



NEPAL-GERMAN

Academic Association

(NEGAAS)

SOUVENIR

JULY 2011

Message From GERMAN EMBASSAY



Embassy
of the Federal Republic of Germany
Kathmandu

P.O. Box 226, Kathmandu/Nepal

*Nepal - German Academic
Association (NEGAAS)
Putalisadak
Kathmandu*

ADDRESS:
690 Gyaneshwor Marg
Gyaneshwor, Kathmandu

POSTAL ADDRESS:
P.O.Box 226, Kathmandu

INTERNET: www.kathmandu.diplo.de

Tel + (00977-1) 441 27 86
Fax + (00977-1) 441 68 99

Contact Person:
Henning Hansen

info@kathmandu.diplo.de

*Kathmanu 16 June 2011
Ref.: Ku-1 641.65/2*

Congratulatory message for NEGAAS Souvenir Issue

I am pleased to extend my warmest congratulations to NEGAAS for bringing out the Souvenir Issue of its Journal. I feel that such publication can contribute greatly towards developing the academic, cultural and other friendly relations between the people of our two countries, Germany and Nepal.

The articles and write-ups in this Journal give testimony to the excellent experiences many Nepalese academics had during their studies and stay in Germany and Nepal and positively reflect upon their hard work and success in their career.

I encourage all NEGAAS members to continue their meaningful work and to share their experiences, thoughts and ideas in future editions of the NEGAAS Journal.

With warm regards and best wishes,

Henning Hansen

Deputy Head of Mission

Message From NEGAAS PRESIDENT

Nepal – German Academic Association (NEGAAS) established in 1986, is an association of Nepalese academicians who have returned to Nepal after attending high level education in the German institutions of higher learning. This is an active and live organization of committed professionals; composed of university professors and other high ranking university teachers, university executive authorities, highly placed government officials, ex-vice chancellors of national academy, doctors, engineers and the professionals of various prestigious disciplines. All the members have been significantly contributing to nation building. A large number of NEGAAS members have received once the scholarship and fellowship from DAAD, Humboldt Foundation and other German institutions. The alumni are goodwill ambassadors of Germany, and they act true to this spirit. NEGAAS has joined hands together with DAAD and German embassy to perform various activities which strengthen the bond and friendship between Nepal and Germany. Some of the distinguished work accomplished jointly by NEGAAS and German embassy in the recent past include commemoration of Einstein Centenary in 2005 and celebration of golden jubilee of the diplomatic relation of Nepal and Germany in 2008 marked by the release of 1000 rupee silver coin, a special postage stamp and publication of souvenir magazine. NEGAAS has always received generous support from DAAD which has been utilized for organizing seminar and workshop for the sake of personal development of its alumni. For instance, this year only in the month of March a national workshop on emergency planning was organized.



The association has this year decided to publish annually an official journal. It's a matter of great pleasure for the whole NEGAAS family that its first issue is appearing quite shortly. I hope very much that this souvenir will prove its worth by containing the important work of its learned members in the respective field of expertise and putting forth their important thoughts and propositions before the readers for a change. It is now just born, how it will grow remains to be seen in future but I am sure this edition will serve a knowledge tank. I am grateful to all those members of the association who proposed the publication of this souvenir and worked towards its realization. I specially put in record the contribution made by the members of publication committee Prof. Dr. C.B. Joshi, Prof. Dr. Bharat Pahari, Dr. Tribikram Bhattarai, Prachan Karanjit and the committee coordinator Er. Rishi Shah. My sincere appreciation goes to the editorial board. Also, I express gratitude to the people who supported us financially in our noble venture.

Best wishes,

Prof. Dr. Dilip Subba
President
Nepal – German Academic association (NEGAAS)

TABLE OF CONTENT

S.N	Title	Page no.
1	Aachen	1
2	Germany (both east and west) in our memory and my career with German education	3
3	It's a bit crazy world	6
4	Pediatrics in Germany and Nepal	10
5	Challenges to secure convergence between Ecology & Economy in Nepal	11
6	Education & Research in Germany	13
7	First day at a German University	17
8	Introduction of integrated bus transit to manage Kathmandu's Traffic	18
9	Johann Wolfgang von Goethe to the tale of Goethe Zentrum Kathmandu	20
10	Going to a primary school in Germany	23
11	My experience with Mid-Marsyangdi Hydro Electric Project	25
12	My Memories in Cologne (Köln) ...	31
13	My journey to Education in Germany	33
14	Opportunities and options for Higher Education	35
15	Resource Sharing in a Federal System	37
16	Notes from my Diary: Study in Germany in shaping my destination	39
17	Sarangi: a spell of magic in Music	42
18	Germany as Mathematics Education Destination & Relevance of Applied mathematics research in Nepal	44
19	Topi and the Teacher: Intercultural observations in the Nepalese Himalayas	48

AACHEN

 Rishi Shah

Popularly known to French speakers as Aix-la-Chapelle and to Italians as Aquisgrana (reflecting its original Latin name) Aachen is coveted for its internationally acclaimed universities of excellence that offer studies in science, engineering, information technology and economics that are high in demand worldwide. Aachen is also famous for its traditional ancient sacred hot springs and modern soothing spa services.

It nestles directly on the border with Belgium and the Netherlands and claims to be Germany's most westerly city, with a population of nearly three hundred thousand. Circa fourty thousand students attend Aachen's four major colleges and universities Rhineland-Westphalian Technical University (RWTH), University of Applied Sciences, Catholic University of Applied Sciences and Academy of Music.

The Rhenish-Westphalian Technical University (RWTH) was founded in 1870 as the Königlich Rheinisch Westfälische Polytechnische Schule zu Aachen. It consists of over two hundred and sixty professorships and institutes as well as fairly hundred and seventy areas of teaching and research. The technical university endeavours to give the instruction an international character. Study programmes and international agreements with well-known universities make it possible for RWTH students to acquire valuable experience and knowledge abroad.

RWTH Aachen University ranks conspicuously among the top European Universities with strong emphasis on technological research, especially in electrical and mechanical engineering, computer sciences, physics, and chemistry. The university clinics attached to the RWTH, the Klinikum Aachen, is the biggest single-building hospital in Europe. Over time, a host of software and computer industries have developed around the university. It also maintains a botanical garden (Botanischer Garten Aachen).

FH Aachen, Aachen University of Applied Sciences (AcUAS) was founded in 1971 that offers classic engineering education like mechatronics, construction, mechanical and electrical engineering. German and international students are educated in more than twenty international or foreign-oriented programs and can acquire German and international degrees (Bachelor/Master) or Doppel-diplome (double degrees). Foreign students account for more than twenty one percent of the student body. The German Army's Technical

as they can be witnessed in the treasury of the cathedral. Dating back to the first century AD Roman soldiers had cherished Aachen's hot springs (Aquis-Granum). Aachen Cathedral has become northern Europe's oldest UNESCO World Heritage Site.

For six hundred years, from 936 to 1531, the Aachen Cathedral was the church of coronation for thirty German kings and twelve queens. It stands till today proudly at the heart of old city centre. In 1372, Aachen became the first coin-minting city in the world to regularly



Rhineland-Westphalian Technical University (RWTH), Aachen


School (Technische Schule des Heeres und Fachschule des Heeres für Technik) is in Aachen.

Historically Aachen was the prominent residence of Emperor Charlemagne (742 to 814 AD) who reigned over substantial part of Western to Central Europe. The well-preserved unique Aachen Cathedral with Byzantine-style that was commissioned by Charlemagne in 786 AD still bears testimony to the glorious days of Charlemagne Empire. The coronation throne reminds avid historians of the commanding reign of Holy Roman Emperors. The cloak of the Virgin Mary and the swaddling-clothes of the Infant Jesus are proud relics of the past. The holy artifacts were once collected by Charlemagne. They have been attracting pilgrims and tourists from all over the world,

place an Anno Domini date on a general circulation coin, a groschen. It was written MCCCLXXII. None with this date are known to exist any longer. The earliest date for which an Aachen coin still exists is dated 1373. Charlemagne has lent his name to International Charlemagne Prize of Aachen prize that is awarded by Aachen's citizens to personalities who have rendered outstanding services to European unity. This award is presented on Ascension Day every year since 1950.

Aachen is renowned for its hottest springs with water temperatures rising up to seventy four degrees Centigrade that contain considerable amounts of common and sodium salt and sulphur. There are over thirty such mineral-rich thermal springs in and around

Pediatrics In Germany And Nepal

 *Dr. Shankar Prasad Suri*

This article narrates about my specialization in pediatrics, a postgraduate course, in pediatric hospital of J.W. Goethe University, Frankfurt am Main and thereafter clinical practice in Nepal.

In July 1978, I joined the pediatric hospital of J.W. Goethe University, Frankfurt am Main shortly after finishing an intensive language course in Saarbruecken. It was very kind of Prof. Dr. Med. Otto Hoevels, the then director of the hospital, who accepted me for the course. I felt, my German language was not sufficient to perform day to day activities like talking to parents about the disease of their children and to communicate with the nursing staff and the colleagues. Therefore, I took 6 months course of German language in the evening at the university while busying myself with my regular duties at the hospital during the day time.

At the beginning I was posted in the ward with senior resident, so that I would not have any trouble tackling bureaucratic works and at the same time get acquainted with the day to day work and its rule and regulation. The colleagues whom I worked with were quite cooperative.

After having worked for a year, I was given the full responsibility of the ward duties like examination of the new admissions in detail, follow-up examination of admitted patients, talking to the parents about the course of the disease of their loved ones, drawing blood for

various investigations, carrying out other procedures like spinal tap, pleural tap etc., and if necessary consulting with different specialists. As needed I took part in daily meeting of the doctors, where interesting and problematic cases were discussed. Participating in clinical presentation and x-ray discussion in x-ray department also became a part of my ongoing course.

I used to take over night duties in the name of other colleagues who later paid me directly for my extra hours when they received their salary. As a scholarship holder I would not have received the payment from administration on



Dr. Suri along with Former President Walter Scheel

my name. With this I could support my family financially better. The amount of scholarship was not sufficient for my family and two children.

There were a lot of bureaucratic formalities to be completed in regard of new admissions, discharge, arranging various investigations to be done in other departments, dictating discharge letter to the treating doctor outside. The secretary used to type-writing the dictated letter back in those days.

The doctors and friends in the hospital used to ask me, whether I will be able to utilize the knowledge of sophisticated machines and specialized method of treatment in the intensive care units. At that time there was no intensive care unit in Nepal. Except intensive care and management, other clinical experiences and knowledge have been quite useful for me in my clinical practice after my return here in 1983. Most of the diseases, especially infectious diseases found there, are also common here. So, the management and treatment remain the same. The antibiotics and other drugs are similar and are readily available here for the treatment. The metabolic diseases, liver and kidney diseases, cancer of different organs and various other diseases are seen here same way as in the hospital there.

The duration of course in Germany was five years. Five years hospital work was a must and after that

viva examination was conducted which after such a long years of practice in the field was not that difficult. After passing that I got the certificate "ARZT FUER KINDERHEILKUNDE" (Pediatrician). In Nepal, there is 3 years course, 2 years hospital work and one year theory including thesis and in the end written and viva examinations.

The degree given is doctor of medicine (MD). In Germany, practical experiences are valued more than the theory aspect, opposite is the case in this part of the world.

Challenges to Secure Convergence between Ecology & Economy in Nepal

Yuba Raj Bhusal



Nepal is one of the least developed countries, situated on the lap of Himalaya with a land mass of 147,181 sq. km. It has three ecological zones namely Mountain, Hills & the Terai covering 35%, 42% and 23% of the land mass respectively. It is an ever independent country though ruled by an autocratic "Rana" family for more than a century (1846-1950). After the introduction of democratic polity in 1950, it practiced party-less Panchayat

regime with the direct leadership of the Monarch (1960-90). Nepal has been adopting mixed economic system since the early 1950's irrespective of its polity. Recently, the Constituent Assembly comprising of 601 Members is at work to frame a Republican Constitution with a Federal structure which was supposed to come out by May 28, 2011.

Nepal is basically an agrarian country, employing more than two-thirds of its populace contributing

nearly one-third of the gross domestic product (GDP). In spite of the completion of the eleventh Development Plan, per capita income is less than US\$600. Population is growing at a rate of 2.25 percent as of the last census of 2001, which seems doubling in every three decades. Nepal's population was only 5.6 million in its first census conducted as early as 1911, which could be 30 million in this year's proposed census (see below).

Population Changes in Nepal (1911-2001)

Census Year	Population	Growth rate (%)	Persons per sq. km.
1911	5638749	-	38.31
1920	5573788	0.13	37.87
1930	5532574	0.07	37.59
1941	6283649	1.16	42.69
1954	8256625	2.27	56.1
1961	9412996	1.64	63.96
1971	11555983	2.05	78.52
1981	15022839	2.62	102.07
1991	18491097	2.08	125.64
2001	23151423	2.25	157.3
2011	Census to be conducted in June 2011		? ?

Source: Central Bureau of Statistics Nepal, Statistical Year Book of Nepal 2007, P. 98

The distribution of population is quite uneven attributing to different socio-economic factors. The Mountain Region accommodates only 7 percent of the country's total population that has been coping with a very tough life style whereas the Terai which is also claimed as the food bowl of Nepal is under extreme pressure

accommodating more than 49% of the people. There are several 'push and pull' factors for migration to Terai and other urban centers.

The growing population and its tendency of migration have posed a severe threat to natural resources in general and to the forest land in particular. While the world

community in Copenhagen and Cancun on the issues of climate change (COP15, COP16) has emphasized on reduction on deforestation and forest degradation for carbon sequestration, Nepal's forest resources are under extreme pressure owing mainly to accommodate the growing

population. Forest encroachment for different purposes (such as settlement, cultivation, schools and colleges, hospitals, temples, burial places, sport complex, high tension lines, roads, irrigation canals) is on the rise and this trend is accelerating, which is also propelled by the country's long political transition.

Absence of governance has been the main reason of deforestation and forest encroachment at the local level. Poverty reduction has been a major priority of Nepal's economy since the Eighth Plan (1992-97) while the number of people living below absolute poverty line was 42%. The Tenth Plan was itself a poverty reduction strategy paper formulated at the call of World Bank. The Tenth Plan brought the absolute poverty line from 38% (Ninth Plan) to 31%, which has further taken down to 25.4% with the completion of the Eleventh Plan (2007-10). Hopefully, the Twelfth Plan (2010-13) would bring the percent down to 21%. As the rural people heavily depend


upon forest resources for their livelihoods such as housing, cultivation, grazing, fodder, timber, and other non-timber forest products, conserving biodiversity has been an immense challenge of the day.

Almost 88,000 hectares of woodland is under encroachment made for settlements up to 2009. Climate Change has further aggravated the lifestyle of the poor people. The mountains at the Himalayas are melting; monsoon has become more erratic, crop failures are more frequent due to negative impacts of climate change. Nevertheless, Nepal has produced National Action Plan of Adaptation and many Local Action Plans of Adaptation are under the process of formulation.

