modernisation discourse risks side-lining cocoa smallholders" by F. Nasser et al., published in Frontiers in Sustainable Food Systems, Volume 4, Article 73, 2020, pp.1–17.

Evaluating collaboration between the private sector and development cooperation – how to prove the added value?

To achieve the Sustainable Development Goals (SDGs) by 2030, the international community increasingly relies on the private sector, both for mobilising additional finance and for project implementation. However, research by the German Institute for Development Evaluation has revealed that the quality of evaluations in the field is currently not sufficient to accurately assess the added value of private sector engagement.

By Valerie Habbel

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Increasingly, private sector companies are being involved in public sector development projects. Many of the projects and the instruments used seek to lower the risks that companies face when investing in developing or emerging countries, for example by providing them with a guarantee in case of project failure or with a grant that matches the company's investment. Development actors expect that this cooperation contributes to channelling more finance into the Global South while taking advantage of the innovation and creativity that is associated with the private sector. While this cooperation seems like a win-win situation, a closer look reveals potential downsides. Crucially, how do you ensure that private companies looking to invest in developing countries actually require the additional push provided by development finance? Some companies may have made the same investment either way, in which case public resources would have been more useful elsewhere.

Development actors regularly commission or carry out evaluations of their projects to understand what worked and what didn't. However, is the quality of these evaluations sufficient to justify the increasing use of public resources to engage the private sector in developing countries?

An evaluation synthesis by the German Institute for Development Evaluation (DEval) aimed at identifying the (intended and unintended) effects of private sector engagement and the conditions that are conducive or unfavourable to them, as well as assessing the quality of evaluations in the field. The quality assessment was also used to exclude evaluations and studies deemed inadequate to ensure that the findings of the synthesis were based on reliable evidence. A total of 75 evaluations and studies from international and national actors in development cooperation were assessed using nine indicators that are based on recognised evaluation standards by the Organisation for Economic Cooperation and Development (OECD) and the German Evaluation Society (DeGEval). The indicators ranged from descriptive aspects, such as whether the evaluations describe their data sources and evaluation questions, to more complex issues such as whether they justify their choice of methods. Only evaluations and studies that exceeded the threshold of 60 per cent of the best possible rating were included in the synthesis.

The quality of evaluations differs widely between actors

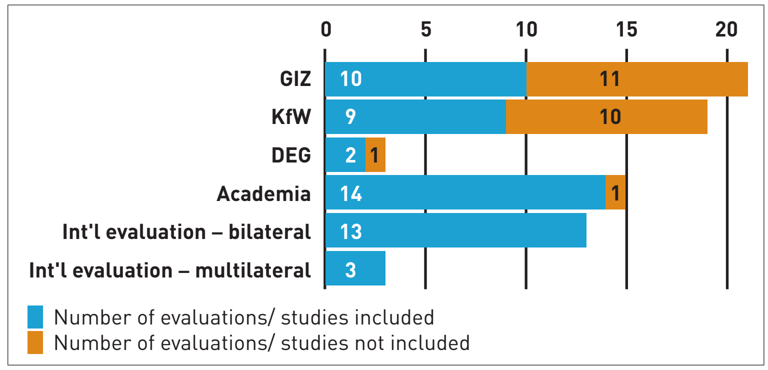
Out of 75 assessed publications, only 51 were deemed reliable enough to be included in the synthesis. While almost all evaluations by international donors/ agencies and academic studies were included, only around half of evaluations by GIZ and KfW made the cut *(see Figure)*.

Generally, both evaluations and studies score well reporting on descriptive aspects: most contain a description of the subject of the evaluation, its area of inquiry, sources of information and the procedural steps specified for carrying out the evaluation or study. However, only few evaluations discuss the appropriateness and limitations of the methods they used or relate their findings and conclusions to the underlying data and data analysis. This limits the transparency of their findings.

Outcomes and impacts are usually estimated rather than measured

Most projects in international development use a Theory of Change, a methodology that can be applied both to plan a new project and to evaluate it later on. It explains the process of change by outlining the causal pathways between inputs and expected effects on different levels: outputs, outcomes and impact. While outputs are the products, goods and services that result from an intervention, outcomes are the short- and medium-term effects, such as participants' increased knowledge in a certain area. The impact refers to the long-term effects, such as better employment opportunities.

To measure the success of a project, the expected effects are generally operationalised through indicators at the planning stage (e. g. 50 trainings carried out by end of 2020), and the completion of these targets is then used in the evaluation to assess the effectiveness of the project. The evaluation synthesis found that in most evaluations, outputs are operationalised well by indicators which are then reported on in the evaluations. However, almost half of the evaluations do not include any indicators at the outcome or impact level, which means that they have no measurable basis for statements regarding medium- and long-term effects.



