

Nanotechnology Conference:

What was not said

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The Conference on Nanotechnology was held on 16 October, 2007, at the BMICH organized by IESL.

Enthusiastic participants from universities, industry and related institutions took their seats to listen to some most interesting and thought provoking speeches on nanotechnology. For most it was like being taken on a tour to another world where the rules are not the same as ours; that this world which is strange and different had lot of promise; that this world appeared, sometimes, like the wonderland where Alice was once.

Prof Tissa Vitharana, Minister of Science and Technology started the series of speeches. Unlike many ministers who grace the occasion and vanishes after delivering a prepared speech (prepared more often by the organizers themselves), he was present at the forum to cover a large part of the deliberations and even chaired the panel discussion, later in the day.

It raised many interesting issues about the development of technology and country in general and getting expatriate help, in the process. The conference also did justice to the topic by discussing nanotechnology, in particular, its scope, its potential and its future in Sri Lanka. Deliberations went into such details like identifying equipment necessary for a take off.

It was such an important event that normal reporting of an event will not do justice to the subject. Hence this account of the event covers not only what cropped up during the session but also what did not; what was said and what was not.

Speakers introduced nanotechnology and presented various possibilities that nanotechnology could bring in to improve the country; in terms of productivity (energy efficiency in particular), developing superior products, preserving its natural environment, etc. The promises were immense and possibilities, according to speakers, were unlimited.

The minister emphasized that we are currently far behind many countries in the world in the technology and development chase. One major reason was that developed countries started well ahead of us and they therefore were able to make a head start. But he also said we have been far better in the past than many other countries but then they too have surpassed us later. One classic country, he said, is Korea.

In our public mind "Korea" meant shanties as Korea was considered a very poor country once. But we cannot even imagine what Koreans have achieved over the last few decades.

There was general agreement in the audience that we "missed the bus" not once but several times, when looking back at the technological revolutions that swept the world.

This is said to be the fourth revolution. If we miss this time some other countries too will be overtaking us in the race soon. Already India and China has begun to run fast. During the discussions it appeared that the Ministry of Science and Technology is struggling to put things right even within the government. Convincing the people who allocate funds is not a small task, it was revealed. Things are moving though at a slower pace we were made to believe.

Focus of nanotechnology, it was said, should be on local industry development and value addition for our own raw material before leaving the shores. It remains a question whether such restrictions are

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necessary in undertaking a technology initiative of this nature, though the question was not raised in the forum. Nobody asked why this technology shouldn't be used in other products.

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There was no one to dispute the above position in the audience. No one asked, by getting into the commercial bandwagon itself, whether a country cannot become rich.

No one asked whether countries which later joined the rich world did it through concentrating merely on poverty alleviation initiatives or whether the poverty was alleviated by creating commercially facilitating environs. At least there was not enough debate on the issue. Even the industry participants did not make their presence felt in this part of the debate. Not a single person asked whether we need to keep our options open than restrict ourselves at this initial stage.

It was said that as our costs are less we would be in an advantageous position. No one dared to ask how our cost could be low, when there is red tape, indecision, a discouraging environment, etc. These hidden costs in most countries exceed the advantage of cheap labour and even the benefits of fewer taxes that they normally offer the investors.

It was said that our expatriates have the necessary expertise in nanotechnology which could be used as a potential resource in a nanotechnology initiative. Many asked how they could be used when the conditions that sent them offshore still remains and gets worse by the day.

Nobody asked whether the experts who are currently working inside the country (as exhibited by some of the contributions made in the forum) with so many odds against them are being looked after or facilitated by the authorities before inviting additional experts -- the expatriates.

There was also a concern about whether we are producing enough intellectuals in the field of nanotechnology. Though it was said that some universities are going to start B.Sc and M.Sc programmes, the necessity of updated foreign know-how was also emphasized.

It was deliberated that not only financial incentives need to be made available but also a facilitating environment has to be created for scientists to work.

Some raised doubts whether we will be able to do it given the mindset we have; not only the politicians and bureaucrats but our own engineers and scientists who hold positions. One example quoted was an incident what happened during the IT revolution. It was said that the first computers brought to one department was given to the top senior most individuals who did not know what to do with them, whereas there were engineers who could use those to do design, estimation, etc but were not allowed to.

The result was those machines were lying on the tables of the seniors covered tightly by dust covers and rarely saw sunlight. With such a mindset it was asked whether the microscopes that are to be brought for nanotechnology would also be end up in a senior's custody without reasonable access to actual scientists.

The necessity of a team based research culture that encompasses more than one discipline was emphasized. Again with the current mindset and people whether that could be achieved, probably, needs to be questioned, which was not adequately done.

There was concern that like in the so called third revolution (IT and ICT), whether "icons" and "gurus" will take the stage and chase out many other small players. It was emphasized that this time, this field should be kept open for a larger number, allowing thousand "flowers to blossom". Hence emphasis was made that this initiative should not end up "fertilizing" one or few individuals to become "hugely grown trees" that would create large shadows preventing any other plant to grow under those.

While scientists emphasized "experts, knowledge and resources" as key factors the audience was not sure whether they were sufficient. It was said that how we organise ourselves, how we create the environment, sometimes might be crucial than other factors and in spite of the availability of "experts, knowledge and resources" we might fail if we do not address those.

It was said that nanotechnology will come to the country whether we do anything about it or not. It will come in the form of products, sometimes replacing more of our conventional products that are in the local and even in the export markets. The opportunity we see today if not used will be transformed in to a threat soon.

But the panel discussion only revealed that "progressive elements" are weak inside the government and in the country. At the end of the day, the minister was expressing the same sentiments of the audience and the audience probably started sympathizing with the minister for not being able to push his agenda inside his own government and probably was at the receiving end like any one else in the audience.

That would have prevented people expressing additional concerns as the signal was that it is futile given the current context, where the minister was also seen as powerless. It appeared that we might even miss this fourth bus and go into history as a country with a history but without a future, unless we do something out of the box.

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