Massive Awareness for adaptation is needed for securing people from the adverse impacts of climate change. Population policies should not only be made more stringent, but also be imposed, i.e., 'one couple two children'. Incentives

should be announced for those who have less than two children and penalties for the noncompliant couple in order to maintain the population under a desirable size. Small and Cottage Industries should be promoted at the nook and corners of the country to make a decent living for the rural poor. Technical and socio-economic infrastructures should be further expanded to the remote rural regions to prevent migration. Similarly a scientific (palatable to all) land reform policy should be worked out without any delay to make the land of all ecological regions more productive. Remittance which has been a recent phenomenon should not be fully relied upon for its economy to sustain. The economic policies should focus on the areas of comparative advantage like tourism, water resources, medicinal and herbal plants. On the whole, the political transition should soon end up making the government machinery properly and fully functional.

was du für mich bist...

 Prachan Karanjit

Als ich dich gesehen habe,
Habe gewusst,
Wie schöne die welt ist!
Als du nah mir kam,
Habe gemerkt,
Wie verrückte die liebe ist!

Du hast wort für meine Gefühl,
Traum fuer meine Liebe!
Du bist ueberall im Leben,
Wo ich sehe!

Du kam mit Liebe,
Habe gelernt,
Was du für mich bist,
Als ich dich sahe,
Habe gewusst,
Wie schöne die welt ist!



Education & Research in Germany

 Prachan Karanjit

Germany is a land of ideas. Education, science and research play a central role here. In a Europe free of borders and a world of globalized markets, education lays the basis, enabling us to exploit the opportunities that open borders and world-wide knowledge networks offer. The German education and university system is undergoing a profound process of renewal that is already bearing fruit: Germany is one of the most preferred STUDY DESTINATIONS by foreign students, a hub of cutting-edge international research and a constant source of new patents. Also as per the report released by Organization for Economic Cooperation and Development (OECD) in the year 2009, Germany is amongst the top education destinations.

Germany is also amongst the top when it comes to international students: 8.6 percent of all foreign students from all countries, study in Germany. After the USA and UK, Germany is the favorite international destination for education.

The strength of the German education system lies in the top results of the graduates in the secondary level 2 (an alternative continuing education path), especially with the high number of graduates in the dual system of professional education. 84% of people between the age group of 25 and 64 have at least one degree in the secondary level. Also the number of less-qualified adults in Germany is at only 16%.

Further reforms of the education system in Germany will ensure that

more people have growth opportunities through further education. The transition from vocational training to degree courses has been simplified.

There are many reasons and aspects which make German education and its products as one of the best in the world. Here we are trying to find those reasons as



many as we can.

The international competition for the best brains

Famed minds such as Humboldt and Einstein, Hegel and Planck laid the foundations for Germany's reputation as a land of scholars and as the country of thinkers and poets. As early as medieval times, scholars from all over Europe made the pilgrimage to the newly founded universities in Heidelberg, Cologne and Greifswald. Later, following the university reforms carried out by Wilhelm von Humboldt (1767–1835), the German Universities actually became considered the ideal example followed by discerning academics elsewhere. Humboldt conceived the university as a venue for the independent pursuit of knowledge.

Reforms to meet the international competition



Globalization is also creating new challenges for the German scientific and university community. The policymakers and universities have taken the initiative, with a series of reforms to adapt the university system to the new international standards. Be it the switch to staggered degrees such as degrees or the introduction of tuition fees and selection tests, be it the emergence of private facilities for academic training or the stronger strategic alliances between universities and institutes outside the higher education system – it is safe to say that the education system is the section of society undergoing the



most major changes.

The diversity of the tertiary education system

After the Second World War, an academic community arose that

was more broadly diversified than ever before, a fact stimulated by German reunification in 1990. Anyone wanting to study in Germany is able to choose among some 370 higher education institutions that are spread across the entire country. Be it in cities or in the countryside, traditional or highly modern, small with everything in walking distance or large and spread across a pulsating metropolis – today almost every larger German city has its own college or university. The state of North Rhine-Westphalia alone has over 18 universities and institutes entitled to award doctorates, 33 universities of the applied sciences and universities not entitled to award doctorates, and 9 academies of art and music. Many of them were founded in the 1960s and 1970s, the age of major expansion in tertiary education, when within the space of only two decades, the number of students exploded by a factor of five, with the figure for female students rocketing most. Today, they have almost overtaken the number of their male counterparts.

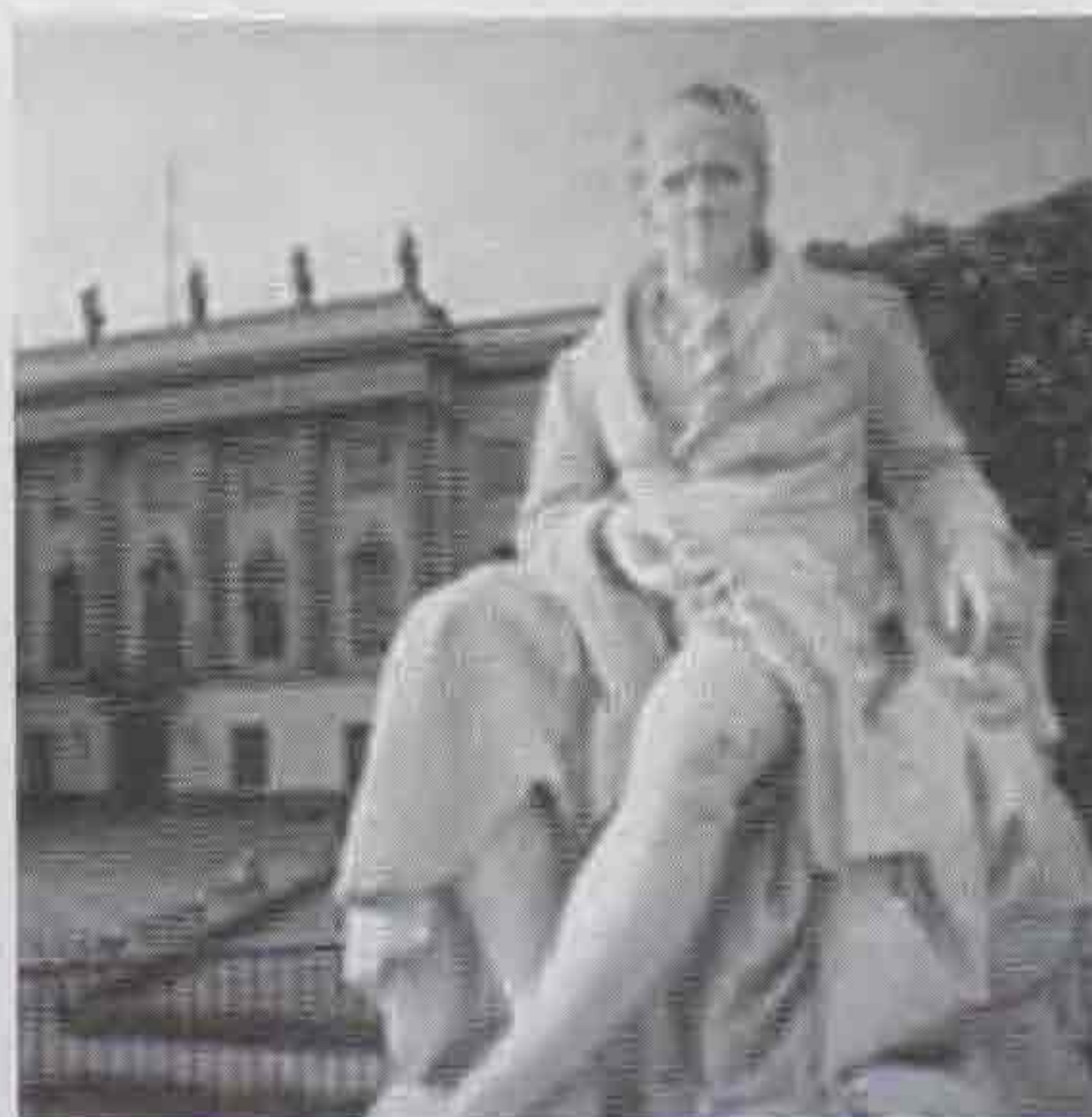
Today, some two million young people study in Germany. In 2009 the ratio of school leavers entering higher education was 43.3 percent. With a drop-out rate of a mere 23 percent, on an international basis Germany is in the top group. With regard to doctoral students as well Germany is in a top position: 2.3 percent of academics acquire this level of qualification.

As opposed to many other countries, private universities play a comparatively subordinate role. More than 90 percent of students attend public institutions that are subject to state supervision and control and are essentially open to anyone who has a high-school leaver's certificate (or a comparable certificate) that authorizes them to enter university.

Since the 1970s, alongside the state universities and theological colleges, many non-state-funded, non-denominational universities have been founded, financed by tuition fees and donations.

Technical and universities of the applied sciences

While the classic university is dedicated to pure science and scholarship and covers the entire spectrum from ancient studies through to economics, the technical universities (TU) focus on engineering and the natural sciences. The TUs have a sterling reputation as the forges of German engineering know-how and are



especially popular among foreign students.

Since the late 1960s, another special institution has evolved in the German education system: the University of the Applied Sciences (FH). Almost a third of all students in Germany attend a FH, or a so-called vocational academy as it is known in some German states – these collaborate closely with corporations. Students are attracted to the universities of the applied sciences above all by the fact that the track to a job is shorter – an FH degree course lasts three years as a rule – and the curriculum is more practically oriented. Stringently organized courses and regular examinations ensure that the average time spent obtaining a degree is less. This does not mean that there is any shortfall in

scholarship – the approximately 200 universities of the applied sciences also conduct research, albeit with a strong focus on potential applications and industry's needs.

Strong international orientation

Germany appeals to young people from all over the world as a place to study. About 240,000 foreign students are enrolled at German universities, 70 percent more than in 1995. Today, more than every tenth student comes from abroad, the largest numbers coming from China and Russia. Germany is the third most preferred host country for international students, following the United States and Great Britain. Furthermore there are over 2500 foreign academics working at German universities and a further 23,000 foreign academics are supported by German funding organizations.

The success in the internationalization of German academia is down to the joint efforts of universities and politicians. The international exchange of students, doctoral students and academics is promoted through specific projects, scholarships, and prizes. The measures are accompanied by programs aimed at increasing the rate of student success and the social integration of foreign students. German universities advertise successfully worldwide for students and young academics. German schools abroad, partnerships between German universities and those in other countries, including Singapore (TU Munich), Cairo (Ulm and Stuttgart universities) and Seoul (the Weimar Academy of Music), and the growing number of departments of German universities abroad also play a role in this. Frequently the DAAD, German Academic Exchange Service, leads and manages such foreign initiatives. It also played a

role in setting up hundreds of foreign-language courses (frequently in English) at German universities. The Alexander von Humboldt Foundation is also one of the important sources of funds for cross-border academic collaboration. With the "External Academic Policy Initiative" launched in 2009 the Federal Foreign Office strengthened the existing tools employed in promoting academic exchange and expanded it by means of various measures, with a view to improving the cross-border networking of Germany as an academic and research center: New German Academic and Innovation Centers abroad increase the visibility of the German academic world over. With the involvement of German universities and together with partner institutions, centers of excellence in research and teaching are being established abroad. Furthermore, the number of scholarships for foreign students is being increased and the worldwide availability of German language courses is being improved.

Since 2010 courses at German universities have for the most part been adapted to the internationally recognized Bachelor's and Master's degrees. This was the intention behind the "Bologna Declaration", to which all European states are signatories. The idea is not only to facilitate student exchanges throughout the continent, but also to make Europe a more interesting prospect for international academics.

What has long since been the norm at art and music academies is, according to the plan, is also becoming the practice at every university. Until recently, only a small number of departments chose their own students. A central office, the ZVS, handles allocation to universities of students to those subjects with admission restrictions – nationwide these are at present

Medicine, Pharmacology, Psychology, Veterinary Medicine and Dental Medicine. An increasing number of universities are also issuing their own restrictions for specific subjects, and first testing



or interviewing applicants before awarding those places.

In 2005, a Federal Constitutional Court ruling overturned the traditional taboo on tuition fees. Until then in Germany it was (almost) only the state that paid for tertiary education. At the moment five federal states charge tuition fees from the first semester onwards, albeit relatively modest ones by international comparison. Other Federal states also levy tuition fees for students who have exceeded ten semesters or have opted after graduation to study another subject.

While it is the universities that are solely responsible for courses of study, needless to say in Germany research is also undertaken outside the university. Thus, German industry is strongly engaged in research: With regard to triade patents Germany is in third place after the USA and Japan. With more than 26,500 registrations for patents submitted to the European Patent Office, Germany is the leading European nation. Siemens, Bosch and BASF, with almost 5,000 registrations for patents between them in 2008, are among the Top 5 of more than 35,000 companies registering patents. Together with

the USA and Japan, with regard to patents for nano, bio and new technologies Germany is one of the world's most active nations. With around one third of triade patents Germany leads the way worldwide in the field of vehicle emission reduction.

Top research outside the universities

Cutting-edge research is also being done at hundreds of scientific institutes that are grouped together in organizations such as the Helmholtz Association, the Fraunhofer-Gesellschaft and the Leibniz Association. Precisely these research institutes outside the



universities offer leading research minds and optimal working conditions that are as good as unparalleled the world over. Here, some of the most fruitful German minds are busy undertaking research and publishing highly original articles. This is especially true of the 77 Max Planck Institutes (MPI). Be it searching for water on Mars, the human genome project, or exploring human behavior, the MPIs are at the forefront of things when it comes to exploring virgin scientific terrain. Since the Max Planck Society was founded in 1948 its scientists have won 17 Nobel Prizes and many other international awards. In 2007, the Nobel Prize for Chemistry was won by MPI Director Gerhard Ertl. The Max Planck Society is so appealing to them because of how it sees research. Each institute that defines its own

topics is equipped with superb working conditions, and has a free hand when selecting staff. For many a scholar, being appointed as director of an MPI is the pinnacle of his or her career.

What is rare at an MPI is by contrast the very source of life for the institutes, namely close collaboration with industry. The research facilities, more than 80 in total, conduct applied research primarily into engineering-related fields. Fraunhofer experts have one foot in the lab and the other in the factory, as their projects are as a rule commissioned by companies, specifically mid-sized corporations.

The 86 member institutes of the Leibniz-Gemeinschaft are not only strong in the life and natural sciences, but also trend-setters in the humanities, the social sciences

and economics. They include ifo-Institut für Wirtschaftsforschung, which regularly publishes a business climate index, Deutsches Museum in Munich, one of the world's leading science and technology museums, the Bernhard Nocht Institute for Tropical Medicine in Hamburg, and Mannheim's Institute of German Language, that provides scholarly support for advances to the German language.

A total of 16 high-tech German research facilities are joined under the aegis of the Helmholtz Association; they are large and often extremely expensive institutions that are well known internationally, such as the Gesellschaft für Schwerionenforschung (GSI), the German Cancer Research Center (DKFZ), the Deutsches Elektronen-

Synchrotron in Hamburg (DESY) or the Alfred Wegener Institute for Polar and Marine Research in Bremerhaven. Every year, the Helmholtz institutes attract thousands of foreign researchers, who wish to conduct physical or medical experiments in what are often facilities that are unique worldwide.

