

Indo-German Relations

From Cautious Beginning to Robust Partnership*

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Introduction

When the first Indian Co-Chairman of the Indo-German Consultative Group, Professor P. N. Dhar, attended the final meeting of his term of office, he took me aside to talk to me about the future of Indo-German cooperation. I had known him for many years and appreciated his sense of judgement. He said to me in a somewhat sad tone: „Indo-German cooperation has not yet really begun.“ He felt that much more had to be done. This was in the mid-1990s, in the meantime there has been a great deal of progress which will be traced in this paper.

The Indo-German Consultative Group contributed its share to this positive development. Its members represent German industries, but there are also some scholars of various disciplines among them. It had its first meeting in Bonn in 1992 and has subsequently met every year at different venues in India and Germany. The details of its inauguration will be explained later on.

In writing this paper I have concentrated on the relations between the Republic of India and the Federal Republic of Germany. I have not discussed the earlier relations between India and Germany to which I have devoted several other publications.¹ In dealing with the more recent history of Indo-German relations I start with the contacts established by Nehru and Adenauer as they paved the way for the future development of these relations which have gained strength in recent years.

The Era of Nehru and Adenauer

When Nehru and Adenauer became the heads of government of their countries, they faced similar problems. The context of their actions was, of course, quite different.

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¹ D. Rothermund, *The German Intellectual Quest for India*, New Delhi: Manohar, 1986;
D. Rothermund. „Max Müller’s Science of Language and Religion“ in: *Orientierungen* 1/2009

After nearly two centuries of colonial rule, Nehru wanted to establish a new position for his country in the world community. He wanted to industrialise India as the colonial rulers had impeded its industrial growth. He opted for a planned economy and he could make use of the interventionist administration which the British had established in India in order to cope with wartime needs. The Soviet Union was a model for Nehru's ambitious plans but he did not want to become a camp-follower of the Soviet Union nor did he wish to become an ally of the Western powers. The independence of India which had been achieved after a long freedom struggle should not be lost again by tying India to one of the two camps which were involved in the incipient cold war.

Adenauer faced the arduous task of building the foundation of a new Germany after a devastating war which had not only destroyed the country but also ruined its standing among the nations of the world. He was a conservative politician who had grown up in the period before the First World War. After both wars his main aim was to regain the friendship of France. He believed in a European Union led by France and Germany. As head of government he opted for a social market economy and strong ties with the West so as to ward off the threat of Soviet Communism.

Nehru's formative years were spent under the guidance of Mahatma Gandhi whom he revered but with whom he also differed in many respects. In the late 1920s Nehru had been attracted to Marxism and had become a mentor of the younger generation of Indian nationalists who showed sympathies with the „Left“. Fascism was detested by Nehru who had seen its effects at close quarters during his visits of Germany in 1936 and of Spain in 1938. Due to these experiences he felt that world politics were threatened by imperialism and fascism rather than by communism.

Nehru and Adenauer were both deeply concerned with the foreign policy of their nations and guided it as long as they were at the helm of affairs. The establishment of diplomatic relations between India and Germany were important to them. Adenauer appreciated that India had been one of the first nations which recognized the young Federal Republic of Germany. Nehru who knew about the German intellectual quest for India was glad that he could now establish relations with a Germany liberated from fascism. Of course, he would have liked to recognize the „other“ Germany also, but he soon realized that he could opt for one Germany only as the Federal Republic of Germany insisted on its claim to represent all of

Germany. In his lifetime Nehru kept the German Democratic Republic at arm's length - although it tried very hard to establish diplomatic relations with India.²

Adenauer had established German diplomatic contacts with India soon after he could reopen the German Foreign Office in 1951 with the permission of the Allied powers. The exchange of ambassadors with India was one of the first acts of the revived Foreign Office. Adenauer showed great acumen in selecting the first German ambassador to India, Prof. Ernst Wilhelm Meyer, who held this post from 1952 to 1957. He was a member of the Social Democratic Party and had spent the war in exile in the USA. He had been a diplomat in the Weimar Republic and had returned to a chair of Political Science at the University of Frankfurt in 1947. Meyer was in tune with Nehru's view of world affairs and did not hesitate to reject orders coming from Bonn when he felt that they would harm Indo-German relations. When he was asked in 1954 to protest against the establishment of an East German trade mission in New Delhi and to announce economic sanctions to this effect, he replied that German industry was just then profiting from good relations with India and that it would be counterproductive to annoy Nehru with such a protest. The German Foreign Office relented and accepted Meyer's advice. He was able to accumulate a fund of goodwill in India. Indo-German relations developed very well in his period of office.