Worse, in a few cases, indicators are designated as outcome indicators, but more properly relate to the output level, which could lead to unfounded claims of wider-reaching effects.

Instead of measurable indicators, claims regarding outcomes and impacts are often based on estimates. While estimation models can be useful tools, for example when precise measurements of the impact of an intervention on the economic development of a country or sector are not possible, the underlying indicators and assumptions of these models are not always made transparent to the reader. In addition, both estimates and measurements are prone to "over-reporting" of effects: for instance, an estimate of new jobs created as a result of a project usually does not consider whether these job gains were at the expense of competing companies that might have lost jobs.

Another difficulty with measuring impact is the attribution to the specific intervention – even if new jobs were created at a company, for instance, how do you know whether these are due to the intervention or external factors such as an economic upswing? To answer this question with certainty, a rigorous impact evaluation (RIE) is necessary, where participants (in this case companies) are randomly assigned to an intervention and a control group. Evidence on various metrics such as the turnover of the companies would be collected before and after the intervention. While the metrics might change over time in both groups, changes should be greater in the intervention than in the control group if the intervention had an impact. Although RIEs provide the highest degree of certainty for attributing changes to an intervention, they are often not feasible. One challenge is the random allocation of participants: companies usually apply for funding and are selected based on specific criteria rather than randomly. RIEs also tend to be rather cost- and time-intensive.

Additionality often not considered

Let's say a private company receives funding from the German government to provide trainings to its agricultural partners in a partner country to improve the quality of its imports. An evaluation using a rigorous design might then conclude that the farmers' standard of living has significantly improved as a result of the intervention and the project would be considered a success. However, what if it later emerged that the company was planning to do the same training even without the public funding, using only its own resources? In that case, even though the project had an impact, the public funding would have not been used effectively, and financial additionality (see Box) would be lacking.

This example highlights the importance of examining additionality, particularly in projects that engage the private sector, where there is the possibility of deadweight effects. It is also clear that additionality needs to be considered at different stages of the project cycle: at the very least at inception, to ensure that only projects that are additional are funded in the first place, and during the evaluation, to understand whether the assumptions made regarding additionality at the beginning actually materialised.

Despite the importance of additionality, the evaluation synthesis by DEval found that most evaluations or studies (35 out of 51) do not even discuss additionality, let alone use a systematic approach to assess it. Where additionality is discussed at all, it is mainly from an ex-post perspective. This makes it problematic to assess the degree of additionality that existed at the beginning of the project or instrument, and how this might have changed during project implementation. Some evaluations and studies also report having no suitable evidence base on which to assess the additionality of the respective project or instrument.

The way forward for evaluating projects that involve the private sector

The scarcity of public resources that are available to close the financing gap is often cited as a reason for increasingly engaging the private sector to achieve development objectives. However, this argument only holds if the private sector contributes additional resources to stretch public resources further, and if these actually contribute to the objectives set. But how do we know whether this is actually the case? At the moment, evaluations and – in some cases – academic studies are the only evidence policy-makers have to assess these claims. To justify the use of public resources for private sector engagements, evaluations therefore need to provide convincing evidence on the additionality and impact of interventions.

As this article has outlined, evaluations do a good job in some regards, usually providing the required descriptive information on the project as well as quantitative information on output indicators. However, the evidence on outcomes and impact is much more vague, often based on non-transparent estimates and assumption. In addition, additionality is not even discussed in most evaluations. We recommend that development actors such as GIZ and KfW in Germany improve the evidence basis on private sector engagement by, among other things, systematically examining additionality both when new instruments or projects are created and when they are evaluated, as well as by improving the assessment of impact by explicitly measuring it for projects of high relevance; other evaluations may use theory-based approaches or estimation models if they set out from transparent assumptions and indicators.

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Additionality
The Organisation for Economic Co-operation and Development (OECD) makes a distinction between financial and development additionality. An official investment is defined as financially additional when it supports a company that is unable, without public support, to obtain financing of a similar amount or on similar terms from local or international private capital markets, or when it mobilises investments from the private sector which would otherwise not have been invested. Development additionality, on the other hand, is defined as the development impact resulting from the investments which would otherwise not have occurred. Especially in relation to private sector engagement, the review of additionality is of key importance when drawing conclusions about the efficiency or cost-effectiveness of projects and instruments, since there is a risk that public funding might finance activities that the private sector would have financed anyway, even without the subsidy component.