

Dear Readers,



President Peter Gruss,
Max Planck Society

Ever since I first explored India in the early 1970s in an orange VW beetle, the country has held a greater fascination for me than any other. Undemanding in terms of comfort but rich in time, I discovered a land steeped in the magnificent culture of ages passed, yet equally overshadowed by extreme poverty.

Today, not only are my travels confined to a different timescale, but – and more importantly – India, too, has changed immensely. The nation is experiencing an economic miracle and is now one of the world's most attractive growth markets. At the same time, research centers are emerging that are of international importance. I was able to visit some of them on my last trip to India in February last year. The National Center for Biological Sciences (NCBS) deeply impressed me. This institute would rank among the best even in Germany and elsewhere. That is why we are currently exploring the option of setting up a Max Planck Center there.

What's more, a whole series of other high-caliber research institutions populate the Indian scientific landscape, including the Indian Institute of Science in Bangalore, the five Indian Institutes of Science Education and Research, and some of the Indian Institutes of Technology (IITs). Their graduates are among the reasons that computer and pharmaceutical companies are booming, with growth rates commonly in the double-digit range.

Yet India remains a conundrum. Outside the gates of these ultra-modern research and business centers, 40 percent of the population lives below the poverty line. One child in two is malnourished. While the Indian Space Research Organization is preparing a mission to Mars, for which it received seed money of USD 2.2 million from the government, 35 percent of Indians are still un-

able to read or write. The children, particularly those born into the poorer echelons of society, frequently have no opportunity to complete even an elementary education.

In pursuing its innovation policy, the Indian government is treading an unusual path of which we may well be critical. But let us not forget that poverty cannot be eliminated without investment in science and technology. As the magazine *NewScientist* recently commented, the hope is "that India can short-cut the established path of industrial development and move straight to a knowledge economy." Numerous studies have found that investments in basic research boost a country's economy in the long term. In the short term, experience has shown that particularly information technology and biotechnology are essential to India's industry, and thus also for govern-

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ment revenues. That is the only way that India will be able to invest more money in the country's development.

I am struck by the efforts being made by India's politicians to catapult the burgeoning country to the forefront of research and development. Measured against gross domestic product, India is already investing more in R&D than Germany is. Furthermore, Prime Minister Manmohan Singh has proclaimed 2010-2020 to be India's Decade of Innovation. India's future program as a center of education and science is an ambitious one.

The Indian government, for example, is founding numerous new universities in order to meet the huge demand from young people for higher education. For many of them, an academic qualification is the only escape route from poverty. Last year alone, almost half a million young people from every corner of society sat the joint entrance examination for the IITs. The test is considered to be one of the hardest in the world. I admire the enthusiasm and ambition displayed by these hundreds of thousands of young Indians: they study for months from early until late, yet in the end, only 2 out of every 100 applicants are awarded one of the coveted places.

The potential scale of young talent in India is vast. The Max Planck Society must thus be particularly concerned to support these gifted young people through its various programs. Our first task has been to arouse the interest of Indian students and graduates in Germany in general and in the Max Planck Society in particular. Until just a few years ago, young people in India had their sights set on Great Britain and the US to study or work. Things have since changed, at least for the Max Planck Society.

India now accounts for the second highest proportion of foreign Ph.D. students at the Max Planck Society. At our International Max Planck Research Schools, Indian students actually make up the largest group. Numerous Indian scientists are now receiving postdoctoral training at a Max Planck institute. To support these young colleagues after they return to India, the Max Planck Society is financing continued cooperation between them and their former institute. For a fixed period of up to five years, the Max Planck Partner Groups provide group leaders and their teams with favorable conditions under which they can continue to develop their research. The Partner

Groups in India have met with an outstanding response: 17 have been set up since 2005, and 7 more will join them in 2011 alone. We have also been offering special grants – the Max Planck India Fellowships – for some years now to enable Indian scientists to spend a little time in Germany.

We have had a local presence since February 2010, in the form of a Max Planck Center at the IIT Delhi, sponsored by India's De-

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partment of Science and Technology and the German Federal Ministry of Research. Incidentally, the starting point for the Center was a former Partner Group attached to the Max Planck Institute for Informatics.

Through all these activities, the Max Planck Society is attempting to make a small contribution to the development of India as a knowledge society. There are many signs that India's population shares this ambition. India is the world's largest democracy. The policies pursued by Prime Minister Manmohan Singh and his coalition of parties evidently have so much backing that, in the parliamentary elections in 2009, the government increased its majority. Furthermore, science enjoys a high status in Indian society. That made a deep impression on us when the Max Planck Society's Science Express – an exhibition on board a train – toured India. Five million visitors have seen the exhibition since it set out in 2007, often forming lengthy queues just to get in. The train was an excellent op-

portunity to raise awareness in India, both of Germany's research profile and of the Max Planck Society itself.

No doubt there are still challenges that India must overcome if it is to maintain its economic and scientific momentum in the long term. For example, there is still much to be done to improve basic education and reduce the number of children who are forced to leave school early. Another important task is to develop the country's infrastructure, especially in the rapidly growing megacities.

Such aspects of urban development will take center stage in the German Year in India this autumn, with a theme of "City Spaces." To mark the start of the German Year, the Max Planck Society, in concert with Siemens AG, is planning a third forum in New Delhi in the international series of "Future Dialogue" conferences. The presentations, plenary discussions and panels of experts will focus on the options and opportunities for "Sustainable Cities." Business leaders, top politicians and scientists from all over the world are invited to attend this high-profile conference to discuss how economic growth can be encouraged in major conurbations while at the same time minimizing the impact on society and the environment.

Millions of people worldwide are being drawn to cities. The urban planning challenges are huge, especially in India. The process of change on the subcontinent continues apace. Of one thing I am certain: the world will continue to be amazed by India in the years ahead.



Peter Gruss,
President of the Max Planck Society