Nehru was equally good at selecting his first ambassador to Germany, A.C.N. Nambiar, who was an old friend whom Subhas Chandra Bose had introduced to him many years ago. Nambiar was a brother-in-law of the Indian poetess, Sarojini Naidu. He had spent most of his life in Germany, first as a journalist and then as a representative of Bose's government of Free India. Nambiar had many friends in Germany.

Diplomatically well prepared, Nehru's first visit of Germany as India's Prime Minister in July 1956 was a success. Nehru was impressed with the cordial reception by the German people and also by his conversations with Adenauer whom he compared to an old lion in his subsequent report to the Indian Chief Ministers. Adenauer and Nehru agreed that their views of world politics differed, but they listened to each other attentively. Adenauer talked about the danger of Soviet expansionism. He indicated that he was afraid that the Soviets intended to conquer Germany and France, Nehru argued that under the conditions prevailing at that time,

² For a detailed study of the India policy of the German Democratic Republic see Johannes H. Voigt, *Die Indienpolitik der DDR. Von den Anfängen bis zur Anerkennung (1952-1972)*, Köln: Böhlau, 2008

Soviet power faced its limits and would not expand. Adenauer listened to him carefully but later on noted in his memoirs that Nehru was an idealist and not a realist.³ At the end of the year 1956, Adenauer met Nehru again briefly at Düsseldorf airport. Adenauer urged Nehru to use his influence to motivate the United Nations and the Soviet Union to foster German reunification. In the meantime the Soviets had suppressed the uprising in Hungary and Nehru felt that they feared a shrinking of their sphere of influence and for this reason would not be willing to think of a reunification of Germany. Adenauer had also hoped that Nehru could influence the nations which had met at the Bandung Conference. To this Nehru replied that these nations had taken it amiss that Germany had not objected to the French and British intervention at Suez. Adenauer had to accept Nehru's assessments.⁴ At least he could be pleased with Nehru's decision not to accept an invitation to visit the German Democratic Republic in 1956. The Hallstein Doctrine seemed to work, after all.

This doctrine named after the German diplomat Walter Hallstein had been formulated in 1955 after Germany and the Soviet Union had exchanged ambassadors. There were now two German ambassadors in Moscow and other countries could be tempted to follow this precedent. The Hallstein Doctrine implied that Germany would terminate diplomatic relations with countries recognizing the German Democratic Republic and would withhold economic aid. Accordingly, the distribution of German economic aid was geared to the Hallstein Doctrine. India did not like this but had to accept it, the more so as it was soon faced with financial problems caused by Nehru's ambitious Second Five Year Plan. A crucial element in this plan was the enhancement of steel production. The very modern steel mill at Rourkela, Orissa, played an important role in this context. The construction and operation of this mill became the major item of German development aid. Originally this construction was the subject of a contract between the Government of India with private German firms concluded in the early 1950s when India still had enough money to pay for it. In 1957 India faced a balance-of-payments crisis and the Aid India Consortium was formed in 1958 with active German participation. It was only then that Rourkela emerged as a major German development project. After supporting the construction, Germany also had to

³ Adenauer recorded the conversations with Nehru in his memoirs, see Konrad Adenauer, *Erinnerungen, 1955- 1959*, Stuttgart: dva, 1967. p. 179 f.