Research is an important key to innovation – and innovation is regarded as the engine room of growth. For this reason the Federal Government has a policy of targeted support with which it wishes to advance science and research. Between 2010 and 2013 federal government spending on education and research is set to rise by a total of EUR 12 billion. The aim is to invest ten percent of GDP in this field by 2015.

कोलोन तिमी सुन्दर छौं ।

डा. (इ.) भरतराज पहारी

रायनको किनार सुन्दर बगैचामा
एउटा यात्री स्वप्निल तन्द्रामा
विचरण गर्दै थियो ।

विज्ञान र सभ्यता डवलीमा छरिएको
उत्साहउमंगका संगीतले भरिएको
यो कस्तो संयोग हो ?

निर्मलनदी चखेवाहरु र जलपरी
जीवनको यात्रा जलवाहनको शिरिरी
सपना हो कि विपना हो ?

सुरम्य र रंगीन मौसमको नशा
जोडी गजुरहरु क्षितिज चुमिरहेका

कुन कालिगढको हो यो अलौकिक सृजना !
यात्रीको मन पुलोकित भो, मयुर नाच्यो
बादलमाथि उडौंकि सपनीमा भुलौ भो
लौन के गर्ने हो !

धन्य हो कोलोन- तिमी र प्रकृति
स्वर्गबाट सखारै भर्यौ की

First day at a German University



Dr. Roshana Shrestha

It was my first day at the Albert Ludwig University, Freiburg on 15 October 1974. I went to the university an hour before the time. I was pretty nervous. I couldn't help wondering how the lectures will go and whether or not I will be able to follow my classes in German language.

But first of all I had to find out where my classes were. I went around and found that there were different classes for different subjects. In Nepal it was not like that. The students stay in a lecture room and the Professors come to that class. It was a relief that I could find the lecture halls of my subjects. Then I had to find out the schedule of the classes. I looked for the notice board to find the schedule. But in the notice board I could not find any schedule. I did not like to miss the first lecture, but did not know which Professor would give the lecture. Helpless I looked around to find out other students, who may help me to solve my problem. There were many students around. I asked one of them if he is a Biology student.

No, he was not. Then I asked some others, and finally found one Austrian guy, who was also a biology student. I asked him if he knew the schedule of our classes. Surprised he looked at me and asked if it was my first day at the university. I told him that I come from Nepal and in my country the university publishes the lecture schedule and the students follow the schedule. He told me that in Germany University one has to make the schedule by oneself. It was my turn to be surprised.

How can a student make the lecture schedule by oneself? He told me that the university publishes a list of lectures (*Vorlesungsverzeichnis*), mentioning which Professor will teach which subject at what time. For any subjects the numbers of semesters are allocated, the students should first decide which subjects he/she wants to do in which semester. So one had to go through that book about the list of lectures thoroughly and then decide which class he/she wants to attain in that semester and make

their schedule by themselves.

At the end of the semester the students must pass the internal assessment and the students would get a kind of certificate (*Schein*). In the final examination the students must submit all the required certificates of the internal assessments; otherwise he will not be allowed to attain the final examination.

To confirm this system I went to the dean's office. The dean's secretary confirmed these statements. First I found it to be very complicated system, but afterward I found that it was not complicate at all and the students were free to choose the lectures of their choice in a particular semester. This was quite a new experience for me! Since I had to study only those subjects which were not taught in Nepal, I knew which subjects I need to study. I burrowed that book about the lectures from a student and quickly went through, decided to attain a particular lecture and went hurriedly to the class.

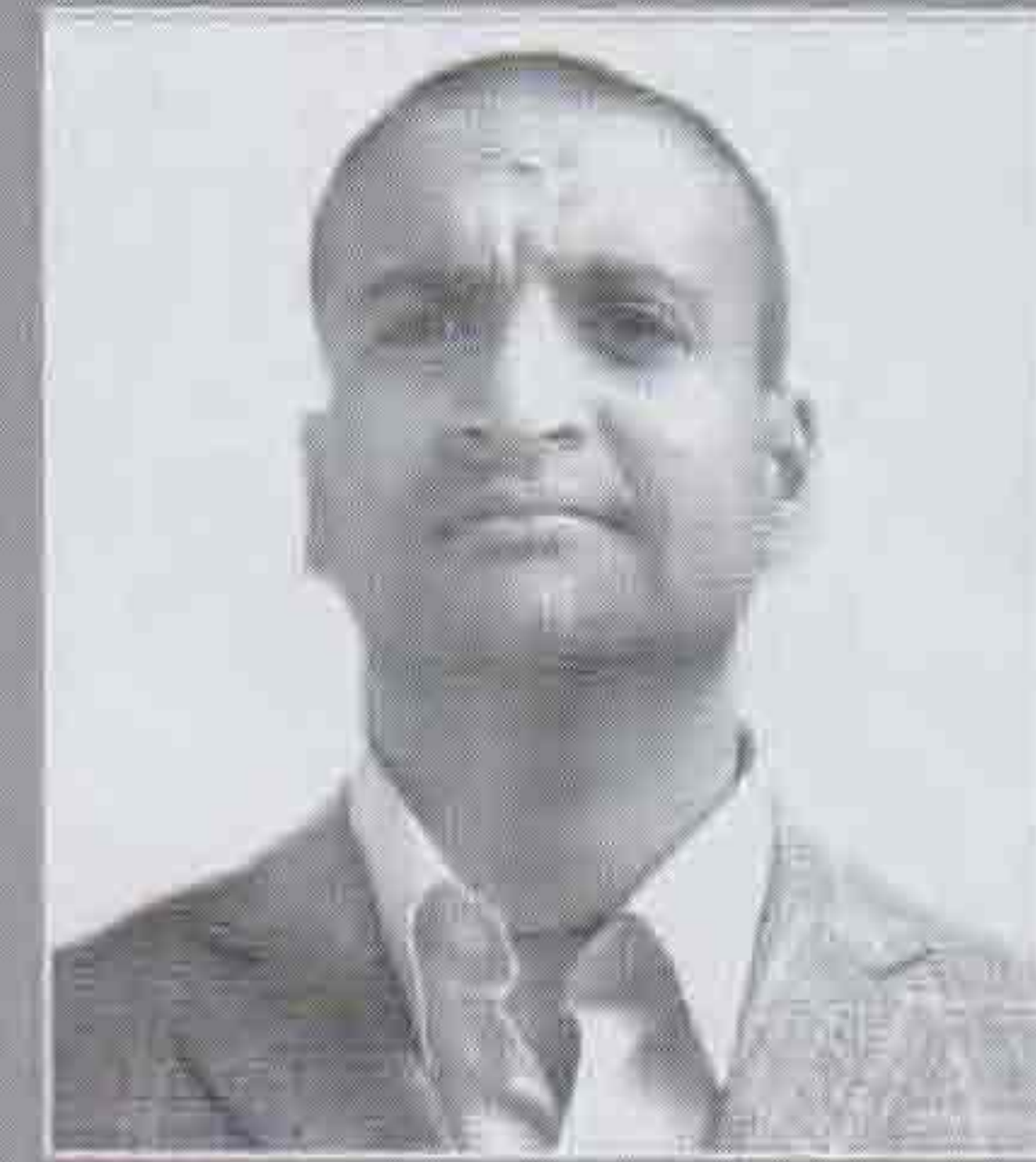
*We express our hearty congratulations and
best wishes for the grand success of the*

NEGAAS-Souvenir

SAGARMATHA SCHOOL

Jawalakhel, Lalitpur, Phone: 5526415, 5522815

Introduction of Integrated Bus Transit to Manage Kathmandu's Traffic



Ashish Gajurel

Nepalese traffic system is mainly controlled and operated manually by traffic police. Although traffic lights are installed at some of the main intersections of Kathmandu, they do not seem to be able to control and manage traffic properly and independently during peak hours at most of these crossings, as suggested by their replacement with traffic police during these hours.

Disproportionately large number of vehicles for its mostly narrow roads is seen as the main cause of traffic problems in Kathmandu; but the main problem is, rather, incompetent management of traffic. Buses, mini buses, taxis, private cars, motorcycles, auto-rickshaws, bicycles, pedestrians and rickshaws share the roads of Kathmandu. Because of the differences in speed of these different types of modes of transportation, free flow of traffic is disturbed. Absence of Right of Way and lenient rules are the other reasons of congestion. The increasing number of vehicles on the roads coupled with driver indiscretion and rudimentary infrastructure make for a potent combination, making traffic jams a routine nightmare on the roads of Kathmandu.

These problems can be solved to an extent. The widening of roads

seems like a common sense solution to the traffic problems, but in the long run, it is not the solution because this is believed to motivate consumers to buy more private vehicles. Widening of the roads is nothing more than merely using a disposable bandage to treat a severe fracture.

Improvement of transportation infrastructure and proper traffic

implementation of traffic rules and proper use of traffic lights are just two of them. The vital and relevant aspect of traffic management in terms of the transportation system of Kathmandu would be the development of an effective and integrated bus transit system.

Bus transit is very flexible form of public transportation and serves a variety of access needs and wide



management should be the focus when tackling traffic problems in Kathmandu. The question then arises: What does traffic management mean specifically? There are various aspects of traffic management of which strict

range of locations. The infrastructure investment for bus system is substantially lower than the capital investment for rail system. The well organized and integrated bus system can improve the overall mobility condition by

upgrading bus operating speed and reliability which would significantly result in the smooth flow of the traffic.

Bus transit is an efficient, economical, flexible and user friendly in terms of operation and development. Efficient bus system should include high capacity vehicles, efficient boarding methods, well-organized bus stations, well-covered route structure, organized schedule and inter-connection, reasonable and integrated ticketing system, comfortable seats and friendly bus staffs.

The traffic problem in Kathmandu is very terrible. The presence of two-wheelers, four-wheelers as well as non-motorized vehicles functioning under the same traffic system makes the task of traffic controlling way difficult. The non-motorized vehicles have lower operating speed compared to the motorized vehicles, which reduces the average speed of the whole system. Reduction of the average speed of the system causes delay that results in the congestion on the street. The city of Kathmandu should encourage the use of public transportation and bicycles and discourage the use of private vehicles. The separate bicycles lanes are to be developed which would certainly encourage bicycle riders. Sidewalks for pedestrians are the most important element of the roads. Footpaths for pedestrian should be safe enough and maintained well so that people are motivated to walk short and if possible even long distances comfortably. These factors motivate to shift traffic from motorized to non-motorized vehicles and avoid the excessive

use of motorized vehicles. This idea would lead in the reduction of the number of motorized vehicles in the street making traffic management task easier. Traffic management should improve the traffic flow, traffic safety and reduction of lost time.

Travelling with public bus should be economical in comparison to the use of private vehicles. This is the basic requirement to persuade people to shift from private vehicles to the public transport. Social status factor is the main cause of increment of private vehicles in Nepal. It requires a change of attitude "only poor uses public transportation" to "public transportation is a mode of transport for everyone". People should be made aware that the traffic jam, urban sprawl, central city decline and air pollution are the problems resulted out of an excessive dependency on private vehicles and should be convinced that the well-organized bus system would provide faster operating speeds, greater service reliability and increased convenience. When designing traffic signals and traffic management strategies, the public transport should be prioritized. This improves the reliability of the public transport.

Well-developed bus transit not only results in greater travel speed (time saving), higher comfort, road safety but also reduction of the number of vehicles, less energy consumption, and less air pollution and noise. Bus transit can be operated by the public authorities or the private transport companies or by both of them. In the case of multi-operator, the proper integrated ticketing system and schedule should to be developed.

Poor country like Nepal should develop the strategies for efficient implementation of bus transit because development of rail system requires huge amount of money. Furthermore, Nepal is a mountainous country. Therefore in general the development of transport infrastructure is much costly and the development of railway is even costlier because it requires tunnels in the mountainous regions and construction of which call for high and expensive technologies. Besides, Nepal being a small country, travelling around with bus would not take days. Bus system is the need in Nepal for the long distance travelling as well as in the urban cities to provide better mobility.

In a city like Kathmandu, bus transit should be developed since it is cost-effective, customer-oriented and simple to operate and easily integrated into existing transport infrastructure. Managing traffic cannot be done in a day or two, it is a time consuming process. Only proper planning and its implementation could solve the traffic problem of our capital. There are several ways of managing traffic; the recent development is the use of telematics. Telematics is the integrated use of telecommunication and informatics as a part of infrastructure to manage and operate the traffic. This system needs complex and exorbitant technologies and very qualified staffs. Looking at the present situation of the country, implementation of such system cannot be carried out immediately. Therefore, the development of systematic bus transit would improve the mobility condition as well as the traffic flow.

Aachen. Based on archaeological findings around Elisen garden, experts have postulated that hot springs which were well-known during Neolithic Age (roughly around nine thousand BC) could have perhaps lured people to settle in the Aachen basin. During the birth of Christ, Romans had established a township with several thermal baths. One of these baths is situated at Hof, a small square in Aachen's old town centre, which also became the location of Charlemagne's palatine spa from which Elisenbrunnen (spring) obtains its thermal waters even today. Colorfully attractive Elisen garden sprawls in the middle of the city.

Originally as stone-hard type of sweet bread (baked in large flat loaves) Aachener Printen is quaintly peculiar sweet local specialty. A soft version is marketed under the same name which follows an entirely different recipe. The term is a protected designation of origin and so all manufacturers can be found in or near Aachen.

Besides the presentation of the International Charlemagne Prize, the major annual events include the presentation of the Carnival Award (The Antidote to Deadly Earnest), the Aachen Peace Prize, the Aachen Innovation Award, the CHIO World Equestrian Festival in the Soers region and the events of the Aachen September Special.

The local football team Alemannia Aachen had a short run-out in Germany's first division, after its promotion in 2006. However, the team could not sustain its status. It is now playing in the second division. The stadium Tivoli, opened in 1928, served as the venue for the team's home games and those of the second division. In the South of the city Aachen's biggest tennis club TC Grün Weiss, which hosts the famous ATP Tournament once a year can be admired.

