



## MOBILIZING SCIENCE AND TECHNOLOGY TO ADDRESS THE PROBLEMS OF THE WORLD'S POOR

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Writing in *The Economist* of 15 February this year, Prof. Sachs raised several points that are relevant to any discussion of technical co-operation for sustainable development. He urges a stronger emphasis on the transfer of appropriate technology, and supports expanded roles for United Nations organizations in helping to solve the problems of the world's poorest countries. Here are some excerpts:

"A(n)...important challenge, as yet mainly unrecognised, is that of mobilising global science and technology to address the crises of public health, agricultural productivity, environmental degradation and demographic stress confronting these countries (i.e., the 42 so-called Highly Indebted Poor Countries — HIPCs, *ed.*) In part this will require that the wealthy governments enable the grossly underfinanced and underempowered United Nations institutions to become vibrant and active partners of human development."

"The conditions in many HIPCs are worsening dramatically, even as global science and technology create new surges of wealth and well-being in richer countries. The problem is that, for myriad reasons, the technological gains in wealthy countries do not readily diffuse to the poorest ones....Research and development of new technologies are overwhelmingly directed at rich-country problems. *To the extent that the poor face distinctive challenges, science and technology must be directed purposefully towards them* (emphasis added). In today's global set-up, that rarely happens....Currently, the international system fails to meet the technological needs of the world's poorest."

Prof. Sachs has been one of the few development economists to consistently remind us that most of the world's poor live under vastly different environmental conditions — mainly tropical climates with their often unique disease agents and agricultural factors — than most of the rich. He points out that sustainable development is not possible unless the underlying ecological constraints are removed or mitigated, yet most R&D is conducted by rich countries and focused on rich-country problems, not on tropical agriculture and medicine.

"If it were true that the poor were just like the rich but with less money, the global situation would be vastly easier than it is. As it happens, the poor live in different ecological zones, face different health conditions and must overcome agronomic limitations that are very different from those of rich countries. Those differences, indeed, are often a fundamental cause of persisting poverty....(For example)...populations are burdened by diseases such as malaria, hookworm, sleeping sickness and schistosomiasis, whose transmission generally depends on a warm climate...."

"...poor food productivity in the tropics is not merely a problem of poor social organization....Using current technologies and seed types, the tropics are inherently less productive in annual food crops. Most agriculture in the equatorial tropics is of very low productivity....Scientific advances again offer great hope. Biotechnology could mobilise genetic engineering to breed hardier plants that are more resistant to drought and less sensitive to pests....(and) there are dozens, or perhaps hundreds, of underused foodstuffs that are well adapted to the tropics and could be improved through directed biotechnology research. Such R&D is now all but lacking in the poorest countries."

In tackling all these problems, Prof. Sachs remains very sanguine both about the ability of science and technology to solve them, as well as about the role that the UN agencies can play in implementing those solutions.

"...rich and poor countries should direct their urgent attention to the mobilisation of science and technology for poor-country problems. The rich countries should understand that the IMF and World Bank are by themselves not equipped for that challenge. *The specialised UN agencies have a great role to play, especially of they act as a bridge between the activities of advanced-country and developing-country scientific centres.*"