⁴ For a detailed assessment of the interactions of Adenauer with Nehru and the development of Indo-German relations in this era, see D. Rothermund, „Die deutsch-indischen Beziehung in der Ära Adenauer“ in: Eckart Conze (ed.), *Die Herausforderung des Globalen in der Ära Adenauer*, Bonn: Bouvier, 2010

provide a team for the operation of the steel mill. In its combination of continuous casting and the cold rolling of steel sheets, the Rourkela steel mill has remained an important asset of the Indian steel industry ever since its inauguration in 1959. It originally produced one million tons of steel. After expansion and modernization in the 1990s it could double its production. Its special Cold Roll Non-Grain Oriented (CRNO) –steel is in great demand. India exported it to China in recent years. After teething troubles at the time of its construction had been overcome, the Rourkela plant has emerged as a lasting monument of Indo-German cooperation.

At the time when the Rourkela plant was built, the shortage of specialised engineers was a pressing problem in India and with German aid one of the new Indian Institutes of Technology was established in Madras (Chennai) in 1959. This period of very active German interest in India also witnessed the establishment of several branches of the Goethe Institute which in India are called Max Mueller Bhavan. Thilo Bode who worked in the German Embassy in New Delhi at that time suggested this name, because he knew about the goodwill attached to the name of this famous German Indologist who had been a friend of early Indian nationalists. The South Asia Institute of Heidelberg University, opened in 1962 in the presence of Nehru's sister, Vijayalakshmi Pandit, was another testimony to this German interest in India. Originally it was to be named „Indo-Asia Institute“, but President Radhakrishnan suggested the name South Asia Institute as he felt that „Indo-Asia“ was reminiscent of „Greater India“ and would be resented by India's neighbours.

The Indo-German Chamber of Commerce – about which more will be said later on – was also established in this early phase of Indo-German relations. It was inaugurated in 1956 by Adenauer's deputy chancellor, Dr. Franz Blücher. With all these new initiatives in the late 1950s and early 1960s Indo-German relations flourished in the era of Nehru and Adenauer. One would have expected further initiatives in the subsequent decades, but before there was a revival of mutual interest, a fairly long period of indifference intervened

In the Doldrums of Benign Neglect

The ship of Indo-German cooperation got stuck in the doldrums of benign neglect. There were several reasons for this development. After the great drought of the mid-1960s, India experienced a long period of stagnation as far as its industrial growth was concerned. This diminished the interest of German industry in India. There were

also signs of political estrangement. In the war which Pakistan forced upon India in 1965, Germany seemed to favour Pakistan. When Indira Gandhi came to power she followed a leftist course although she was much less interested in ideology than her father. Her insistence on „self-reliance“ and her restrictive legislation such as the Monopoly and Restrictive Trade Practices Act of 1969 and the Foreign Exchange Regulations Act of 1973 vastly increased the powers of the bureaucracy and stunted industrial growth. The „Emergency“ which she imposed on India in 1975/1976 made German observers feel that she had killed Indian democracy. Moreover, India seemed to get more and more attached to the Soviet Union in those years. All this did not augur well for Indo-German friendship.

The loss of India's attractiveness was matched on the German side by the prevalence of the Trans-Atlantic orientation which reached its zenith under Chancellor Helmut Schmidt. His indifference towards India was well known. He did befriend China but otherwise he was not much interested in Asia. During the period of office of Prime Minister Morarji Desai, Schmidt was once dragged to Frankfurt Airport by his diplomats, when Desai spent some time there between flights. The meeting did not change Schmidt's outlook. For 19 years no German Chancellor visited India and accordingly no Indian Prime Minister came to Germany, because the protocol of alternating visits prevented that.

The change in Germany's approach to the German Democratic Republic which was initiated by Willy Brandt enabled India to establish diplomatic relations with the German Democratic Republic in 1972. The Hallstein Doctrine which had been resented by India, had been abandoned by Germany. It was an irony of fate that this doctrine had actually contributed to German solicitude for India. Once this doctrine was jettisoned, solicitude changed into indifference. This is certainly not what Brandt had intended, but his term of office was anyhow cut short in 1974, before he could do something about the improvement of Indo-German relations.