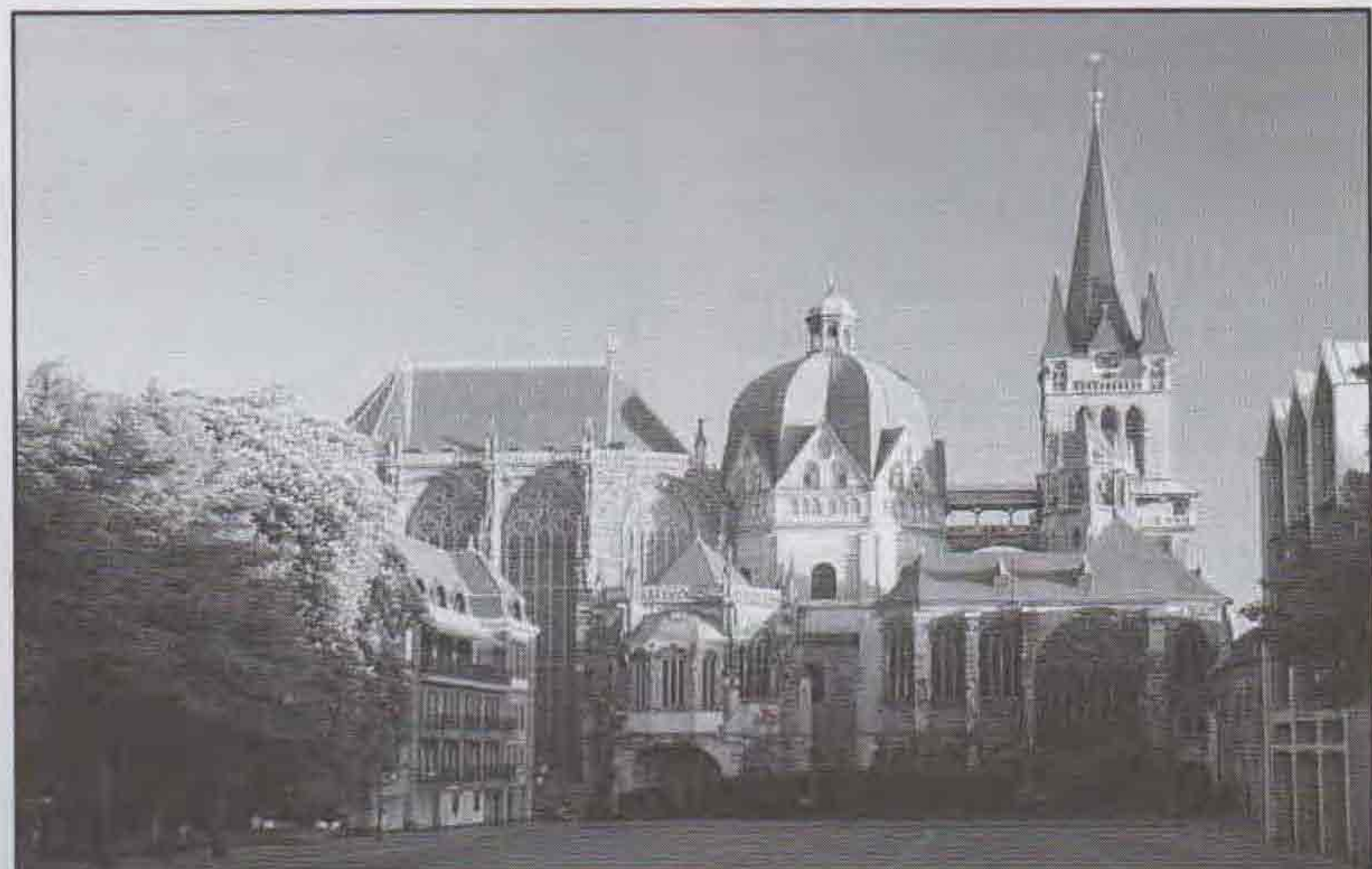
Aachen has a large number of spin-offs from the university's IT department and is a major centre of IT development in Germany. Due to the low level of investment in cross-border railway projects, the city has preserved a slot within the Thalys high-speed train network

which uses existing tracks on its last seventy kilometers, from Belgium to Cologne. The airport that serves Aachen, Maastricht Aachen Airport, is located about forty kilometers away in Dutch territory, close to the town of Beek. Aachen was the administrative centre for the coal-mining industries in neighbouring places to the northeast. Products manufactured in or around Aachen include electronics, chemicals, plastics, textiles, glass, cosmetics, chocolates and needles and pins.

Aachen is not just a museum city, but a modern one open to the world with political, economic and cultural contacts. Europe's first

ten thousand jobs have sprouted here since 1985, as Aachen's colleges and universities have developed top technologies for the industries especially engaged in information, telecommunication and plastics engineering, computer and materials science and biotechnology.

King Ethelwulf of Wessex (father of Alfred the Great) and Ludwig Mies van der Rohe (one of the founders of modern architecture and the last director of the Bauhaus during its period in Dessau and Berlin) were born in Aachen. In 1850 Paul Julius Reuter founded the Reuters News Agency in Aachen. He pioneered and



Aachener - Cathedral

transnational industrial estate Avantis was developed in cooperation with the Dutch town of Heerlen. At EXPO 2000 in Hanover, Aachen was presented as an illuminating model of structural change that transformed the area of conventional mining region to one of Europe's major high-tech locations.

This success story results from cooperation between the universities and the chambers of industry, research institutions, companies, business establishment centers and the city's administration. The scientific competence available in Aachen has attracted famous international enterprises and research institutions. Numerous forward-looking companies providing over

transferred messages between Brussels and Aachen using carrier pigeons. The Scotch-Club in Aachen was the first discothèque since 1959 with Klaus Quirini alias DJ Heinrich as the first ever DJ.

The attractive old city centre, the important historic monuments, the wells and baths over the hottest natural springs in Europe, the bustling activity in the streets and squares, the cultural diversity and quality (Ludwig Forum for International Art, Suermondt-Ludwig Museum, Couven Museum, Burg Frankenberg Museum, International Newspaper Museum) offer recreational and leisure activities that turn Aachen exciting and thrillingly pleasing. During our study and stay my family and I have enjoyed every moment of our lives in Aachen.

Johann Wolfgang von Goethe Listens to the Tale of Goethe Zentrum Kathmandu

Michael Chand (Harish Chand)
Director & German Language Instructor
Goethe Zentrum Kathmandu



Johann Wolfgang von Goethe (1749 – 1832) should have seen for himself how the German language is miraculously having its impact on the Nepalese students in Nepal. First of all, let us educate ourselves more about this man, Goethe. He was a great poet, writer, philosopher and even a politician with a remarkable range. Known for his audacious literary status and genre of German diction, he is sometimes referred to as the last universal man. He also has the distinction of being perhaps the most fully-documented creative artist in Germany and rest of the world.

Scared as I am always to go into the details of someone else's personality, even talking about it is a distant approach, I must, however, oblige myself to kneel down in praise of this great personality for his vision and philosophy of life. This resolve should not force me to neglect the great scholars, poets, writers and artistes of our own country. Lekhnath Poudel, Laxmi Prasad Devkota and many literary luminaries of Nepal, both men and women, are imprinted in my mind. I have knelt down many times in front of our own national assets and elites on different occasions and here, I proudly and bravely also bow down in front of Laxmi Prasad Devkota, whom I, willingly and without any hesitation, call him "Goethe" of Nepal.

The surname "von Goethe" is enough to draw the attention of German language learners worldwide. In Nepal, Johann Wolfgang Goethe has not been given the proper literary status of being on the publicity list among the academic circles and Nepalese intelligentsia. As such, I forcibly bring Goethe from his birthplace in Frankfurt, Germany to our Metropolis, Kathmandu, in order to brief him about the zeal and enthusiasm the Nepalese students have been showing and whose inclination towards learning German language is growing even faster than ever before in Nepal. Goethe should be briefed on the following in Kathmandu:

Goethe's name was established in Nepal in the form of Goethe-Institut Kathmandu in 1978. The founding father of that institution was Prof. Dr. Late Heimo Rau, Indologist and Professor at Heidelberg University, Germany. Dr. Rau must have spiritually "requested" Goethe to synchronize his name with the Nepalese society, because the tourism trend, as Dr. Rau saw during that period, was surpassing even the upward graphical limits, with encouraging arrivals of German tourists in Nepal. Had this name not been introduced in Nepal and had Goethe not been successful in becoming a centre-piece among German language circles, how could the then Goethe-Institut Kathmandu have run so successfully and unhindered in all

those turbulent years from 1978 till 1997, the year when it was closed down owing to financial reasons? Now, Goethe himself could have vehemently refuted the wishful authorities sitting in the headquarters in Munich, Germany, for their high-colored decision on the fate of the Goethe-Institut Kathmandu in 1977, when there was still a policy to establish at least one Goethe-Institut in a capital worldwide. However, the influence of the name Goethe in Nepal could not be deterred by that "fatal decision". Goethe had such an impact on the Nepalese soil that the authorities, somewhat repenting on their earlier decisions, at last gave a green light to establish Goethe Zentrum Kathmandu one month prior to the closure of the Goethe-Institut Kathmandu. It must have been a great relief to Goethe as well.

In Kathmandu, Johann Wolfgang von Goethe would have delightfully taken into account the fact that thousands of Nepalese students and other nationals, guided by his name, have learned the German language in Kathmandu, and hundreds have gone to German-speaking countries, in order to pursue their higher studies. Together with the German language speaking skills of the Nepalese students, and, of course, with a powerful "weapon in their tongues", Goethe would have been extremely pleased that his name was also remarkably contributing towards the promotion of

Nepalese tourism and study programs in Germany, thus helping people find excellent employment opportunities in the tourism sector.

As a politician, Goethe could have heaved a sigh of relief and even praised the efforts of the Goethe Zentrum Kathmandu in crafting and chiseling the excellent relations between the Nepal Government and the Federal Republic of Germany. The name "Goethe" is the brand ambassador of the Federal Republic of Germany in matters of German language and inter-cultural activities worldwide. There are about 126 Goethe-Institutes abroad and 16 at home.

As one of the exponents of Romanticism, Johann Wolfgang von Goethe would have loved to see the Nepalese tourist guides interacting so eloquently with inquisitive German-speaking nationalities high up on the vales and dales of Nepal. His trip to our country would have been even more delightful and heart-rending than his famous "Italienreise" (Journey to Italy). Just imagine, Goethe sitting at the lovely foothills of Nepal and identifying his refined literary genre, somewhat different than the exposition of Romanticism in his great poem "Heidenroeslein" (Heath Rose) or in one of his masterpieces "Erlkoenig" (Swamp King). His other masterpiece "Faust" would have been somewhat unimaginable in Namche Bazaar had he tried to stage it there.

It is interesting to note that Johann Wolfgang Goethe travelled extensively in his lifetime, but in person, he never made it to Nepal. However, he sent his name to this country that turned the whole course of the German language scenario, for which he certainly deserves admiration and appreciation. Prof. Dr. Late Heimo Rau equally cannot escape our appreciation for introducing Goethe in Nepal. Therefore, in this regard,

I personally welcome him spiritually to our country and greet with "**Namaste Goethe!**"

In my own imagination and thoughts meandering towards Goethe himself, who was sitting under the walnut tree at Goethe Zentrum, Thapathali, I told him this:

Goethe Zentrum Kathmandu (GZK) is the direct offspring of the then Goethe Institut Kathmandu with

“The prestige and honor of the GZK is further enhanced by the prestigious state medal of the Federal Republic of Germany awarded to the writer of this report by the then Rt. Hon. President of the Federal Republic of Germany, Prof. Dr. Horst Köhler in April 2008.”

headquarters in Munich, Germany. It was closed down on 30 th June 1997 and the former staffs did not waste any time in launching another German language institute already on 1st June 1997 with the full support of the former Goethe Institut München. This was how the Goethe Zentrum Kathmandu (GZK previously Goethe Centre) was born.

Well-stocked with the German language tools, like grammar, audio-visual classes with communication are given top priority in the teaching methods, the GZK is also seen as a relief centre for the students, who are normally loaded with German language tasks and sometimes even with mind-blowing exercises. Relief and relaxation are given to the GZK students as "Thanks-giving" for their engagement in German language lessons and love towards the Institute. February every year begins with "Karneval", the fun-buster program with students of all levels seen in their "go-as-you-like

costumes". A small parade with a lot of hullabaloo takes place right up to the Thapathali junction, with onlookers standing in total dismay or rather in shock and awe. "**Helau Karneval!**" to everybody!

Come May/June, students get ready for the eating fiesta with their food-festival. They bring in their own food, sell them at reasonable prices and the atmosphere turns even more exiting with the German guests also participating in the program. **So! "Guten Appetit" to everybody!**

The prestige and honor of the GZK is further enhanced by the prestigious state medal of the Federal Republic of Germany awarded to the writer of this report by the then Rt. Hon. President of the Federal Republic of Germany, Prof. Dr. Horst Köhler in April 2008. The award given away in the category of German language teaching in Nepal makes the writer the first-ever recipient in Nepal as well as in the South Asian Region. **Hopla! Die Verdienstmedaille des Verdienstordens der Bundesrepublik Deutschland (Das Bundesverdienstkreuz / Gold) The Order of Merit for Nepal!**

Thanks to the ongoing "**Pasch Program**" (Partner School Project) of the German Government through the Max Mueller Bhavan, New Delhi regarding German language teaching in two prestigious schools in Kathmandu, the DAV School and the Nobel Academy. Thanks to the Pasch Coordinator for Nepal Ms. Julia Opitz, who has definitely added another milestone in fostering German language learning and promotion of the inter-cultural relationship between Nepal and the Federal Republic of Germany. Hence, "**Alles Gute und viel Spaß beim Deutschlernen!**"

The monthly counseling at the GZK on general study programs and

specialized DAAD scholarships should not be missed by anyone. **Lassen Sie sich bitte über die Studienmöglichkeiten in Deutschland gut beraten!** The in-depth counseling is done once a month on a Tuesday by the President of the Goethe Zentrum, Mr. Jürgen Skambraks, whereas counseling for DAAD programs is done by Mr. Bishnu Thapamagar of the German Embassy in Kathmandu.

The month December invites the Christmas Festival "**Weihnachtsfest**". Like always, it is a gala event with students opening up Christmas Bazaars, eateries, singing Christmas carols such as "*O, Tannenbaum, O, Tannenbaum, wie grün sind deine Blätter*" / "*Stille Nacht, heilige*

Nacht" / "*O, du fröhliche, o, du seilige!*", exchanging greetings and gifts amidst a galaxy of personalities, guests and friends and students of GZK. So, "**Frohe Weihnachten!**"

With all the festivals and extracurricular activities over, students cluster again in their respective classes, in order to continue with their German lessons. The only thought that haunts them every now and then is how to pass the exams and get a Visa for Germany. Those who become successful in their lessons can sleep now in Nepal and wake up in Germany and other German-speaking countries with the mission completed. This is how their long-awaited dream comes true!

The Goethe Zentrum Kathmandu is there for everybody, who wants to shape their future in terms of study programs in Germany, fulfilling spouse re-union (*Ehegattennachzug*) pre-requisites through central examinations like *Start Deutsch 1 (SD1)* and *Zertifikat Deutsch (ZD)*. Es lebe das Goethe Zentrum Kathmandu! **Es lebe die Nepal – Deutschland Beziehung!** (Long live Goethe Zentrum Kathmandu! Long live Nepal – German friendship!)

I could see a faint smile on Johann Wolfgang Goethe's wrinkled face! I am sure that he is now satisfied that the Himalayan Country Nepal has done a great justice to his name and the German language! He then disappears from my vision, never to return again!

