

approved by an ethical or institutional review board (IRB). All researchers and institutions should follow this approach, and also ensure that IRBs – or peer-review panels in cases in which no IRB exists – have the expertise to examine potentially risky AI research. And scientists using large data sets containing data from people must find ways to obtain consent.

Fearmongering narratives about existential risks are not constructive. Serious discussion about actual risks, and action to contain them, are. The sooner humanity establishes its rules of engagement with AI, the sooner we can learn to live in harmony with the technology.

Extreme poverty can be eradicated

To improve millions of lives, find better measures of what constitutes poverty.

By 2030, says the World Bank, something like 574 million people will be living in extreme poverty. That is equivalent to the combined population of the European Union and Japan. The United Nations has a Sustainable Development Goal (SDG) to eradicate extreme poverty by 2030; this was always ambitious, even when policymakers and researchers set the SDGs in 2015. It is now unattainable.

The past few years have bucked a positive trend. Back in 1990, almost two billion people were living under the extreme-poverty line, which the World Bank currently defines as an income of no more than US\$2.15 a day at 2017 prices. By 2015, there were fewer than 700 million. Had that trend continued, extreme poverty would have been eliminated by, and possibly before, the SDG target.

But the trend had started to slow by 2020, and the COVID-19 pandemic reversed it, forcing an extra 75 million people below the extreme-poverty line. And the pandemic wasn't the only factor. Soaring food and energy costs after Russia's invasion of Ukraine, ongoing conflicts and, increasingly, the effects of climate change have all played a part. Extreme poverty is starting to decline again, but it will take until 2024 to return to 2019 levels. A rethink in approach is clearly needed – and researchers can get involved.

The World Bank, headquartered in Washington DC, is one of the go-to agencies for both measuring poverty and prescribing solutions to end it. Some 80% of people who escaped poverty between 1993 and 2017 were in China and India – countries that posted impressive economic growth figures for that period. The bank says that, similarly, economic expansion in the countries that now have the highest numbers of people in extreme poverty – most of which are in sub-Saharan Africa – would help them to follow China and India's lead.



By one measure, some 1.2 billion people worldwide are living in acute poverty.”

Some researchers doubt that economic growth automatically leads to reductions in extreme poverty, saying that it often coincides with widening income inequality. But even if we accept the World Bank's premise, economic growth rates across Africa have consistently been much lower than in China and India, and on current trends they will remain so. That poses the question: what other levers can countries pull to improve the lives of hundreds of millions of people?

One answer was established in many now-high-income countries that were rebuilding after the Second World War. A number of countries in Western Europe, for example, established basic social and health-care protections at a time when many nations were dependent on aid from the United States. The principle that these protections help people to escape extreme poverty is just as valid today, and applying it would help countries to build resilience to shocks such as pandemics and climate change.

Counting the cost

Even more fundamentally, researchers are advocating a rethink of how poverty is measured. One problem with using an income-based measure is that it excludes people who are earning more than \$2.15 a day but are still unable to fulfil their basic human needs.

In 2010, researchers at the University of Oxford, UK, working with the UN Development Programme (UNDP), created the Multidimensional Poverty Index (MPI; see go.nature.com/3jy2srm). It is an estimate of the number of households facing deprivation when measured by ten basic indicators, including adequate housing, child mortality, clean water, sanitation, cooking facilities and an electricity supply. By this measure, some 1.2 billion people worldwide are living in acute poverty, almost 580 million of whom are in sub-Saharan Africa. The global figure is nearly double that calculated on the basis of income. The UN currently uses the MPI to track progress towards another SDG target: reducing by half the proportion of people experiencing poverty in all its dimensions.

In 2018, inspired by the MPI, the World Bank created the Multidimensional Poverty Measure (MPM; see go.nature.com/3nmhmwh). This assesses the number of households facing deprivation in five dimensions (educational attainment and enrolment, and access to electricity, sanitation and drinking water). But unlike the MPI, the MPM also includes the percentage of households living on less than \$2.15 a day.

There are some gaps in the data. Some countries do not provide researchers with access to the relevant data; in others, access is possible but there are few on-the-ground resources to collect the information. But where indicators of multidimensional poverty exist, they provide a nuanced picture and help countries to target interventions.

Researchers who study poverty, and development agencies such as the UNDP, agree that a multidimensional index ought to replace a simpler income-based measure. This September, world leaders will gather in New York City to take stock of the SDGs. One of their tasks must be to continue to nudge the World Bank to make this change happen.