Throughout this period of indifference which lasted from the mid-1960s to the mid-1980s there were no real tensions between India and Germany. The prevailing atmosphere was one of benign neglect. At diplomatic functions the cultural interest which Germans had shown in India and the appreciation by Indians of German Sanskrit scholarship were always highlighted but there was hardly anything else to talk about. One of the few bridges between India and Germany was provided by the German Peace Corps (Deutscher Entwicklungsdienst). In keeping with her advocacy

of self-reliance Indira Gandhi told the German minister Dr. Erhard Eppler, who was in charge of development aid, in November 1973: „You should now take care of your young people yourselves“. Soon thereafter the sending of such young people to India was terminated.

Another bridge was provided by the foundations attached to the German political parties. It was due to the initiative of Winfried Böll as secretary to the German Ministry of Economic Cooperation that these foundations were encouraged to work abroad. They began this work in the 1970s and have continued since that time.. Their representatives in India have done a great deal of good work in cooperation with Indian partners.

The activities of the German Academic Exchange Service continued throughout this period, but the number of German scholarships which were offered to India amounted to less than 40 per year and the 10 scholarships which India offered to Germany were hardly ever fully utilized. The Alexander von Humboldt post-doctoral fellowships increased in importance and some eminent Indian scientists and engineers still remember how they had benefited from their Humboldt-years in Germany. The students and staff members of the South Asia Institute, Heidelberg, did intensive field work in India in this period and some Indian scholars were invited to Heidelberg as visiting professors. But seen from a larger perspective, these activities remained marginal and did not have a major impact on Indo-German relations.

New Orientations after the End of the Cold War

New initiatives began to unfold very slowly in the mid-1980. Several ministers of Chancellor Helmut Kohl's cabinet visited India in quick succession, but the Indian side would not pay much attention to such visits unless the Chancellor himself appeared on the scene and set the pace. In fact, such ministerial visits gave the impression that India should be satisfied with the interest shown by cabinet members as the Chancellor could not spare time for India. Actually, Kohl had paid a visit to India in 1983, but it was only a stopover during a tour of Asia. It annoyed the Government of India, because it was not a proper state visit and confirmed the impression that he had no time for India. Finally Kohl did come to India for a regular state visit in 1986 and thus paved the way for Rajiv Gandhi's reciprocal visit of Germany in 1988. From now on further contacts progressed very well. The end of the Cold War helped to intensify them. India had always deplored the Cold War, but actually this global

conflict had provided India with a solid framework of political orientation. Now India had to grope for new perspectives. Germany where the people had managed to break the Berlin Wall seemed to be a good point of departure. When P.V. Narasimha Rao became Prime Minister he visited Germany before every other country. Actually in terms of protocol his visit was premature as there had been no reciprocal visit after Rajiv Gandhi's, but Narasimha Rao came to inaugurate the Festival of India in Germany which proved to be a great success. At his request Chancellor Kohl agreed to convene an Indo-German Consultative Group of industrialists and scholars which has been mentioned before. This group has well defined terms of reference; at the end of its meetings it drafts a letter to the two heads of government in which it specifies concrete points concerning the improvement of Indo-German cooperation.

The economic reforms introduced by the Government of India in 1991 have stirred a renewed interest in India among German businessmen and industrialists. Germany participated in the India Engineering Trade Fair of 1993. At that time Helmut Kohl visited India once more and attended this fair. The Chief Ministers of several German federal states have toured India with large delegations of businessmen who wished to establish contacts in India. The most recent visit was that of a delegation of the State of Baden-Württemberg in November 2009. The Chief Ministers of this state have been most active in this field as this was the third visit of its kind, the earlier ones had been in 1986 and 1995.

The Indo-German Chamber of Commerce which was established in Mumbai in 1956 has flourished in this new climate. It has now about 6700 Indian and German members and is the largest chamber of commerce in India. In fact, it is the biggest of such international chambers worldwide. In addition to its headquarters at Mumbai it soon opened branch offices in several Indian cities: Delhi in 1958, Kolkata in 1959, Chennai in 1966, Bangalore in 1976 and Pune in 2008. It also has a branch in Düsseldorf, Germany, which was established in 1959. With the active help of this Düsseldorf branch 16 regional chambers of commerce have established „India Desks“ in their headquarters from Hamburg in the North to Munich in the South of Germany. In the new era of liberalization the activities of the Indo-German Chamber of Commerce have increased by leaps and bounds. It has also taken up new themes such as the encouragement of the use of renewable energies. For instance, the Mumbai office is actively involved in fostering a biogas project in Maharashtra. Trade fairs have also been of importance in encouraging Indo-German cooperation. The

impressive technology show, TECHNOGERMA, which was inaugurated in New Delhi in 1988 set the pace for many later events of this kind.

