

Development opportunity

Achievement of the United Nations' Millennium Development Goals is by no means guaranteed, but there is heartening progress in the promotion of science for development.

In November 2007, *Nature Physics* joined the 'global theme issue' on poverty and human development, organized by the Council of Science Editors: simultaneously, more than 200 scientific journals worldwide dedicated their issue or part of their content to the theme of the Millennium Development Goals (MDGs) set by the United Nations. Three years on, and following a recent United Nations summit to review progress on the MDGs, we are once again considering the progress of science — research and education — in the developing world, as explored in two Commentary articles in this issue (page 828 and 830).

The first of these articles, by Gordon Fraser, marks the passing of 50 years since Pakistani physicist Abdus Salam set about establishing a world centre for theoretical physics in Trieste, Italy. Having first-hand experience, Salam understood well the difficulties facing researchers in developing countries, difficulties that so often resulted in a tough decision: emigrate or quit. Backed by the UN's International Atomic Energy Agency, he created the International Centre for Theoretical Physics (ICTP) as an "intellectual oasis" for scientists from the developing world, which would fuel their success on returning to their home countries. Fifty years on, Salam's ICTP is evolving, as Fraser explains, to meet the challenges of science today.

In their Commentary, Nithaya Chetty, Richard M. Martin and Sandro Scandolo report the success of the first African School on Electronic Structure Methods and Applications (ASESMA), held in Cape



Abdus Salam opens the inaugural seminar at the International Centre for Theoretical Physics in 1964.

Town earlier this year. While noting the huge value of overseas programmes such as that of the ICTP — "a home away from home" for African researchers, they say — Chetty, Martin and Scandolo promote the benefits of a scheme that is run in Africa itself, making good use of visiting international expertise to nucleate a sustainable research community across the continent.

Both the future plans of the ICTP and the development of the African materials research community are predicated on the availability of computer power and the opportunities that it brings. With a good network connection, any group of scientists around the world has the possibility of making significant, meaningful contributions at the very forefront of research. And that research may be — as is the case for materials science in Africa — relevant particularly to the country concerned, the basis of future technological and industrial development.

The MDGs were set out in 2000, to be achieved by 2015. The latest summit, in late September, noted many positive steps that have been taken but also expressed concern over slow and uneven progress (<http://www.un.org/en/mdg/summit2010/>). Although the summit concluded that the goals "remain achievable", it is clear that some countries

are very unlikely to meet them. Moreover, the financial crisis that has engulfed the developed world is having significant impact everywhere, hitting Africa hard in particular, and "threatens to seriously undermine" the timetable for achieving the MDGs.

However, the effort continues, and significant commitments were made at September's summit. Among the contributions recorded from individual nations and organizations such as the World Bank were pledges from businesses, some specifically targeted at information technology: Dell will give US\$10m for technology for education this year; Ericsson is a partner in 'Connect to learn', a non-profit global initiative to improve access to education, including through broadband technology; and Monster.com will promote employment for young people in rural India, by expanding access to an internet job portal across nine states.

Straightforward financial aid is vital to many of the least-developed nations. But the success of projects such as the ICTP and the ASESMA demonstrates indisputably the value of other kinds of investment. The training of scientists around the world, although not explicit in the MDGs, certainly underpins a sustainable, secure future for all. □

Millennium Development Goals

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Global partnership for development