Unfortunately, these efforts are failing, at least on the broad scale.

Even though high-profile programmes have distributed millions of stoves to households in south Asia, Africa and Latin America, it is hard to find signs that the stoves are being widely used. There is a vast gap between reported accomplishments and what researchers see when they step into people's homes.

The crux of the problem is that simply supplying the stoves does not establish demand for them.

As a News Feature reports on page 548, women often complain that the stoves do not meet their needs. Some designs require wood to be chopped up into small pieces, thereby creating extra work; others do not burn hot enough, break easily or are too small or too expensive. Cooks from Bolivia to Bangladesh will use the stoves only if the devices make their lives easier. Too often, this is not the case, so the stoves get set aside — or are modified to work more like the traditional, pollution-producing stoves.

The downbeat assessment will not be popular with those who distribute the devices, such as the Global Alliance for Clean Cookstoves, a coalition based in Washington DC. But it should not come as a big surprise. In 2012, a report by the Massachusetts Institute of Technology in Cambridge, called *Up in Smoke*, found no long-term improvement in pulmonary health or in fuel savings among villagers who had received the stoves, mainly because people had abandoned the devices.

The alliance countered that the stoves just need to be adapted to meet local needs and that users need more training. The perpetual claim is that the biomass stove of people's dreams is just around the corner.

But some researchers looking at the health effects of cooking fires say that it is time for a fundamental shift in strategy — one that moves people away from burning biomass entirely.

Efforts could be redirected to providing people with the energy they most aspire to: not a stove designed by someone in the developed world to cook cleaner, but the actual stoves used in the developed world, which run on electricity or hydrocarbons such as liquefied petroleum gas (LPG).

"It is time for a fundamental shift in strategy — one that moves people away from burning biomass entirely."

This is not an absurd goal. The International Energy Agency (IEA) estimates that bringing electricity and clean-cooking facilities to every person on Earth by 2030 will cost US$49 billion a year. Although that is a considerable sum, the agency points to major commitments by Indonesia, Ghana and Nigeria to aggressively switch large portions of their population to cooking with LPG.

Where will all this new energy come from? It will require some additional consumption of fossil fuels, and that will increase the emissions of carbon dioxide into the atmosphere. But the extra pollution would be minimal at the global scale: the IEA estimates that it would boost CO_2 emissions by just 0.7% above its base scenario.

Renewable sources should be able to supply a major fraction of the needed energy: electrical micro-grids that use agricultural waste, solar cells or wind turbines to provide energy are popping up, for instance. Clean-cooking programmes have an enduring appeal, just not for their intended users. It is time to rethink the approach. ■

ANNOUNCEMENT

Welcome, *Scientific Data*!

Everybody is talking about data. Experimental scientists live and breathe data. Theorists are challenged by data. Funders are wondering how to make the data produced with their support more accessible without stretching their budgets. Research communities are seeking new data repositories, and standards to support them. And scientific publishers are wondering how to host data and provide quality control.

Scientific Data is a new journal, launched by *Nature*'s publishers this week, that will help to address some of these challenges. By publishing formal descriptions of data sets — Data Descriptors, the publication's main article type — it will render the data more visible and give originators explicit credit for those data, rather than for the papers that use them. The journal is peer-reviewed and online-only. Authors pay a charge on publication: this ensures that the final, published versions of their contributions to the journal are immediately freely accessible to all. The content is licensed under one of three Creative Commons licences, and machine-readable metadata are released with every article to maximize reuse.

To quote *Scientific Data*'s launch editorial: "The question is no longer whether research data should be shared, but how to make effective data sharing a common and well-rewarded part of research culture". When it is feasible to do so, many journals, including all those in the *Nature* family, have long insisted that data are deposited in repositories where available, before publication. For other areas of research, we at *Nature* have significantly increased the figure limits in our papers. In *Nature Protocols*, there is a place for more-specific methods descriptions than is conventional in scientific papers.

Now, in *Scientific Data*, there is space for researchers to formally describe a data set and the techniques used to derive it, and to refer readers to research papers that have already incorporated the data.

Crucially, the journal's descriptors, being peer-reviewed and citable, provide a way to assign credit to the originators of reusable data sets. In other words, the delivery and sharing of data becomes as credit-worthy, in principle, as publishing conventional research papers. It is important that the assessment of research and reward of researchers does more justice to this essential component of science.

The journal's first publications include articles describing previously unpublished data sets — demonstrations that *Scientific Data* can help to motivate scientists to share valuable data. The journal's editors highlight work by Zengchao Hao and colleagues detailing data sets that track drought around the world (Z. Hao *et al. Sci. Data* http://doi.org/sww; 2014). Using the Data Descriptor, anyone can download the data, generate their own maps (past or future) for any area of the world and even use the authors' source code to recalculate the drought metrics.

Another article, by Graham Edgar and Rick Stuart-Smith, provides an example of a Data Descriptor that builds on previous publications (G. J. Edgar and R. D. Stuart-Smith *Sci. Data* http://doi.org/sxv; 2014). It is based around the data produced by the Reef Life Survey, a citizen-science project that uses volunteer divers to help to survey biodiversity on the world's reefs. Analyses of these data, which are relevant to our understanding of reef ecology and to conservation, have been published in a number of research papers. The data are given in full in the Data Descriptor, along with the authors' descriptions of the survey procedures and data standardization — crucial information for other scientists interested in using these data.

Beyond its significance for data buffs, the journal is a further step in Nature Publishing Group's drive to enhance research reproducibility. The more researchers take steps to make their data available and discoverable, the more a core principle of science — that others can replicate the work — can be fulfilled, in an era in which such replication is often beset by obstacles. For that reason alone, we at *Nature* welcome *Scientific Data*. ■