Indo-German trade has increased in recent years. German exports to India grew from 2,4 billion USDollar in 2003 to 8 billion in 2008. Indian exports to Germany did not match this figure, they only amounted to 4, 3 billion USDollar. However, German direct investments in India which had been rather marginal in the past have increased to 2,4 billion USDollar in 2008. Of course, this amounts to less than 10 per cent of total foreign direct investment in India. But as more and more German firms establish branches in India, the flow of investment will increase. The most spectacular recent development is the construction of a big plant of the Volkswagen Company in Pune. Indian industrialists also invest in Germany, particularly in the pharmaceutical industry. In fact, the flow of investment from India to Germany now more or less equals that from Germany to India. This is a very encouraging sign of reciprocity in Indo-German relations.

In earlier years the Joint Venture was the favourite form of Indo-German cooperation. This was beneficial to both partners when India was still a closed economy. The German partner gained access to a protected market and the Indian partner profited from investment and technology transfer. With liberalization this relationship changed. The Indian partner could now emerge as a competitor of the German partner in the world market. Nowadays German entrepreneurs prefer the establishment of fully owned branches of their firms in India. This implies that they must solve the problem of hiring competent Indian staff on their own. In order to help German firms to solve this problem the Indo-German Chamber of Commerce has set up a department called „DEinternational“ whose team advises German firms in getting started in India and in recruiting qualified personnel.⁵ Human resources are not only essential in business, they are also crucial in the academic field.

Recent Projects of Academic Exchange and Joint Scientific Research

While Indo-German academic contacts had existed for a long time, they have recently been promoted with added vigour. The German Research Foundation (Deutsche

⁵ For a recent survey of the activities of the Indo-German Chamber of Commerce see *Annual Review 2009. Indo-German Cooperation*, Mumbai 2009.

Forschungsmeinschaft) has opened a permanent office in New Delhi in 2004 and has signed an agreement with the Department of Science and Technology of the Government of India. Several programmes have been launched in this context. Among them are the International Research Training Groups. In Germany they are called „Graduiertenkolleg“ (Graduate College). They consist of teams of Ph.D. candidates who work on a common theme. The first Indo-German IRTG was inaugurated in October 2009 at the University of Münster in cooperation with the University of Hyderabad. Two specialists in plant chemistry and plant diseases, Professors Bruno Moerschbacher (Münster) and Appa Rao Podile (Hyderabad) had been in touch for some time and have now jointly launched this new venture. A dozen Ph. D. candidates from India and Germany have started work at the University of Münster, they will also spend some time at the University of Hyderabad. Finding ways and means to combat wheat rust is one of the common endeavours of these scientists. Chitosan manufactured from shells of shrimps, a byproduct of the shrimp fisheries industry of Gujarat, has chemical properties which can be used to fight rust. This will be one of the items of joint research. In addition to training young scientists, the joint venture could thus also be of immediate use for Indian agriculture. More IRTGs are in the pipeline and it is to be hoped that they will be equally successful. The University Grants Commission (UGC), New Delhi, has indicated its interest in co-sponsoring such initiatives. Prof. S. Thorat, Chairman UGC, had visited Münster for the inauguration of the IRTG and had talks with the DFG-President about this programme which obviously impressed him.

The German Research Foundation has given grants to Special Research Programmes (Sonderforschungsbereiche =SFB) for more than four decades. It has made efforts to internationalise them. For instance, a joint programme with Poland seems to have gone ahead very well. These SFBs are made up of teams of one or more universities and are often interdisciplinary. Indo-German programmes of this kind could very well follow the pace set by the IRTGs. The DFG has numerous formats of giving grants to scholars and the Indian side could explore those with the help and advice of the office in New Delhi.