German associated Organizations in Nepal (Part I)

<p>Nepal German Association of Academics (NEGAAS) Putalisadak, Kathmandu Tel: 4441812 Email: sdn@info.com.np</p>	<p>Society of Nepal German Academicians (SONGA) Bhaktapur Phone: 6613197 Fax 6618671 E-mail: songa-nepal@hotmail.com</p>
<p>Flensburg Alternative Energy Management - (FAEM- Nepal) G.P.O. 13854 Pulchowk, Lalitpur Phone: 5009154 Fax: 5009154 Email: info@faemnepal.org.np Web: www.faemnepal.org.np</p>	<p>Carl Duisberg Society Nepal (CDS-N) Anamnagar, Kathmandu Tel: 4241632 Email: cdsnepal@ntc.net.org.np Website: www.cdsnepal.org</p>
<p>Association of Stuttgart Alumni Babar Mahal, Kathmandu Tel. 4464767 Email: gpg@mail.com.np</p>	<p>SPRING Association of Regional Planners, Nepal (SARP-N) Putalisadak, Kathmandu Tel. -4265081</p>
<p>Nepal Oldenburg Renewable Energy Centre (NOREC) Kathmandu Tel: 4225831</p>	<p>IJB Alumni Association of Nepal –IAAN Thaina, Lalitpur-12 Mobile no 9851048109</p>

Going to a primary school in Germany



Sima Bhattarai

With the crack of dawn, I got out of my bed rubbing my eyes to see why such commotions were going around in my house. Initially surprised, I went downstairs to the kitchen only to find luggage packed up. It was then that I realized the day had finally come for me to go to Germany, a place where I was born.

It was some eight years back that I had just completed my fourth grade. I had been studying in Nepal since the very first days of my schooling and therefore had zero knowledge on the German language. At the age of 10, I experienced my first flight on an aircraft. I had butterflies in my stomach that I felt from the excitement of going to a place so different from where I had been brought up till that day. Somewhere in my heart the anxiousness of going to new schools with new faces tickled me.

Along with my mother, an elder sister, a small brother and I flew from Tribhuvan airport first to Doha and then to Munich. Tucked safely in the lap of my mother, as a small baby I had flown in an airbus before. But that day's flight was the very first which I was going to recollect for many years in my life. My mother and sister were previously been living in Germany.

My sister had spent three years in Kindergarten of Stuttgart, the city where I was born. Both of them were familiar about Germany. But for my brother and me, it was going to be a completely new experience.

After the long flight of 14 hours we were finally at the Munich Airport where our father came to receive us. From there, he took us directly to a bus with only 15 passengers on it quite contrary to the ever overcrowding bus of Kathmandu. Travelling in a train to Bayreuth afterwards was another new experience. The long clean fast train going at the speed of almost 250 km per hour was quite refreshing for a girl like me who was seeing the train for the first time in life. Sure I had seen a chuchu before, a play train that is, at Bhrikuti Mandap. After journeying for four hours in the train, we lastly reached Bayreuth.

We were to live in this small city named Bayreuth for a year. During the initial days, it was challenging to adjust with the distinct time and climate. The world I knew it looked up-side down to me and I had to get used to it. It was peculiar a routine to go to sleep while the sun was still high. The sun in summer did not set till 10 in the evening.

The whole city was spotless, not a single bit of waste could be seen

lying on the streets. Traffic rules were strictly followed and traffic police were almost never seen on the streets there. I could not imagine our streets of Kathmandu without traffic police and the polluting wastes. Footpaths were big enough for a vehicle to pass through, but those footpath shops which are common on the narrow streets back home were missing out there.

Very soon it was time for me to go to school. Since the academic session was about to end, I had to join during the mid-session. Because I could neither speak nor understand the German language, I was to enrol into the third grade. I was welcomed in my new class. A friendly face of a girl readily offered me the seat next to her. I was soon surrounded by curious expressions asking my name and my home land. Those were the only two questions they could ask in English and German which I could not understand. They asked me the same questions every time they could. For a few days the same pattern continued. I noted every German word I heard and asked what it meant. In about two months' time, I could speak the new language.

Some Asian students too went to the school with whom I was at an ease to interact. No sooner, I befriended German friends despite

the language problem. I had an easy time learning Mathematics and English as at my previous school, I had already learnt advanced chapters.

We shifted our flat to a place near to the University where my father was doing his research. I had to change my school too. A new place and new people, but this time it was slightly easier. By that time, I had understood the foreign language to some extent. The time just flew by learning more about the novel language and culture as well as sharing mine and also happily answering their curious queries like why I always sketched people with black hair and brown eyes or why I bow at the papers when I accidentally stepped on them. Almost none of my classmates had ever heard of a country named Nepal and I had this sense of pride revealing them about my country and its inherent rich culture and natural beauty.

They had a different way of teaching at school. We cooked in the classroom to learn about certain food, we visited places related to our subject-matter, and we interacted with specialists to have a better understanding of subject. I had never gone for educational trip back home. We were not confined to the text books, unlike here in Nepal.

I soon improved my language

scores from 6 (the least) to 1 (the best) with the support from my friends, family and teacher. I still remember my class teacher's proud face when I scored one for the first time. Extracurricular activities were a must for every student there. We had sports, swimming, art, craft, music or something else every day. I learnt to play my first musical instrument, a flute. I learnt swimming for the first time in the German school. School was so much of a fun affair and less of stress.

I saw an open and lively atmosphere in classroom. However erroneous our views or answers sounded to us, we were encouraged to express them without any hesitation. Here in Nepalese class room, a wrong opinion is criticized; and a lot so the students hardly ever speak up their mind.

School started at eight in the morning and lasted till one or two in the afternoon. After that, we had quite a bit of leisure time. We came back home to finish our works. Then we were off to playing with friends or with family in the nearest community garden. Of the one year that I lived there, I got to encounter the snowfall, celebrate Christmas and enjoy Easter parties all for the first time. And then, the day of packing up my belongings came again. This time I was coming back home. The research stay of

my father had ended.


I was enrolled into my previous school. The class had the same friends with some addition of a few new faces. I was heartily welcomed by everyone including the teachers. During the initial days, I found it little uneasy adjusting back to the nine-four school hours. I missed extra activities. It did take me some times to bend back with the same old routine.

With each year passing, a lot of changes in schools have appeared. Extracurricular activities are becoming a part of school education. I even went on an educational tour once. I had different projects to do outside the regular textbooks. On top of that, the classical education system of stick and carrot seems to be vanishing since new forms of encouragements for inspiring creativeness are given to the students rather than beatings or scolding.

As I sit here today and reflect that one year I spent in Germany, it seems like the best time I ever had. It was an experience which taught me a lot. It taught me to be honest, to follow rules, not to throw wrappers on the street, to wait for the correct traffic signals and to respect others' culture. I feel lucky and proud to have gone through the beautiful experience.

Sima Bhattarai spent one year in Germany school at the tender age of ten. She accompanied her father Prof. Dr. Tribikram Bhattarai, who was working in University of Bayreuth as postdoctoral fellow under Alexander von Humboldt fellowship.

My Experience with Mid- Marsyangdi Hydro Electric Project

 Narendra Bhupal Malla

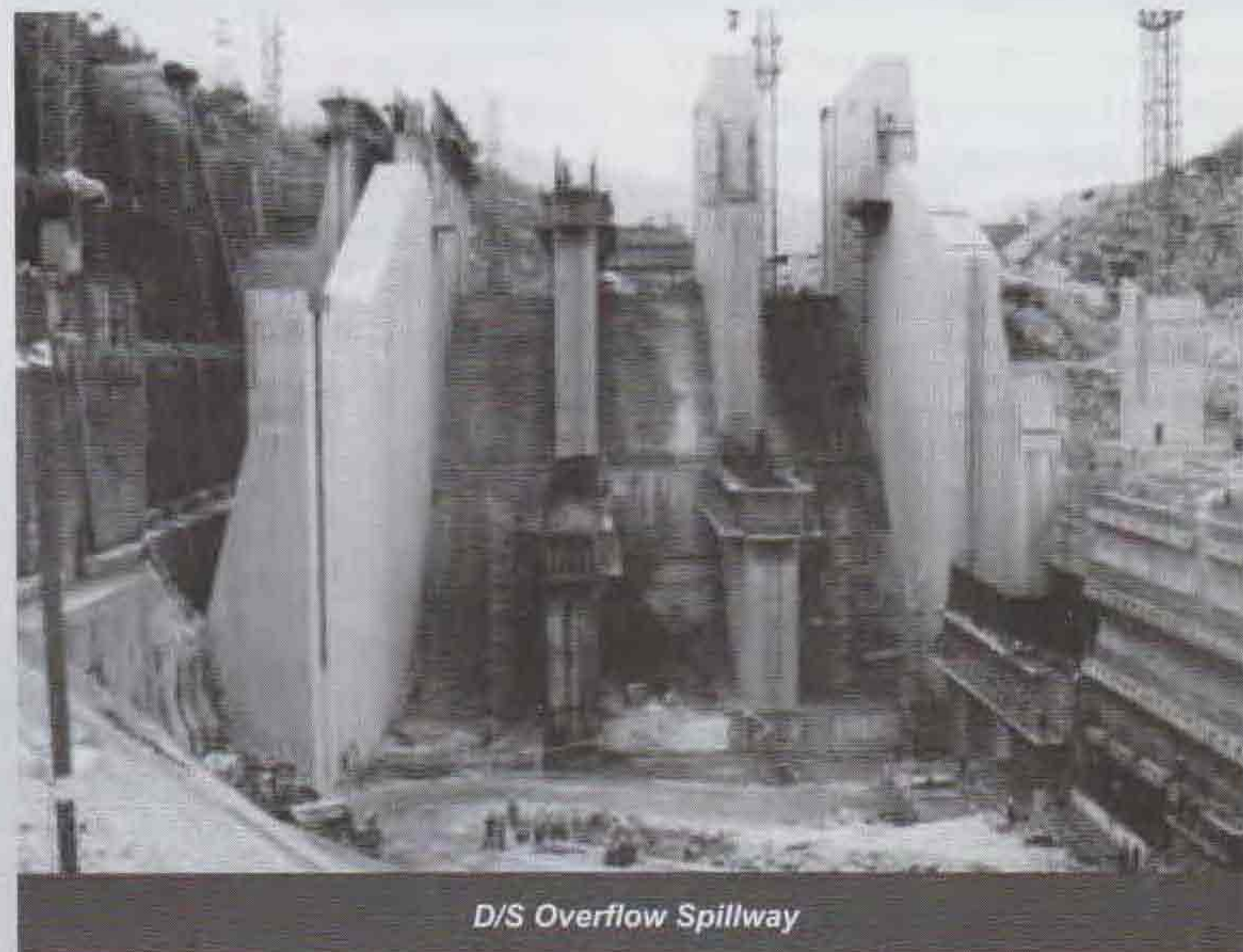
It was my second hydro project in Nepal, for which I was assigned with the responsibility of Design Chief for Lot-C: construction of powerhouse and all related structures. Actually I was not mentally prepared to accept that responsibility in the construction of hydropower project again as I was just back from the construction site of Kali Gandaki (KG) 'A' Hydro Electric Project (HEP), in which I worked as Chief Engineer for Morrison Knudsen International and was responsible for design of construction of powerhouse and all related structures. At that time it was the biggest hydropower project in the country. The KG 'A' plant has 144 MW installed capacity.

My job was to prepare the design for the constructions of powerhouse, penstock, service building, tailrace, valve chamber, switchyard, surge tank. The construction of powerhouse is always a multidisciplinary job as multi contractors are involved in the construction.

Actually the implementation of Mid-Marsyangdi HEP could have been taken place already in middle of 90s. The feasibility study of the project was prepared by Engineering Directorate, Nepal Electricity Authority (NEA) in the year 1994. In the feasibility study the project was designed for the installed capacity of 42 MW with scheduling to complete in 3 years. The headrace tunnel was only 3.50 kilometers. The license for the project was then given to Private Power Developing Company residing in Canada. The company started to do some geological investigation works but failed to

raise the fund for the project in international capital market. Their license was cancelled, which then NEA got for the generation and gave Lahmeyer International (LI) for updating the feasibility study. In 1997 LI which was the leading consulting company in the construction of Lower Marsyangdi Hydro Electric Power Plant, 69 MW reviewed the report and suggested the capacity of 62 MW by making

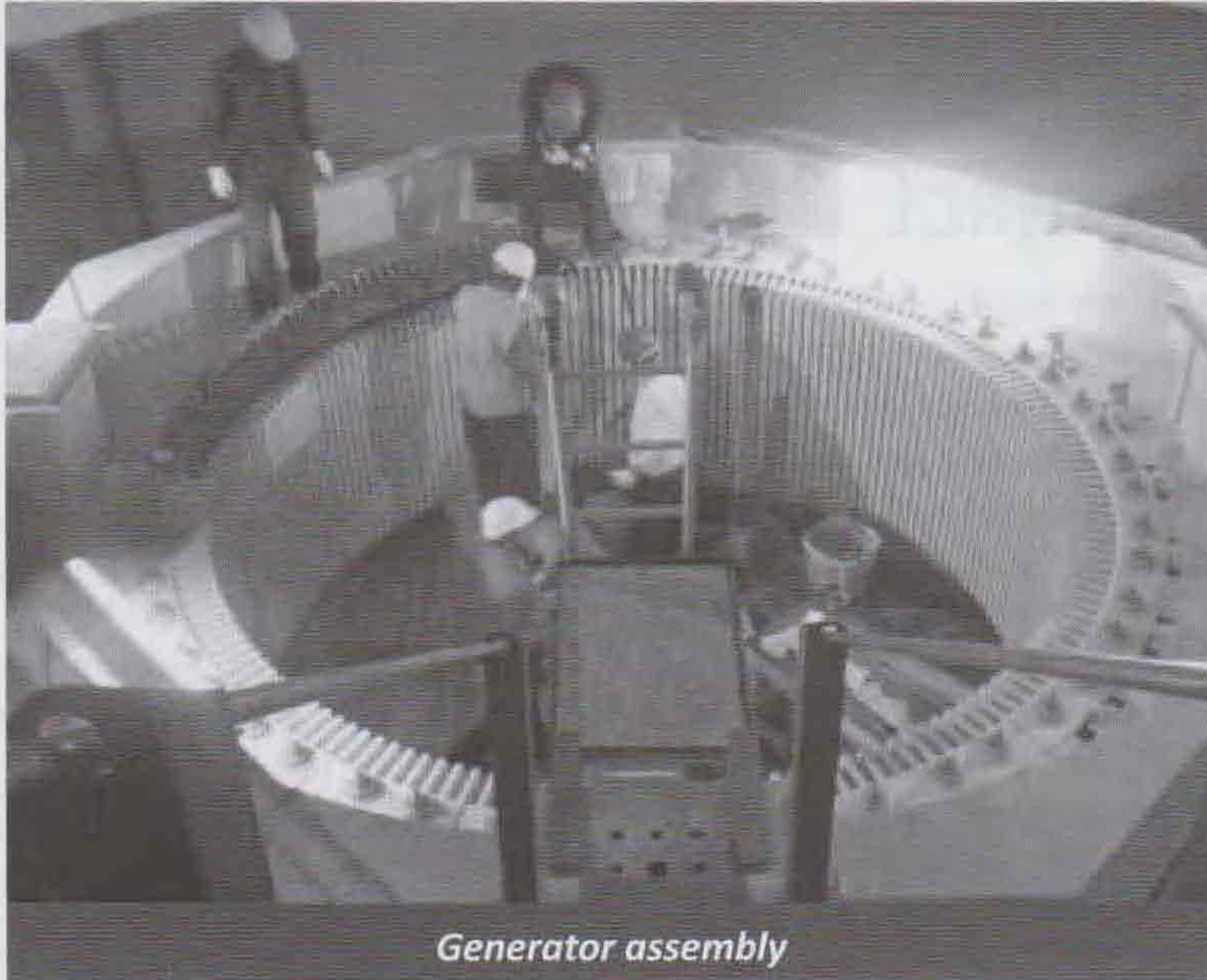
and remaining 15 % from NEA. It was a grant project but NEA has to pay the fund in 40 installments after the commercial generation started. The contract agreement between NEA and M/S Fichtner JV for Mid-Marsyangdi HEP was signed in December 2000 as the consultant with the responsibility of doing detailed engineering design, producing tender design and tender documents and supervision of construction works.



