

Remarks at the Area Science Park meeting on G77 and the proposed South-South Forum and Exhibition in 2006

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Professor Budinich has kindly asked me to remark on the 40 years of ICTP's experience with scientists from developing countries. I thank him for this opportunity and Professor Cristina Pedicchio for arranging this meeting. I will refer to ICTP only in so far as it connects to the main topic of this meeting. Other institutions represented here will no doubt add their views.

You may have heard me say on occasion that 100,000 scientists have visited ICTP over the forty years of its existence. You may have also heard me say that half of them are from developing countries. These numbers are quite solid though somewhat rounded off. Compared even to the best institutions which deal with Physics and Mathematics, ICTP's influence is real and widespread. It goes beyond the numbers just cited. Even among those on whom ICTP's influence is soft, there are many scientists who have been inspired by its mission.

The reasons for ICTP's success are several, even aside from the generous Italian support that makes it possible to run in the first place. First, it has been allowed to function, by and large, with a great deal of autonomy by all parties involved: UNESCO, IAEA and the Italian Government. Second, there is an institutional commitment to its mission---not as a secondary task or as a means to another end, but as the principal purpose or as an end in itself. There is a certain inclusiveness in the way ICTP operates, embracing not only the institutions nearby but also as many people and as many external institutions as possible, so they all feel that ICTP belongs to them. Part of the distinction of ICTP as an institution is that it mixes people from the North and the South in roughly equal proportions. The Centre has so far preferred to engage individual scientists, independent of the status of their institutions and the scientific reputation of their countries, as long as the scientists exceed a threshold of quality. By so doing, we have often bypassed the negative attributes of many institutions, and directly reached the level where we can make the most difference. What also makes ICTP valuable, perhaps unique, is the balance it maintains between a strong core of research and the large range of its outreach activities. Without the scientific core, we lose our soul as well as appeal, and we are of no value to ourselves---certainly of no value to those whom we aspire to serve. Without our particular type of outreach, we diminish in our relevance.

We can do better by some 20% simply by raising our standards and methods, by getting involved more genuinely in poor countries. It is possible to improve our quality, in both the science we do and the way we disseminate it, and to enhance our impact on the world scene. We should constantly strive to make such improvements. Indeed, we have done just that in the last two or so years. While ICTP's revenues have declined somewhat because of the shift in the euro-dollar parity, the number of our scientific publications, programs and visitors has increased by more than 20%. We did it through constant vigilance and attention to details. I am sure we can do even better, but will soon be reaching the limit of our capacity.

Let me now take off on the basis of these facts. If we assume that the world needs one scientist for every 1000 people in the general population, the number of scientists that the world should aspire to have is several million. Needless to say, there are far fewer of them now in developing countries. In spite of the large numbers who have gone through ICTP, the Centre has touched only 1 in a few hundreds of this desired number. Adding up the contributions of all other international institutions in Trieste does not qualitatively alter this conclusion.

We might therefore logically ask the question: how do we bridge this gap of the order of a few hundreds? Is it even possible to do so, or even reasonable to consider? No amount of belt tightening---no amount of working in the margins---will make this jump possible. We have to do something qualitatively different from what we are doing presently. We have to deal primarily with institutions, and raise their level and effectiveness. We have to assist them in doing these things for themselves.

If institutions are our target, there is no more logical place to begin than the governments themselves and their international representatives. ICTP has been involved in such efforts occasionally, TWAS more so. It is in this context that our connection with UNESCO, IAEA, UNIDO and other international bodies is very important. This is also why Paolo Budinich's proposal of engaging the G77 is very interesting and worthy of attention. This can be a very rewarding task but can also be highly frustrating. No quick changes should be expected.

There are two aspects to this proposal. A high-level South-South Forum and an EXPO-like Exhibition (although on a small scale). They are parts of the same plan, but I will regard them separately for this discussion because they will impact us at Trieste quite differently.

