nature

8 July 1999 Volume 400 Issue no 6740

A pudding worth the eating

The results of the World Conference on Science, which ended last week, should not be exaggerated. But they are a firm basis on which governments in the developing world can plan their future support for science.

It is easy — perhaps too easy — to be cynical about meetings such as the World Conference on Science, which ended in Budapest last week (see pages 100 and 101). A six-day talking shop that produces two fat documents of 'principles' and 'guidelines', but not a single clear-cut decision, nor any strategic plan with identified objectives, is guaranteed to raise eyebrows. And those who argue that a critical determinant of a country's scientific potential is the size of its research budget will inevitably be frustrated by a meeting that refuses even to recommend extra spending on science.

It is equally easy to be complacent. With delegates from more than 150 countries endorsing, after lengthy negotiations, the documents in question — the *Declaration on Science* and the *Framework for Action* — it is tempting to give both an authority that would be deceptive. For all the talk of a 'new social contract' between science and society embodied in these documents, so much is missing, in terms of the economic and political realities needed to put the principles they contain into practice, that they invite dismissal as little more than a raft of good intentions.

Both sets of criticisms are unfair. The answer to those who lament the lack of any clear agenda emerging from Budapest is that the meeting, as jointly conceived by the United Nations Educational, Scientific and Cultural Organization (Unesco) and the International Council for Science (ICSU), was never intended to achieve this. Rather, it was aimed at — and largely succeeded in — establishing a consensus on the essential components of policies intended to promote the scientific capabilities of any state, developed or (in particular) developing. This message was intended for policy-makers, not scientists. If there is one regret, it is that the senior politicians who attended were science and education ministers, not the finance ministers — or even heads of state — who hold the purse strings.

But the danger of overstating the significance of the outcome lies in ignoring the fact that the conference will be judged, not by the seductiveness of carefully crafted paragraphs, but by the practical changes they bring about. Many of the organizers rightly criticize the lack of impact of the last such conference, held in Vienna 20 years ago. If their efforts are to avoid the same fate, as much effort needs to go into implementing the high-minded phrases expressed in Budapest as went into polishing them in the first place.

There is plenty of scope. The meeting highlighted many areas where constructive efforts are needed, from enhancing the position of women in science, through boosting collaborative efforts to provide research training, to exploring new, cost-effective funding mechanisms. It proposed concrete measures for doing this, from an international women's network, to funding science through debt relief. And it also suggested where responsibility for achieving some of these goals should lie; monitoring the implementation of these suggestions, providing it is done in a fully transparent manner, is now essential to ensure that those identified in this way live up to their responsibilities.

There were other positive signs from Budapest. Those who lamented the lack of ringing endorsements of new projects ignore the amount of work that took place in the corridors intended to ensure that such initiatives — ranging from a proposed synchrotron radiation facility in the Middle East to the possible setting up of an International Centre for the Communication of Science — see the light of day. Earlier preparations for the conference have already stimulated a constructive, and continuing, debate on the possibilities for regional collaboration. Perhaps most significantly, a number of countries and regions, such as India (see page 95) and Africa (see page 101), have already promised to use the consensus on principles and guidelines emerging from Budapest to catalyse their own efforts to develop a sustainable science base.

It is essential that this momentum be maintained. Part of the Vienna conference's failure was the way that responsibility for follow-up was left to United Nations agencies for whom the health of global science was never a top priority. This time round, even though aid agencies and organizations such as Unesco and ICSU can act as useful catalysts, responsibility for action must remain firmly with national governments and regional bodies. This is one pudding whose proof really will lie in the eating. □

Learning by incentive

University reforms would help Germany to combat its worrying shortage of bioinformaticists.

Germany is not isolated in its need to address a shortage of bioinformaticists to support increasing efforts in genomic and post-genomic research (see page 102). But neighbouring countries have reacted with somewhat greater agility to the scientific opportunities being opened up by the data already flooding in from the nearly completed human genome project. Switzerland, for example, has just opened its Swiss Institute for Bioinformatics (SIB) in Lausanne, an initiative supported by local universities and research institutes.

The SIB's activities include teaching undergraduate and post-graduate university courses, leading to a nationally recognized certificate. This is exactly the sort of national initiative that Germany needs to support the programme launched by its university granting agency, the Deutsche Forschungsgemeinschaft. As the German research ministry is currently in the middle of developing a new genome research strategy, this is a good time for it to try some creative thinking along the lines of the Swiss model.

Good things can happen fast in Germany if the incentives are right; a few years ago, the research ministry's Bioregio programme, a sort of formal ranking of highly competitive regions, turned around the fortunes of German biotechnology within a year. But the attack must be on several fronts. Federal and *Länder* governments must pursue reforms to allow universities to offer competitive salaries and more flexible employment conditions. Given the worldwide shortage of those qualified to teach bioinformatics, it is important that candidates see a good reason to do so in Germany. □