The German Academic Exchange Service has in the meantime embarked on a „New Passage to India“. It was inaugurated with great fanfare in 2008 and is designed so as to increase the mobility of German students and scholars. Whereas there were about 4000 Indian students at German universities only about 150 German students

studied in India. The German Ministry for Education and Research (Bundesministerium für Bildung und Forschung) has sanctioned more than 3 mill. Euro per year for this programme which is administered by the DAAD. While thus encouraging German students to go to India, the DAAD has also increased the number of scholarships granted to Indians in a big way. One of these programmes is the IIT-Sandwich-Fellowship which enables Indian IIT-students to spend some time in Germany and return home for their final degree.

Another important organization which grants post-doctoral fellowships to Indian scholars is the Alexander-von-Humboldt-Foundation which has been mentioned before. It has awarded more than 1000 fellowships to Indians in recent decades, among them about 150 engineers. After the USA and Japan, India holds the third place among all nations in this programme. There are no quotas for specific nations or disciplines therefore these numbers would indicate that Indians have done very well in the international competition for these coveted fellowships. Germans have also profited from such grants, because there is an additional programme for German scholars who are invited to work with alumni of the AvH-Foundation abroad.

Recently the Max Planck Gesellschaft (MPG) has also appointed a permanent representative in India. The MPG is the apex body of 80 national research institutes devoted to fundamental research. The majority of these institutes belong to the natural sciences but in recent times several institutes working in the field of the social sciences have also been established. These institutes are not attached to universities but their leading staff members often have parallel appointments as university professors. The staff of these institutes is international, among their directors is also an Indian, Prof. Rupak Mazumdar, who heads the Max Planck Institute for Software Systems. The two Max Planck Institutes of Computer Science and of Software Systems, based in Saarbrücken, will support the new Indo-German Max Planck Center for Computer Science at the Indian Institute of Technology, Delhi, which was opened by the German Federal President Horst Köhler during his state visit of India on February 3, 2010. Several of the groups working at that center will concentrate on algorithm research. The establishment of this center paves the way for future Indo-German partnership in this field. More than 500 Indian scientists are at present working in institutes of the MPG in Germany. Some of those who have returned home have established Max Planck Centres in India of the type mentioned above. Such centres are jointly funded by the German ministry for education and research, the

Indian Department of Science and Technology and the MPG. A unique „road show“ sponsored by the MPG is the „Science Express“, a train which has travelled throughout India and has attracted millions of visitors. The MPG supports work at the „cutting edge“ of research. So far 19 of its staff members have won the Nobel Prize. It offers important possibilities of Indo-German cooperation.

Whereas top-level academic exchanges have a long tradition, the exchange of high school students and their teachers is a very new experience. A project called „Schools. Partners of the Future“ has been launched recently. It is supported among others by the Goethe Institute and the German Foreign Office. There is an initial emphasis on German language teaching in secondary schools. The Delhi Public School with its 146 branches all over India encompassing altogether 250,000 students is a major partner in this project. It has now been joined by Kendriya Vidyalaya Sangathan which has 981 branches with altogether about a million students. These major schools have opted for German as the first foreign language (other than English). The Max Mueller Bhavans are also experiencing an increasing interest in their German language courses. In addition to the MMBs in the five cities mentioned earlier, there are additional language training centres in Hyderabad, Trivandrum, Chandigarh, Coimbatore and Ahmedabad. These centres are practically self-supporting as they can rely on the fees paid for their courses. The phenomenal surge in the Indian interest in the German language is a harbinger of increasing future cooperation.

Future Prospects of Indo-German Cooperation

I started this article with a reference to a conversation with P.N. Dhar in the mid-1990s. His plea for a more intensive cooperation between India and Germany has actually been fulfilled. One may now look forward to many more joint endeavours in the future. One such field of fruitful cooperation is the exploration of alternative and renewable sources of energy. German engineers have done pioneering work in this field and much of it is applicable to India. The acquisition of the German firm Repower by the Indian firm Suzlon shows how the use of wind power can be developed jointly. Recently several big German companies have sponsored DESERTEC, a bold multinational venture aimed at producing energy by means of collectors of sunlight in the deserts of Africa and elsewhere. A grid of direct current transmission lines of high voltage would transfer part of this energy to Europe.

