

How science can put the Sustainable Development Goals back on track

The COVID-19 pandemic has disrupted the United Nations' flagship plan to end poverty and protect the environment. Researchers need to launch a rapid response.

In October, United Nations secretary-general António Guterres made a series of key appointments. He tasked 15 scientists from around the world with providing policymakers with evidence, as well as their thoughts, on the Sustainable Development Goals (SDGs).

This time last year, the UN's flagship plan to end poverty and guide the world to environmental sustainability by 2030 was already off track. Since then, the pandemic has reversed most of the achievements made in the five years since countries adopted the goals.

The World Food Programme estimates that 270 million people are now at risk of starvation: double the number before the pandemic. And school closures resulting from lockdowns have set back one of the few SDGs that were within reach before the pandemic – the goal to achieve universal primary education. In December, the UN's science and cultural organization UNESCO estimated that some 320 million children were out of school, an increase of 90 million in just one month.

In the 3 months from 1 April last year, working hours equivalent to 495 million full-time jobs were lost to lockdowns around the world, according to the International Labour Organization. And in October, the International Monetary Fund projected that the world economy would contract by more than 4% by the end of 2020, a decrease on a scale not seen in generations.

This is the situation facing the researchers whom Guterres has tasked with researching and writing the second UN Global Sustainable Development Report (GSDR) – the first was published in 2019. They have been drawn from all over the world and span a range of disciplines, including climate change, ecology, environmental economics, ethics, health policy, infectious diseases, oceanography, the governance of international organizations and the study of science and development.

For this editorial, *Nature* spoke to individual researchers, government and UN officials, and campaigners from high- and low-income countries. Our advice for the report's authors and for the UN – considering the state of the pandemic and the halting progress made towards the goals so far – is twofold. First, the authors need to work



The UN goals to provide jobs and universal education are under threat.

MANISH SWARUP/AP/SHUTTERSTOCK

fast – faster than the three-year timeline they have been allocated. Second, they must reach out beyond their usual expert networks as early as possible in the evidence-gathering process and, in particular, look for innovative ways to involve under-represented communities.

The GSDR's three-year timetable from commissioning to publication is excessive, considering the urgent need for advice on achieving the SDGs. One way to a shorter timetable is for the UN to commit to releasing an interim or work-in-progress document before the end of this year. That could then be circulated and feedback could be gathered by governments, UN agencies and the many organizations involved in implementing the goals, and this input could be incorporated into an amended second draft.

Producing the document in such a way would generate and maintain interest and momentum, but also provide a means of ensuring greater inclusion. Making the process inclusive is as important as the final outcome. Worldwide, there are many thousands of organizations – including those focused on research and education, companies and civil-society groups – that have volunteered to create their own plans for achieving the SDGs and which are themselves trying to evaluate the pandemic's impact on their plans. An interim report would allow them to provide feedback. This should not be difficult to organize: the pandemic has shown how easy it is to have video meetings with people from around the world.

The research team will be reporting to the UN Department of Economic and Social Affairs, based in New York City, which has responsibility for tracking the progress of the SDGs and managing the GSDR. But it is essential that the team also works closely with the individual UN agencies that have responsibility for particular SDGs.

The importance of this partnership between research

and action cannot be overstated. At present, UN organizations such as the children's charity UNICEF and the World Food Programme are operating in emergency mode. Research often suffers when budgets are stretched and personnel have to be redeployed – in this case to more pandemic-facing roles. But these organizations still need research. They still need to be able to draw on people who have the time to think and gather evidence; people with the time to reflect on that knowledge before providing advice and answering questions from their colleagues on the front-line, and from policymakers and colleagues in other roles.

Such hands-on research will not be for the GSDR authors to do, but they could help UN agencies and countries to think about how to meet their research needs during the pandemic. Researchers need to test different strategies to help children whose families lack access to smartphones, laptops and broadband. They need to study the effect the pandemic is having on health systems. And, as governments rush to revive economic growth, there is a mountain of research to be done on the pandemic's economic impact and on how to make recovery as green as possible. The SDGs will not be met unless research can shine a light on these and other issues.

The UN and its science advisers – on the SDGs especially – need to work at speed, and involve under-represented communities, all of which will require extra resources, including more people and more funding. Without this, it's not realistic to expect them to work differently. But business as usual is not an option. Continued research will be needed to support action to end the current crisis and get onto a pathway to greater well-being and, eventually, prosperity and environmental sustainability. The UN's science advisers have been given a bigger responsibility than many are ever likely to face. Everyone must be ready to work with them and help them succeed.

Find a naming system for coronavirus variants

Geographic associations risk stigma. Researchers must quickly agree on a more meaningful and universal nomenclature.

Earlier this month, the World Health Organization (WHO) convened a meeting at which, among other things, experts discussed guidelines for naming variants of the coronavirus (see page 339). The need is urgent, because there's no agreed naming system. Until one can be established, researchers are developing their own nomenclature. At the same time, media organizations and policymakers

“**Publications and policymakers should avoid using names with geographical elements.”**

around the world are filling the void by naming coronavirus variants according to the places where the first cases were identified. Such a practice is understandable in the middle of a pandemic, when new data are continually emerging and need to be communicated quickly. But connecting viruses to identifiable places also carries dangers, one of which is the risk of stigmatizing people (see *Nature* 580, 165; 2020). The absence of an agreed system also prevents consistency in naming, which is a hindrance for researchers, such as those who study the transmission of virus variants.

It is only six years since the WHO introduced guidelines to end a previous practice of associating viral diseases with the landscapes, regions, people or cultures where the first outbreaks occurred – a habit that resulted in names such as Middle East respiratory syndrome, or Zika virus, named after a forest in Uganda. These guidelines were intended to protect people from the erroneous suggestion that their region somehow caused a virus, and to reinforce that everyone is at risk from an outbreak, irrespective of where they come from. But these guidelines do not refer to variants – only to the naming of new human infectious diseases.

Patchwork system

Agreed-on nomenclature does exist for the different varieties of other viruses, such as influenza, but not yet for SARS-CoV-2. In its absence, various naming conventions are proliferating. For example, the team that identified one variant in South Africa named it 501Y.V2, after a substitution in the 501st amino acid site of the virus's spike protein. By contrast, Public Health England is calling a variant identified late last year VOC 202012/01 – in which VOC stands for 'variant of concern', and the numbers include a reference to the month and year of discovery. Other groups are using the name B.1.1.7 for the same variant; this label comes from a classification system based on the evolutionary relationships of viruses. The situation is confusing. These names are not only conflicting, but almost impossible for non-specialists to follow.

Those who are discussing a standardized nomenclature must work quickly, as more variants continue to be discovered. At the same time, publications and policymakers should, as much as possible, avoid using names with geographical elements – such as 'UK variant' or 'South African variant'. It is more informative to use a construction that describes where the virus was identified and includes one of the scientific names. For example: 'a variant called B.1.1.7, which was identified in the United Kingdom in late 2020'. The scientific name can be used alone thereafter.

More coronavirus variants are likely to be found in the coming weeks and months – by the middle of 2020, there were more than 35,000 complete or near-complete genome sequences of the coronavirus, and the number continues to grow. An agreed nomenclature will both stop the use of place-based names and provide researchers such as epidemiologists with the commonly agreed labels that they are keenly awaiting.