D/S Overflow Spillway

the headrace tunnel 4.5 km long. At that time the situation with power sector was not very good as the implementation of much talked Arun-3 HEP was not going to take place because of World Bank's decision. After some time KFW people were in Nepal looking for a hydro power project in which the fund allotted for Arun-3 could be used. First they looked Chamelia HEP. But later on they decided to go with Mid-Marsyangdi HEP. With the updated report prepared by LI NEA went to contracting the consultant for the project implementation after the finance chapter closed. The project finance was closed with 85 % from KFW

M/S Fichtner JV comprising of three companies Statkraft Engineering as Oslo Hovik, Norway, Consulting Engineers Salzgitters GmbH, Salzgitter (CES), Germany and Fichtner GmbH and Co.KG, Stuttgart, Germany. Fichtner JV was selected on the basis of their bidding price that was the minimum among the bidders. Fichtner JV proposed in their technical bidding to increase the capacity to 72 MW by increasing the headrace tunnel. Then the activities belonging to the preparation of detailed engineering design and tender drawings with tender documents were carried in an office New Baneswar,



Generator assembly

Kathmandu. Later on I came to know that this part of job was done with the maximum involvement of Statkraft.

After completing the necessary procedures it was decided to award the contract for civil works construction to Dywidag-Dragados-CWE JV, Munich, Germany which comprised of three companies Dywidag, Munich, Germany, Dragados, San Sebastian de les Reyes, Spain and China International Water and Electric Corp. (CWE). NEA issued the notice of invitation of tender for Civil Works, Lot-C on 6 August 2000. The contract agreement was signed on 25 June 2001. The contract price based on unit prices was Euros 85,245,616.00 and NRs.774,466,306.00 with consideration of

20 % discount. It was noted the civil works construction to be

completed in 43 months. Lot-C was for all civil works in the project. The works in headworks and headrace tunnel were undertaken by Dywidag Company while the powerhouse site was given to CWE, the Chinese company. Dywidag was entirely new in Nepal but CWE had done many jobs in the past.

Besides **Lot-C** there were other Lots too for the mechanical works and electrical installations.

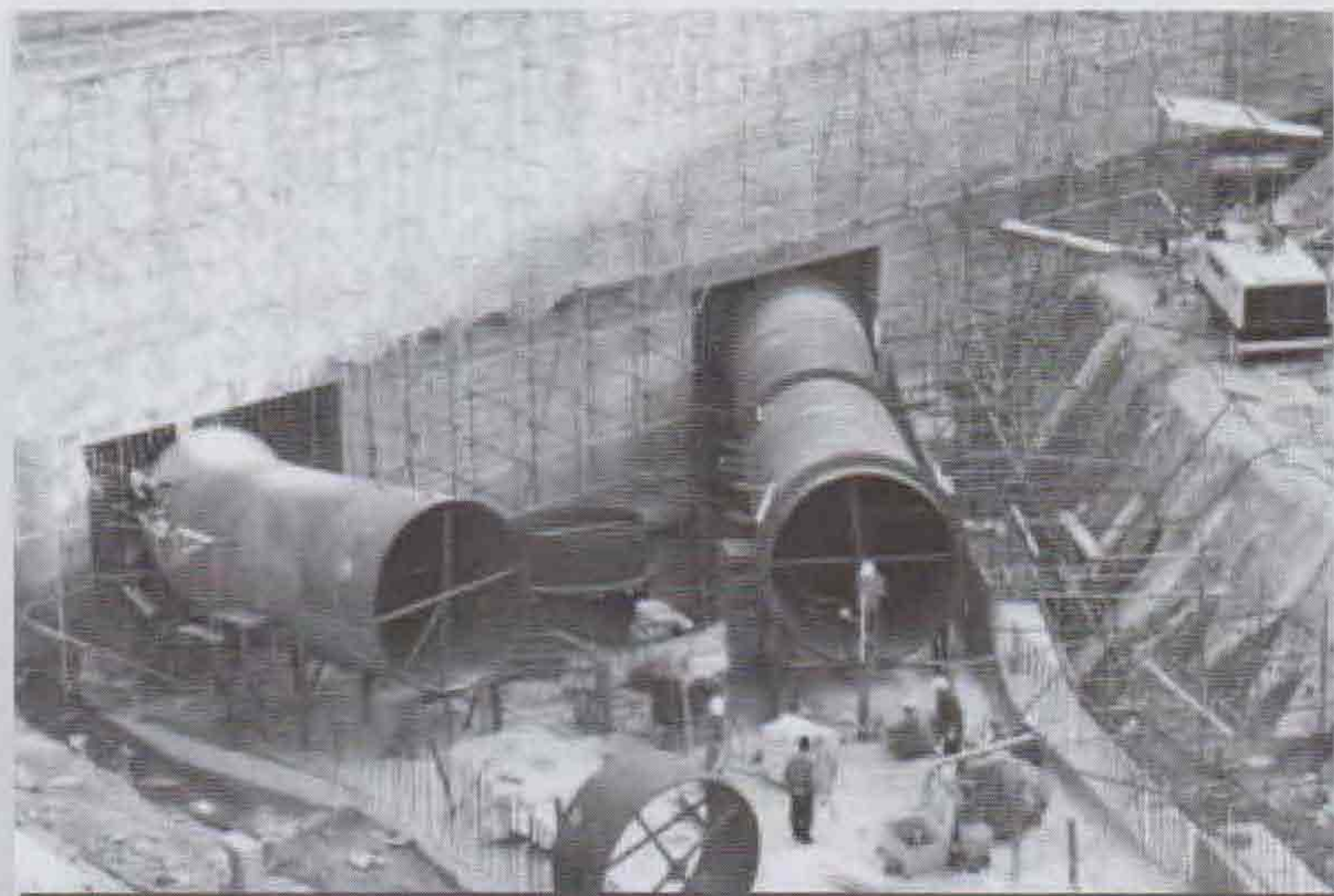
Lot-E: Responsible for all electrical works and contracted to Voith Siemens,

Lot-M: Responsible for all hydro mechanical and electro mechanical installations and awarded to VA Tech,

Lot-HSS: for hydraulic steel structures,

Lot-SS1: for switchyard construction,

Lot-TRL: Transmission lines.



Construction of Penstock Manifold

The main features of the project are as follows:

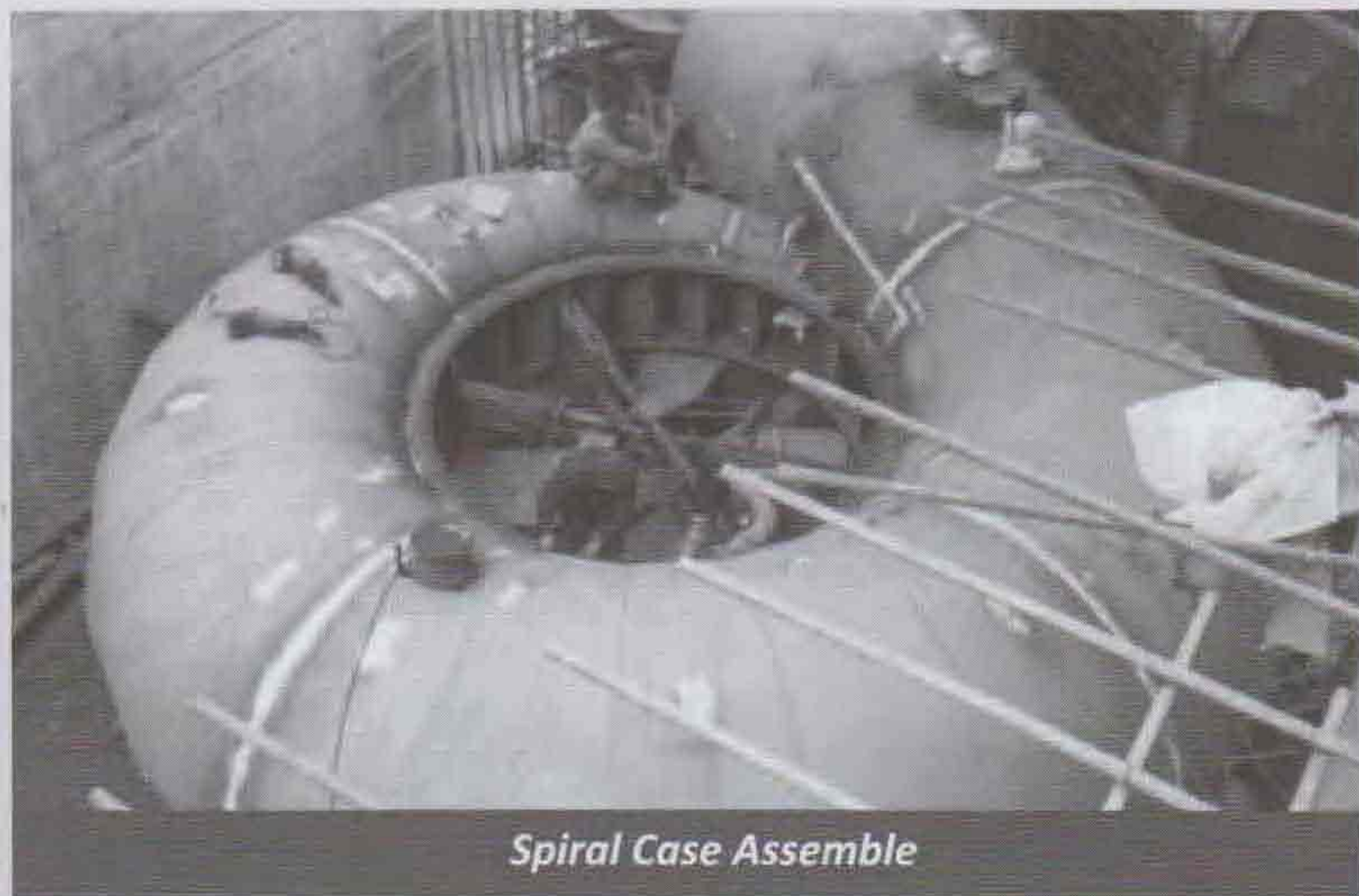
<p>1.General</p> <p>Type: Location: Maximum Gross Head: Maximum Net Head: Total Length of Waterways: Design Flow: Installed Turbine Capacity:</p>	<p>Run-of-River plant with daily pond for 5 hours peaking. Headworks / Powerhouse: Phalia Sangu / Siudibar. 110 meters. 98 meters. For design 5,940 meters. 80.00 m³/sec. 71.8 MW.</p>
<p>2.Hydrology</p> <p>Catchment area at Dam site: Average annual Flow: 90 % Daily Flow: 95 % Daily Flow:</p>	<p>2,729 km². 99.50 m³/sec. 24.80 m³/sec. 21.50 m³/sec.</p>

Flood:	1:2,000 years: 1:10,000 years: Probable Maximum Flood:	Dam site: 3,610 m ³ /sec. Powerhouse site: 3,990 m ³ /sec. Dam site: 4,270 m ³ /sec. Powerhouse site: 4,720 m ³ /sec. Dam site: 6,400 m ³ /sec. Powerhouse site: 7,840 m ³ /sec.
3.Reservoir	Maximum operating Level: Minimum operating Level: Live storage Volume: Surface Area at max.ope.Level	EL.626.00. EL.621.00. 1.65 Million m ³ . 427,000 m ² (42.70 ha.).
4.River Diversion	Diversion Flood: Diversion Tunnel: Upstream Cofferdam: Downstream Cofferdam:	1:20 years dry season Flood (Nov-May): 415.00 m ³ /sec. Length: 360 meters-Section: 56 m ² , unlined. Earth-rock fill Dam: Crest EL. 605.00 Earth-rock fill Dam: Crest EL.593.00.
5.Dam	Type: gravity dam with overflow spillway. Crest EL. / Crest Length: Height above Foundation: Spillway capacity: Spillway Gates:	Combination of Rockfill dam with impervious core and concrete EL.632.00 / 95.00 meters. 62.00 meters. 1:10,000 Years Flood: 4,270 m ³ /sec. 3 Nos. Radial Gates, WxH = 10.00 m x20.00 m.
6.Intake Structures	Type: Sill level / Platform level: Length:	3 Nos. Submerged Tunnel intake with trashrack and gate. EL.616.00 / EL. 632.00 35.00 meters.
7.Desander	Type: No. Length / Width / Height: Water depth: Efficiency: Flushing Operation: Max. ope. Level / Min. ope. Level:	Underground Cavern with 2 nos. of Flushing System each. 3 nos. 100 meters / 15 meters / 25.10 meters. Max. ope. EL. / Min ope. EL.=15.90 m. / 10.90 m. 95 % particle size 0.2 mm. Vertical Flushing: BIERI System. EL. 625.60 / EL. 620.60.
8.Power Tunnel	No. of Adits: Diameter: Length: Length / Exc.Dia. / Fin. Dia./Lin. Type:	2 nos. 5.40 m. 390 meters / 670 meters. 5,210 m. to Surge Tank. / 6.0 m / 5.4 m/ unreinf. Concrete.
9. Surge Tank	Type: throtrling effect. Fin.dia / Height / Orifice dia: Max. Upsurge / Min. Downsurge:	Vert. Cylindrical underground with reinf. Concrete lined and 20 m. / 45 m./ 2.90 m. EL.635.40 / EL. 610.20.
10.Penstock	No./ Type: Net diameter: Total Length:	1 no./ partly as tunnel and partly covered with reinf. Concrete. Ø 4.60 m. / Ø 3.00 m. / Ø2.40 m. 450 m.
11.Powerhouse	Type : Width / Height / Length: Service Building : Width / Height / Length: Bridge Crane Capacity: 130 tons.	Surface structure with partly buried in ground. Below Ground: 16.50 m. (max.21.5 m) / 26 m. / 33 m. Above Ground: 11 m. / 11.6 m. / 43 m. Surface type. Above Ground: 8 m. / 8.2 m / 14 4 m.
12. Tailrace	Total Length:	42.20 meters.

