

Nations set eight goals in 2000 to end poverty and hunger and to spur sustainable development. The target date for completion of these Millennium Development Goals (MDG) is 2015, but what will follow?

Arguably the most significant outcome of the UN's Rio+20 summit last year was an agreement to set universal Sustainable Development Goals (SDG) for all nations. While the process remains complex, it is on track for the SDGs to replace MDGs.

The MDGs were not legally binding. But they were clear and simple. By creating an agreed list of priority areas, the goals and underlying targets helped channel development aid.

With two years left to go, the MDGs have already scored notable achievements. In 1990, an estimated 12 million children under the age of 5 died each year. By 2011, this estimate was down to 7 million. Likewise, the goal to halve the number of people living on less than \$1.25 (USD) a day has been met ahead of schedule. However, it is arguable this would have been achieved regardless because of China's rapid economic development.

Some areas, though, received less attention. Only one MDG explicitly tackled the environment, and environmental considerations were not embedded across the other goals.

Let's spin back to 2000 again. In the year nations created history by setting MDGs, Nobel Laureate Paul Crutzen created a stir at IGBP's scientific committee meeting in Cuernavaca (Mexico) by declaring that we'd exited the Holocene and entered the Anthropocene.

In a single word, the Anthropocene captures humanity as the prime driver of change within Earth's life support system. It captures a profound level of interconnectivity between societies through trade



and communications that amplify our environmental impacts. And it captures a new collective responsibility for the changes we are making to the Earth system.

The Anthropocene has implications for SDGs: the interconnections between social, environmental and economic spheres must be considered for the formulation of the goals and their underlying targets and indicators, but how does science engage with this process and at what level?

Many avenues are available for experts to have input. For example,

a recent IGBP-supported commentary in *Nature*, "Sustainable development goals for people and planet" has been presented to the UN working group set up to oversee the SDG process.

In the past year, I've attended workshops organised by the UN's Environment Programme (UNEP) to look at options for how the environment could be incorporated in SDGs (see news, p. 4). We concluded that where appropriate, goals and targets should be integrated to include social, environmental and economic dimensions and at the same time designed to avoid conflicts between goals and targets. Furthermore, targets must be scientifically credible and verifiable, and they must be formulated to break the links between socio-economic development and unsustainable resource use, for example, by promoting efficiency.

We must accept that these challenges are huge. The UNEP workshop I will attend in November is one step towards identifying environmental priorities that fulfill these criteria.

Ultimately, the SDGs could become one of the most significant international policy developments in recent years. If properly formulated, the goals have the potential to add up to genuine long-term sustainability. This is a goal worth aiming towards. ■

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