Sceptics have pointed out that the problems of making DESERTEC work and bearing the cost for it may stymie this project. But there is no doubt that DESERTEC on a smaller scale constructed within one country could work very well. India with its huge Thar desert could utilize the technology which is at the disposal of DESERTEC. The giant Spanish solar power station ANDASOL close to the Sierra Nevada has demonstrated the utility of such projects.

Huge projects like DESERTEC and ANDASOL tend to fire the imagination of many people while modest small-scale schemes are often overlooked although they could also contribute a great deal to a new type of energy supply. One such scheme is the Competence Network Distributed Energy Technologies which has organized a Cluster Network Germany-India (CNGI) on renewable energy and energy efficiency. It is supported by the German Ministry for Research and Education (Bundesministerium für Bildung und Forschung). The University of Kassel (Hesse) has taken the initiative to study and to provide advice to local enterprises engaged in the decentralized production and distribution of energy. This experience will be shared with partners in India. A first joint workshop was convened in New Delhi in August 2009.

The exploration of geothermal energy is another field in which Indo-German cooperation would be useful. India has great resources in this field which have been hardly utilized as yet. There are about 400 hot springs in India, some of them with a surface discharge of water at 90° C. Their location is known, there may be many more which have yet to be discovered. Experts have estimated that geothermal energy could yield 10,000 Megawatt in India. In Germany several methods of the use of geothermal energy have been introduced. There are deep borewells whose output is reinjected. But there are also shallow drillings of about 5 m depth into which coils are inserted which help in the heating of houses. Indian entrepreneurs could profit from German work in this field. The German agency GTZ (Gesellschaft für Technische Zusammenarbeit) has now two permanent representatives in New Delhi, one of them is dealing with energy, the other with the protection of the environment. They are competent partners for Indians working in these fields. I may mention only two important projects as examples for the type of cooperation supported by the GTZ. One of these projects is devoted to the filtering of drinking water so as to remove the traces of arsenic. This poisonous substance is found in drinking water to an increasing extent due to the tapping of ground water by borewells. It is flushed out of

some strata of the soil and thus contaminates the water. Harbauer GmbH, Berlin, has invented a cheap and effective technology for filtering this water. It has entered into a public-private partnership with the GTZ in order to apply this method in India. The GTZ also supports new methods of recycling „e-waste“, i.e. the remnants of used computers and other electronic appliances. These remnants contain valuable material which should be recycled, but some of this is hazardous waste which must be handled with great care. Much of this recycling is done in small workshops in the informal sector of the Indian economy. Technical advice in this field is very important and the GTZ provides it.

Another interesting field of potential Indo-German cooperation is comparative research on demographic transitions. India is at present profiting from a „demographic dividend“ which accrues to countries where the working population has less dependents to take care of due to a reduced total rate of fertility. South India has reached the reproduction rate of 2.1 while North India is still much more „fertile“. Demographers have been puzzled by the rapid drop in the total fertility rate in states like Andhra Pradesh. They have been able to map it but are unable to explain it. The conventional explanations that a rise in income and an improvement of the education of women lead to an acceptance of birth control have not proved to be convincing in areas where poor, illiterate women have been in the vanguard of fertility reduction. Decisions about birth control may reflect perceptions of the immediate future. An interesting example is provided by the steep and sudden decline of births in East Germany after 1989. It seems that many young women felt insecure about their future prospects at that time and postponed having children. Comparative studies of this phenomenon and the reduction of the fertility rate in South India may shed light on aspects of demographic change which have not been analysed so far.

Creative productions in literature and the performing arts should also be encouraged. The Max Mueller Bhavans have launched a project called „48°C – Public, Art, Ecology“. This encompasses performances in cities, using public spaces for illustrating ecological problems. The Max Mueller Bhavans are presently planning a big event: The German Year in India, 2011-2012. This will certainly enhance Indo-German cooperation in many fields. Hopefully Indo-German relations will never again suffer from benign neglect.