<p>13. Switchyard Type: Dimensions:</p>	<p>Open air switchyard. Length / Width = 60 m. / 47 m.</p>
<p>14. Turbines No. / Type : Rated Discharge / Rated Output Rated Speed: Max. Gross Head: Spiral Case CL Elevation:</p>	<p>2 Nos. / Francis: Rotating around vertical axis. 40 m³/sec. / 35.90 MW. 333.33 rpm. 110 m: EL. 515.00</p>
<p>15. Generators Nos. / Type / Type of construction Rated output / Rated voltage: Rated Frequency / Rated speed Power Factor / Flywheel Effect:</p>	<p>2 / Three phase, synchronous. / W 42 44.4 MVA / 11 or 13.8 kV +5 % 50 Hz / 333.33 rpm (10 poles) 0.85 / 600 t m².</p>
<p>16. Transmission Lines Route: Length / Nominal Voltage : No. of Circuits: Middle Marsyangdi HEP</p>	<p>41 km / 132 kV. Double circuit tower design with one single circuit between MMHEP and Bhanu / Bhansar - 21 km, Single circuit tower design with one single circuit between Bhanu Bhansar and Lower Marsyangdi Plant - 20 km. Lower existing MHEP.</p>
<p>17. Substation Type and Configuration of Switchgear:</p>	<p>Existing AEG indoor SF₆ extension by one feeder.</p>

It was a very attractive project with good geological conditions and very good access to the project areas. Compared to Kali Gandaki 'A' HEP the geology was very good except in left bank. The left bank of Marsyangdi river was covered by thick mudflow and alluvial deposits, where the rockfill dam was built. For rockfill dam construction it was not good and could be a serious danger of seepage or piping for the dam, which needed additional geological investigation by means of drilling and geophysical explorations along with the bed rock and ground water conditions. With construction of observation wells the permeability was checked during the construction period. Due to these geological conditions the design was required to be modified; otherwise there were not any big modifications in the tender designs.

I was very impressed with the professional ethics that I saw with Fichtner guys. For the exact doing without any compromise in quality they were really very smart, which anybody could see when this plant was visited. Sometime it was not easy to get done exactly as it should be due to different reasons. But the Fichtner guys exhibited the typical German character of doing



Spiral Case Assemble

the things in a perfect way. Some were really very interesting as they showed their interest on our politics, festivals, food and women and working together with Nepali staff had functioned very well. This was an opportunity for me to know and work with different German nationals. We had German national from Iceland, Argentina, South Africa, Austria, Switzerland and others from Australia, England, Canada and Scotland. I had the impression that they all had good time in our country in spite of the difficulties in the period of Maoist insurgency. Nobody is perfect but

the expatriates were really dedicated in their jobs. It was sad that such efforts were not found with the NEA people. Senior officers of NEA used to come to the site for two days mostly at the end of months put their signatures in the attendance book for all their absent days.

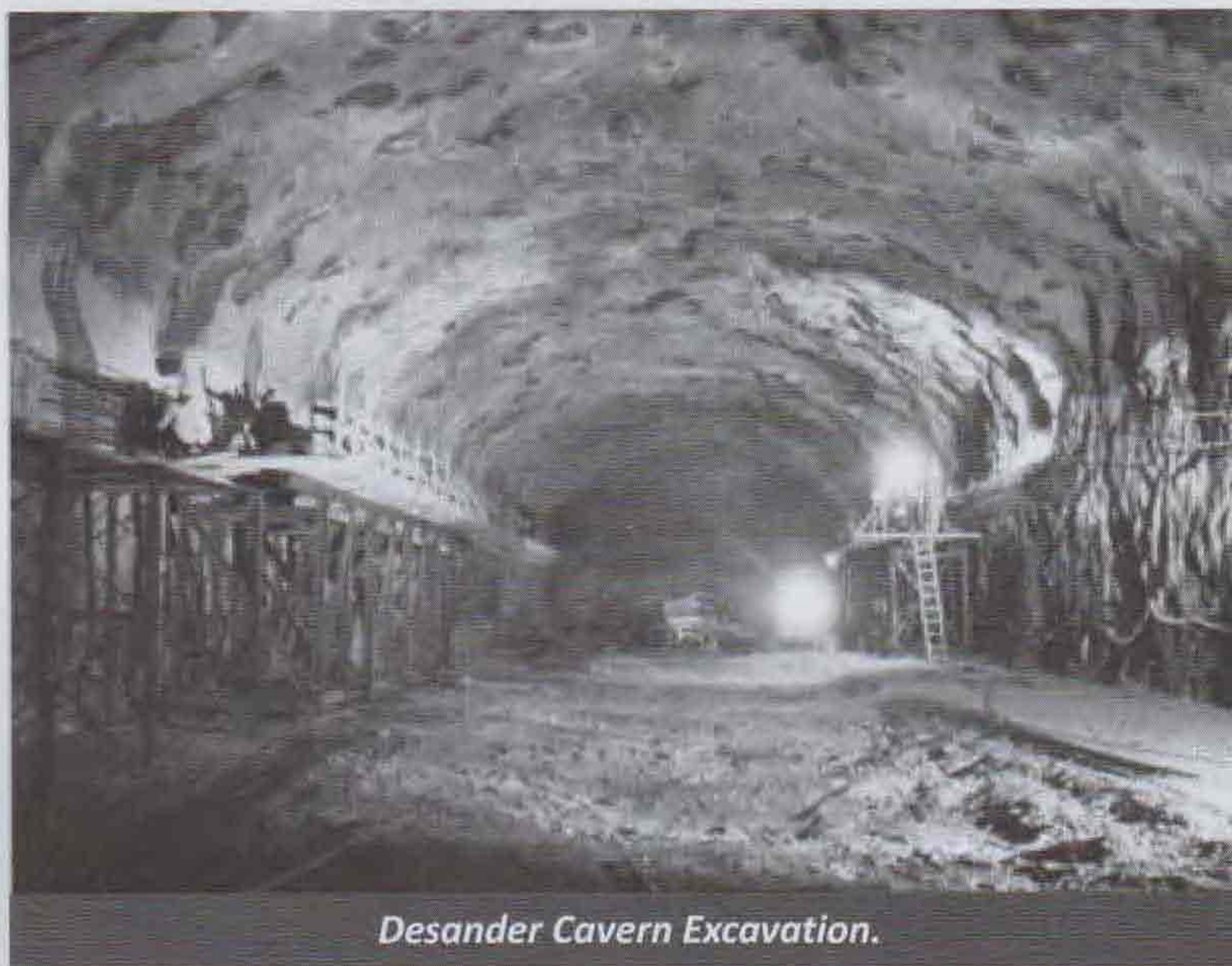
The important thing that was done in Mid-Marsyangdi HEP construction was **Neighborhood Support Program (NSP)**. NSP was responsible for monitoring environmental impacts of construction works going on

different fronts and other programs relating to betterment of local community of the project area. In total there were 64 families that were displaced and rehabilitated in Udipur. Different programs for skill development trainings as welding, mason, carpentry, and electrical wiring were done especially for boys and for girls sewing, weaving and account. NSP funds were made available for construction of buildings of schools, campus, and health post. In second phase education materials as computers, furniture and sport materials were provided to the schools, with which the number of students increased. The necessary equipments were provided to the health post for better services and the people got much benefitted in health sector. By providing fund for increasing the voltage capacity of the existing electricity supply from 1.6 MVA to 5 MVA electrification of the rural areas was extended and many people got electricity. At many places existing roads were improved and bridge was constructed. Interesting thing in all these programs was that the local community was involved from the beginning to the execution stage of all the programs, which was different from other projects.

Many of us have read very frequently the headlines about this project in daily tabloids during the construction time and much later

too. It is true that the construction was not completed as scheduled and the project cost exceeded the estimated amount. But we should not forget that the construction period was in the peak of the Maoist insurgency time and it was in Lamjung, a very hot area of Maoist activities. It was not normal and was a difficult time for the project staff. There were security threats of different levels

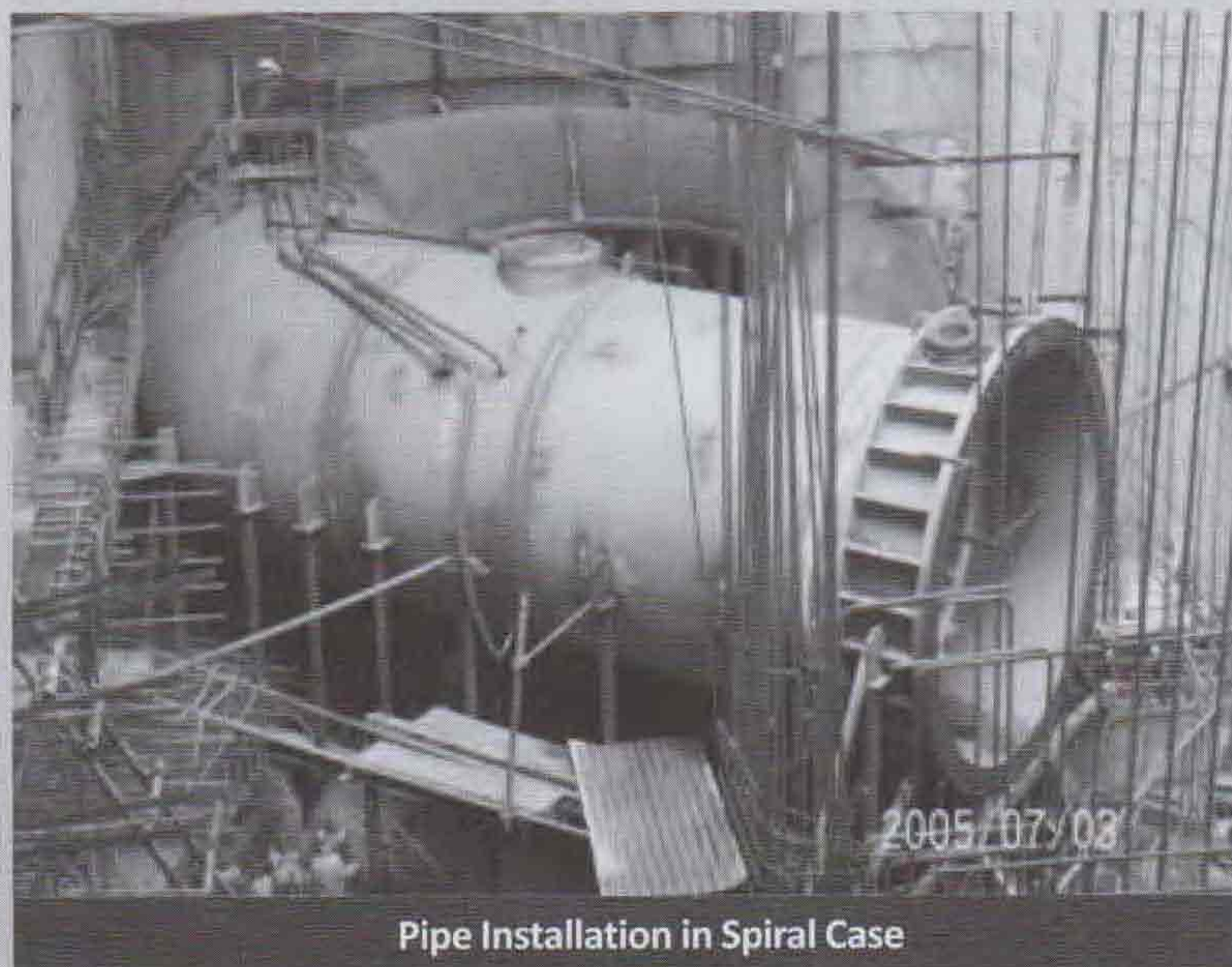
4 o'clock morning but still the night shifts were continued with the coordination of District Administration Office. What we all felt but did not talk that we all had a feeling of fear of insecurity at one corner of our hearts. In spite of the continuous efforts to keep the project least affected from these insurgencies, the ongoing works were suspended several times and for several months. In the



Desander Cavern Excavation.

depending on time for the project as well as the staff. A separate unit was there to watch and study the situation and give necessary advice to the project administration. There were times when the curfew was imposed from 8 o'clock evening to

beginning the rumor was that Maoist demanded 3 Crores Rupees donation from Dywidag for their party and Dywidag refused to do so with the statement that it was entirely against the existing Law in Germany. In one incident the Dywidag expatriates left the site for Kathmandu with charter planes immediately after they felt their security threatened. Next day they left Nepal. NEA paid Euro.30,000.00- 40,000.00 per day to Dywidag in the period when the work was suspended. In the later period Maoist demanded donation from the project staff with 10 % of their monthly salary for the whole year in advance and threatened to list those persons who refused to pay them. The situation was really not funny because some of project staff had provided them shelter in their quarters and they knew the staff. The ongoing work was suspended several times and for several months. This all had effects on completion and finally on the



Pipe Installation in Spiral Case

Germany (both East and West) in our Memory and my Career with German Education

Anita Chitrakar

Research and Development
Induktions-Anlagen + Service GmbH & Co. KG
Am großen Teich 16+2758640 Iserlohn Deutschland
Email: anita.chitrakar@gmail.com



A Brief Info about Germany (East & West)

Today, Germany is one of the advanced nations in the world. Germany has a highly qualified labor force, a developed infrastructure, a large capital stock, a low level of corruption and a high level of innovation. Germany's achievements in sciences have been significant and research and development efforts form an integral part of the country's economy. Germany has been the home of some of the most prominent researchers in various scientific fields.

Following the Second World War Konrad Adenauer became the new Germany's first chancellor in 1949. The western sectors controlled by France, the United Kingdom and the United States, were merged on 23 May 1949, to form the "Federal Republic of Germany (*Bundesrepublik Deutschland*)". On 7 October 1949, the soviet Zone became the German Democratic Republic (*Deutsche Demokratische Republik* or DDR). They were informally known as "West Germany" und "East Germany". East Germany selected East Berlin as its capital while West Germany chose Bonn, [<http://en.wikipedia.org/wiki/Germany>]. On 3 October 1990, the treaty between West Germany and the GDR was officially united. To commemorate the day that marks the official unification, 3 October has since then been the official

German national holiday so called the Day of German Unity (*Tag der deutschen Einheit*).

