

How 'scientific' are the Millennium Development Goals?

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Last week, world leaders reconfirmed their commitment to meeting the UN Millennium Development Goals, increasing the need for the goals to be grounded in both scientific and political reality.

In the late 1990s, aid officials — keen to revive the global fight against poverty — came up with a novel strategy. They proposed to both developed and developing countries that, rather than vague commitments in health, food production and primary education, it would be more effective to have a clear set of quantified objectives that governments could aim to achieve within a set timeframe.

This strategy resulted in the adoption at a UN summit in 2000, of the eight Millennium Development Goals (MDGs). Each of these embodies a set of targets that, if achieved, could in principle go far towards eliminating poverty and social deprivation on a global scale. Last week, at a follow-up meeting at the UN headquarters, world leaders confirmed their earlier support for this strategy and pledged to continue to pursue it.



In operational terms, the strategy has proved to be a successful way of bringing greater focus to the aid policies of developed countries, as well as the domestic social and economic policies within the developing world itself.

In many of the former, aid projects are frequently required to show — or at least express — how they are likely to contribute to achieving the MDGs, and viewed with some scepticism if they fail to do so convincingly. Within developing countries, indicators of progress towards the MDGs are taken as a broader measure of political achievement, a critical step at a time when governments are being pushed to prove to donor governments and agencies the effectiveness of their social development efforts.

But how 'scientific' are the MDGs? Or, to put it another way, is the development community being too complacent about the basis on which some of the goals — such as the pledge to "halt and reverse the incidence of malaria and other major diseases" — have been defined?

Dangerous implications?

These provocative questions have recently been raised by Amir Attaran, a prominent analyst of development policy at the University of Ottawa in Canada. In a stinging critique in the current issue of *PloS Medicine*, Attaran claims that the way the goals are being discussed disguises the significant uncertainty that surrounds the way that both the goals themselves —

and thus achievement towards reaching them — can be measured. And he argues that this has potentially dangerous implications (see Progress on UN development goals 'can't be measured').

Attaran accepts that this is not necessarily true of all of the MDGs. He points out, for example, that since children's deaths tend to be recorded accurately in most countries, trends based on those statistics are likely to be reliable. The goal of reducing the mortality rate among children under the age of five years is therefore a credible one.

Other cases, however, are far less clear-cut. In his discussion of the malaria targets, for example, Attaran points out that difficulties in obtaining reliable data on the current extent of the disease is such that even official agencies such as the World Health Organization admit that they cannot be confident about any particular set of figures. Despite this, the MDGs continue to list a reduction in malaria incidence as one of the top health targets.

By placing such emphasis on dubious figures, Attaran argues, the UN is building its MDG house on sand. He castigates UN officials who appear to argue that the robustness of the figures is not particularly important, as they are only intended to be indicative. And he even suggests that the UN itself is in danger of destroying its credibility by placing too much faith in statistics that may later prove to be bogus.

Significant truths

Not surprisingly, Attaran's critique has generated a strong response from some of those who have helped to turn the MDGs into an article of faith within the development community. In comments posted on this website, the economist Jeffrey Sachs, director of Columbia University's Earth Institute in New York, and two of his colleagues on the UN Millennium Project, John McArthur and Guido Schmidt-Traub, provide a vigorous response (for the full exchange, see 'The Millennium Development Goals: how close are we?').

While acknowledging that some of Attaran's criticisms are valid — for example, they accept that data for some of the goals are poor — they also suggest that he has overstated his case. Furthermore, they argue that, by focusing on the scientific uncertainties that surround the way that the MDGs are expressed, Attaran is underestimating their political value.

Implicit in this argument is the suggestion that, whether or not they are scientifically valid, the MDGs have already proved their worth as a way of helping to increase both the amount and the effectiveness of international development assistance.

As in most such instances, however, there are merits in both sets of arguments. Sachs and colleagues are correct to suggest that there are times when political action is appropriate even in the absence of scientific certainty. After all, what matters is not the precise figure reached; even reducing the incidence of infant mortality in Africa by half, rather than two-thirds, by 2015 would be a major achievement.

In other words, it is important not to become obsessed with quantifiable targets. As development expert Calestous Juma has pointed out, the physicist Albert Einstein once said: "Not everything that can be counted counts, and not everything that counts can be counted".

Overemphasising scientific accuracy can have the same dampening effect on political initiatives as dressing up development goals in jargon that means little to non-specialists (see

Simpler words are needed to get MDG message across).

But Attaran (whose full response to the criticisms by Sachs and his colleagues is also posted on

this website) makes an important point when he warns that a lack of robustness could be storing up problems for the future. Too often a lack of scientific clarity reflects a lack of scientific understanding. And this in turn can encourage short-term solutions to problems that could persist if insufficient attention is paid to their root cause.

A double goal

There is an analogy here with the treatment of HIV/AIDS. Treating the symptoms of the disease, as many acknowledge can be done with traditional remedies, can undoubtedly make life more bearable for those who are affected. But it is not the same as fighting the disease itself, which needs a proper understanding of the nature of the virus, and its effects on the human immune system. Furthermore, believing that a patient has been 'cured', when the symptoms have been suppressed but the infection remains, may only accelerate the spread of the disease.

The analogy also carries an important implication for the pursuit of the MDGs themselves (as well as the limitations of some current strategies being promoted). The danger is that, by expressing development targets in a highly instrumental and relatively short-term way, insufficient attention could be paid to the longer-term developments that are essential if social and economic development is to be achieved. High among these is the need to build a basic capacity in science and technology. This need has already been highlighted in the work of the UN Millennium Project, which is headed by Sachs, and that of its task force on science, technology and innovation. (see Science advice 'essential' to meet development goals). It was also featured in the final statement issued by last week's meeting, which described science and technology as "vital" for achieving the development goals.

What is essential is that development strategies are described in a way that make them both scientifically and politically achievable. Attaran's arguments about the need for greater scientific robustness must be taken seriously if the pursuit of MDGs is not to be diverted down unproductive paths. It was unfortunate that, in the political turmoil created by the efforts needed at last week's UN summit to keep the MDG ship afloat, no time was found to discuss the need to reassess the viability of the way the goals are expressed.

At the same time, greater effort still needs to be put into bridging the gap between the way in which the MDGs are expressed, with their emphasis on relatively short-term objectives, and the language of long-term goals (and potentially fuzzy outcomes) in which discussion about long-term investment in science and technology capacity is inevitably expressed. As UN officials start to look towards the next review conference, due to take place in 2010, this issue requires a high place on the agenda.

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