Let me first remark on the Forum and ICTP's potential involvement. A Forum on the bottlenecks in South-South collaboration is a worthwhile initiative. One hopes that it will lead to something concrete---not another declaration. This

is not always clear because it is no longer possible to put all the developing countries in one big basket called the "South". We seem to need some new ideas; in any case, we need action, people and Euros. The fact is that Euros are to be found mostly in developed countries. We cannot thus make the Forum merely a South-South enterprise, but one in which the North should have an important role to play. This role should not be to set the agenda for the South and ram it down its throat (as sometimes happens to the detriment of all), but to support the agenda that South could adopt on its own, with genuine support and guidance from the North. This is the way that the South can address its multiple problems with confidence and eventually become less of a problem for the North, and make the world a better place for all. There is, in fact, a lot that the South can offer its richer neighbors. As is the case with ICTP itself, we should mix people from the North and the South, at least where matters of science are involved.

With these caveats, I am happy to offer ICTP's support for the Forum. In fact, if ICTP does not take the lead role in organizing the Forum, it will look strange to the outside world and many participants, and it would be out of tune with the Center's history and sense of purpose. I think that ICTP and TWAS should host the Forum, with the full cooperation and partnership of all other local institutions---and perhaps even the Regione. As I have already said, we should involve others besides G77. Perhaps 2006 is too soon for this effort to be undertaken professionally, but it all depends on how rapidly we can act. In the meantime, we should secure funding for the event from as many sources as possible, including G77. I am happy to work for this goal, but don't see how to finance a significant part of it from our existing resources.

In this context, allow me to call attention to the "World Conference on Physics and Sustainable Development", to be held from 31 October to 2 November 2005, in Durban, South Africa. The conference will review the past contributions of Physics to Society, focusing on four themes: Physics and Economic Development, Physics and Health, Energy and the Environment, and Physics Education. It is the official closing meeting of the World Year of Physics 2005, and is jointly organized by ICTP, IUPAP and UNESCO. Participants from many developing countries are expected to attend. I serve on the organizing committee, and Claudio Tuniz serves on the coordinating committee. This meeting is an excellent venue for discussing Trieste's plans for 2006 and beyond. I urge Trieste's active participation and involvement.

Let me now turn to the part of the proposal concerning the exhibition. I am aware of the work done already by the committee consisting of Gallieno Denardo (ICTP), Luisa Mestroni (ICS), Graziano Bertolli (ICS), Antonio Filiogi, Elena Colonna and Nicoletta Tamburini. They have done a marvelous job of putting some substance to the original proposal. They have mapped out the structure and possible themes, and generated a preliminary budget. They have shown that the event involves large sums of money, needs a team of experts, and a large-scale commitment on the part of all the countries involved---and a lot of concerted planning.

The proposal is to hold the exhibition every two years or so, with contributions from emerging countries and small innovative companies from developed countries which have some connection to research. Big industries like GE and IBM are not included, which is perhaps a good idea. We should, however, understand the consequences of holding such an exhibition periodically. Let me raise some issues for our collective consideration:

(1) Arranging a periodic min-EXPO every two years is nontrivial, and we need sizeable increase in resources in money and manpower. Otherwise, these events will sap our finite energy and suck our limited resources, and the emphasis of our institutions might be skewed from doing serious science. We have to ensure that whatever we do, our own core of excellence cannot, and should not, be affected adversely.

(2) For the enterprise to thrive we have to count on the active support and interest of the G77 countries towards scientific development. Resources and proactive involvement of G77 will be quite important.

(3) While supporting basic sciences in developing countries is a non-controversial goal, supporting the development of technology is somewhat more nuanced. For example, it would be hard to see why Italy would (or should) be interested in lending support to textile industry in China, which is in direct competition with Italy's national interests.

(4) Many practical issues are involved with regard to arranging the mini-EXPOs, about which we don't have any experience at present.

As you can see, I think that part of the proposal is brilliant, but some of it needs much more thought. I eagerly look forward to what others here have to say.

Thank you for your attention.