Personnel curiosities about Germany & Milestone

So what does today's Germany look like? What about its people, its government, and its technological development? Those were some of my curiosities before I started

Fortunately, I got the DAAD scholarship for master study in the year 2005. The German embassy in Nepal was in full assistance throughout the application process. The main criteria for this application were completion of bachelor degree (higher the score has the better chance) and 2 years working experience. I am very much thankful for DAAD

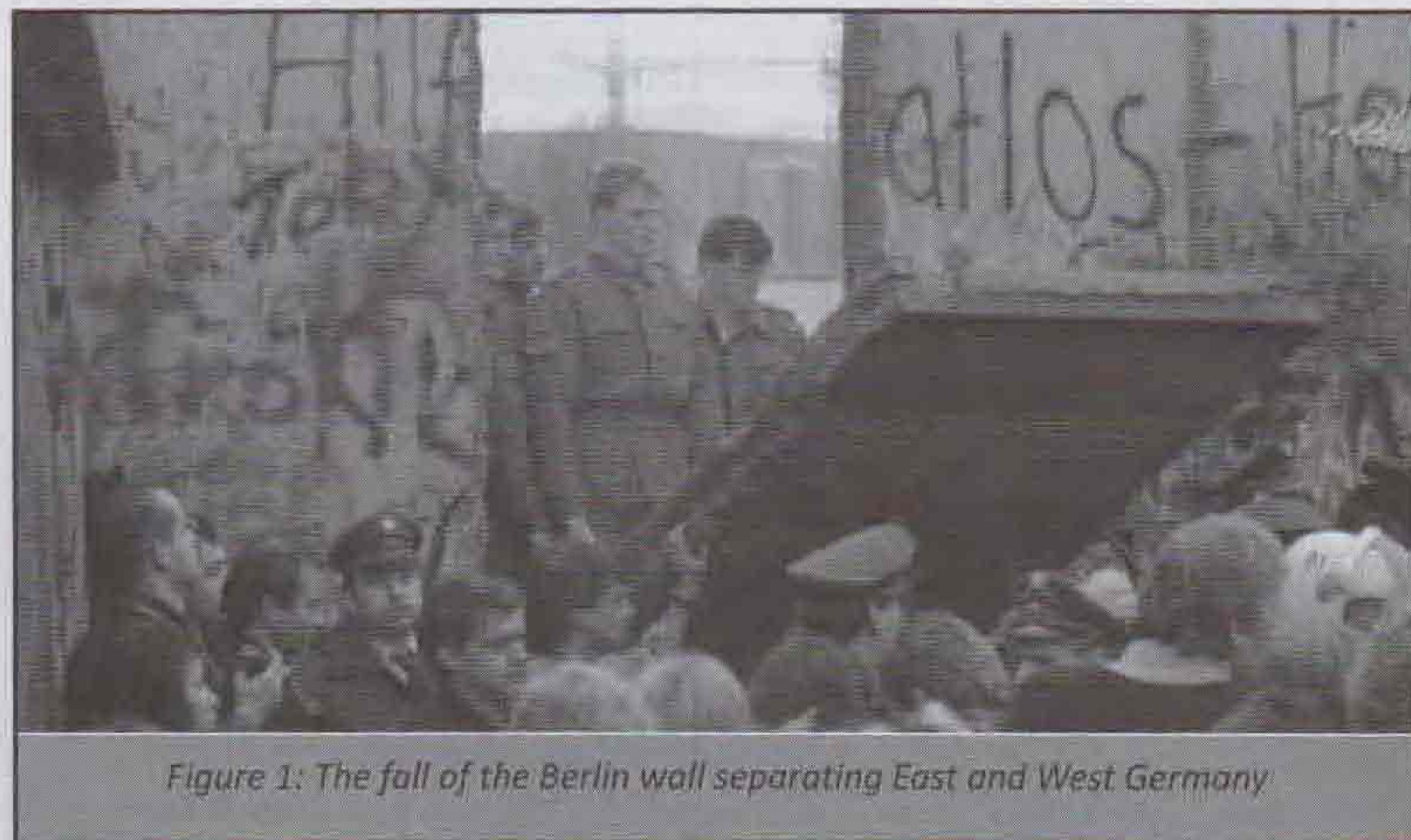


Figure 1: The fall of the Berlin wall separating East and West Germany

my educational and professional career in Germany. The German Society has a promising punctuality. During my language course in Goethe Institute in Nepal, we had course book called "Moment mal". I still remember how unbelievable for me to know system of train time. The train arrives at for instance, 10:15 o'clock. If you are late for 1 minute, meaning you reach the platform at 10:16 o'clock, there is no chance of getting train.

Where there's a will, there's a way- I totally agree with this proverb. I had a strong desire to learn Germany and the key point of their success in development.

scholarship. It is like the door to develop my technical knowledge further and to use them practically in research/development projects.

I flew to Germany on 30 June 2005. It was the evening flight. I was partly happy getting this wonderful opportunity. At the same time, I missed my family and home country. It was absolutely a new milestone in my life. It was my first far away departure to a foreign country. I landed in Frankfurt Airport on 1 July 2005. Then I took the train to Dortmund, where I was supposed to join German language course in Carl Duisberg Centrum. This language course for two

cost. I got the feeling this part of situation is entirely overlooked.

NEA, the employer was the main actor but it was difficult to realize that there was NEA management in the project area. All the senior officers lived in Kathmandu. Most of the time nobody was available in the site for interaction and consultation that made every decision very delayed.

The other factor that affected the project cost was the exchange rate of Euro. With time the exchange of Euro increased and increased. Definitely there were different type of claims from contractors but the portion due to design variations was very nominal.

Really the project has suffered very much due to insurgency problems. But still today the situation with

hydropower projects has not improved very much. Many private developers are struggling a lot to get their works done in the site as they get a lot of problems. The load shedding has become a part of our life nowadays. But there is no project that is going to be commissioned in immediate future. The load shedding will not end in coming years.

Mid-Marsyangdi Project has made frequently into the headlines in many daily tabloids

German embassy deplores threats against Marsyangdi Hydro project

The Kathmandu based German Embassy issuing a press communiqué Wednesday evening has deplored the repeated threats directed by Maoists against the companies involved in the Middle Marsyangdi Hydroelectric Power Project (MMHEP). The MMHEP, a major hydro-power project in west Nepal has been closed down amid Maoists threats.

In the communiqué, the Kathmandu based German Embassy has said that the forced closure of the MMHEP was against the interests of the Nepali people and the embassy considered the Maoist threats an irresponsible act.

Saying that the project was largely financed by the German government for the benefit of the Nepali people and development of Nepal, the embassy has said that closure of the construction site will cause hardship for the large number of Nepali employees and their families.

Citing basic operating guidelines established by a general donor group of development agencies operating in Nepal, the embassy has said that the guidelines were based on international agreed

principles, apply to all development and set out the parameters with which the development agencies work in the current conflict situations.

Earlier, the rebels had asked a huge amount as 'donations' from the project, according to reports. However, the multinational contractor, DDC JV, reportedly, had refused to pay 'donations' to the Maoists. According to the embassy, no multinational contractor could make any forced contributions in cash or kind as the basis operating guidelines was clearly against contributions to political parties in Nepal. nepalnews.com, Aug 25/04.

Mid-Marsyangdi project to resume work from Thursday

The Mid-Marsyangdi Hydro Electricity Project (MMHP) is to resume operations from Thursday, MMHP said.

Issuing a joint press statement, the engineers and contractors of the MMHP said, "The project will suffer a great setback if the present deadlock continues. So we have decided to resume work from Thursday."

The country would be deprived of necessary electricity and the local people would be deprived of basic needs such as drinking water,

bridge, schools and health posts if the project halts its operation, the release added.

The German government funded project has been providing employment to over 1,200 people. The German embassy had earlier deplored the Maoists for forcing the closure of the project. nepalnews.com, Sep 14/ 04

Mid-Marsyangdi contractor demands Rs. 5400 million from NEA

The contractor of Mid-Marsyangdi Hydro Electricity Project (MMHEP), citing delays in project completion due to security reasons, variation order and prolongation costs, has demanded an additional amount of Rs.5400 million from Nepal Electricity Authority (NEA), reports said.

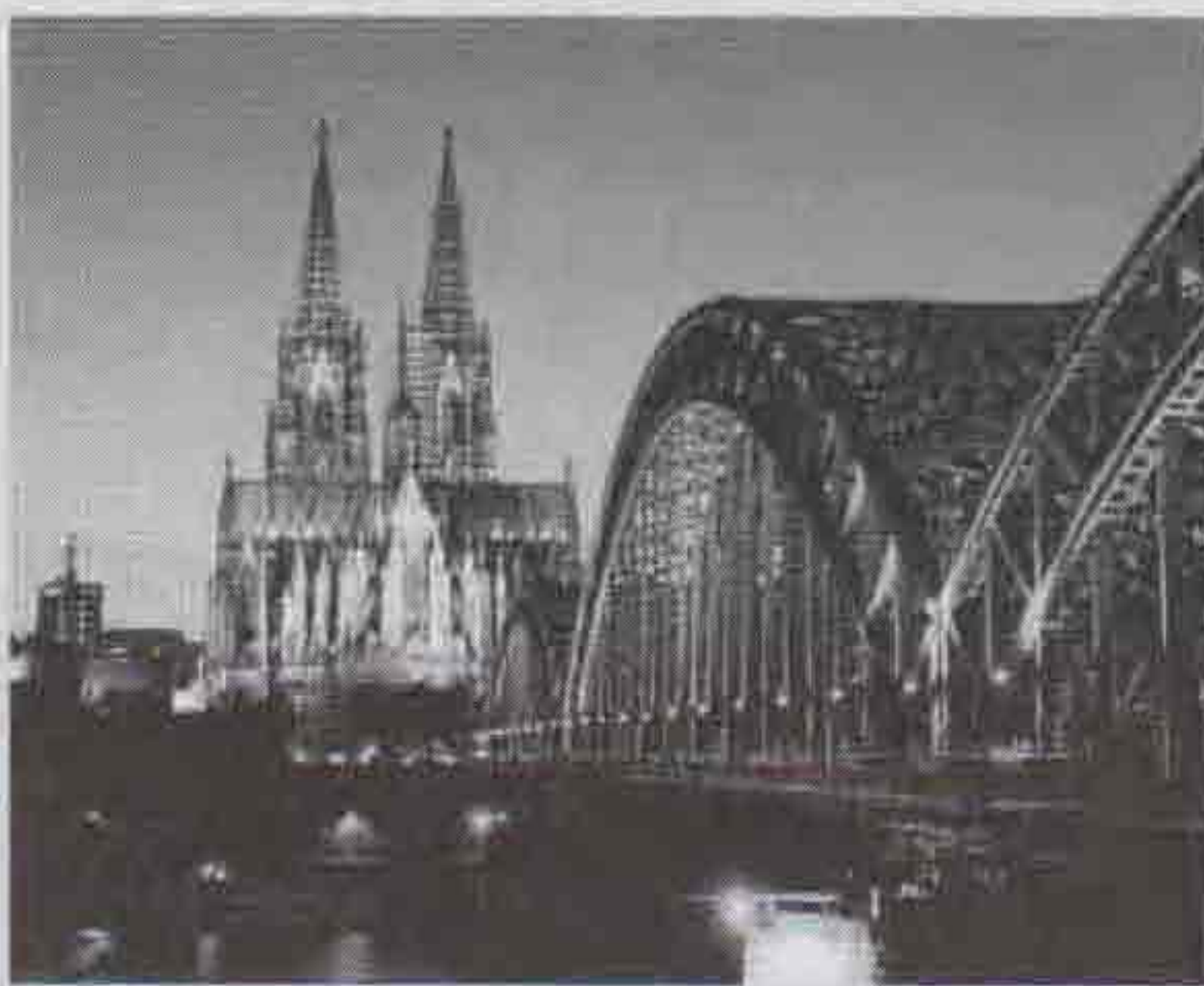
Not even 50 percent of the project's construction works have been completed though the project completion deadline was over more than two years ago, Kantipur daily said. The multinational contractor company, DDCJV, was awarded the construction contract of the German-funded hydroelectricity project for 74 million Euro. The 70MW MMHEP is the second largest hydropower project and the only developmental project under construction in the country. nepalnews.com, Sep 19/ 04

My Memories in Cologne...



Dr. Ing. Bharat Pahari

One strong wind blow came across; I was prepared to go to Germany for higher study. Despite, my strong attachment with the notion of transformation of the country and my involvement in the process, I had decided to go for higher study. I was suddenly very thirsty for higher education. Study in Germany was fascinating. I



remember, it was 1995 April 2, I began my voyage from Kathmandu via Frankfurt finally to Cologne-Bonn airport. The flying saucer-Lufthansa drove me to Cologne. Many thoughts were emerging and vanishing about my new place. I was not fortunate for easy communication at that time. My passion crossed the boundary, I was a bit desperate. When I reached airport, it was about midnight. Hostel was booked, I had the information of travel route too; however, I was worried. I was more upset when my back-of-mind hit to the argument that I may not find the place and no one may be in the airport to receive me. I was preoccupied.

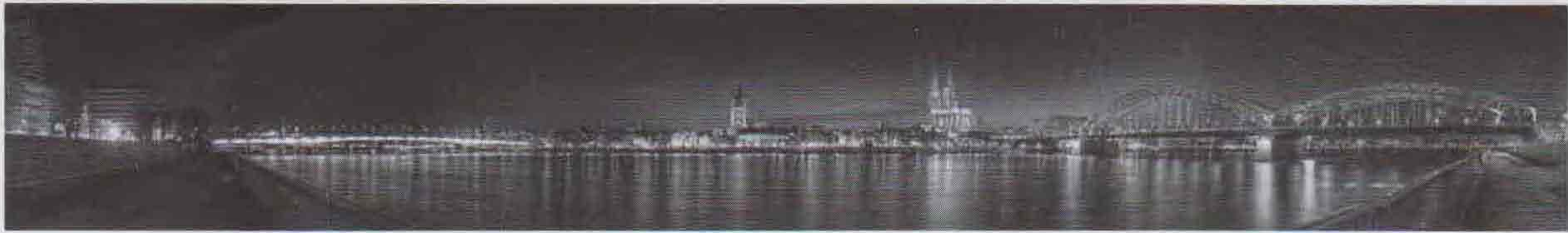
It was a strange country and I was along there. Being native of Pokhara-a tourist city of Nepal, it

was a setback for me. I had met and talked with Germans. I was worried of their introvert habits, unless someone approaches and talks with Germans, they rarely initiate to talk. Contrary to my assumptions, a colleague-perhaps from Tanzania, was in the airport to receive me, which I was not expecting. I was moved with the arrangement. He had a car and took me to hostel. I was taken to the Efferen-a suburb of the Cologne. A small room in the hostel was allotted to me. It was an old building but just cozy room. There was only Dunlop on the bed except bed-sheet and pillow. I did not know the situation and requested to the colleague for at least a bed-sheet, so that I can use it as blanket. I was tired. This was my first day.

Next day was in-fact fascinating; a new environment, new college, etc. I could not sleep that night. It is not that I was disturbed, but it was the day-light shined such an early hour at about 4 am. I was accustomed to getting up before dawn. Nevertheless, I got up and went out for a morning walk. It was rather a jogging. While walking around, I realized that it was a small students' village having about 20 numbers of hostel blocks with recreation centers and supermarkets. I was alone on the street and in the park. Nearby the hostel, I found a large green park. Brown color rabbits were running and jumping everywhere. There was a whirring of leaves and the cool air. I was expecting morning humming of the birds, surprisingly;

there was not a trace of bird up to the horizon. I was desperate to go to university and get necessary information; of my classes, of relevant info, of other residential and other formalities. The same fellow assisted. We took a tram (u-bahn) No 18 from Efferen. It was after five stations, tram went underground. We dropped into Neumarkt station –about 20 meters below the ground. We came to the surface through elevators. Neumarkt (new market) was a city center. Tram no 9 was waiting for us. Tram went to Heumarkt station and crossed Rhine River. My eyes were wide, I was watching around. In front of me (on the other side of river) towards next station-Freiheit, was a tall Lufthansa building. In my left was Dom- of which I had read a lot as an icon of the Cologne. My eyes went up to the horizon, both in up- and downstream of the Rhine, it was just awesome. The scenery of the river and its surrounding were eye-catching. I imagined Narayani River. I was still into the dream; tram went underground two more stations. We came out from the station in Deutz-Kalker Bad and came up to the ground surface. We turned to the right; in-front of





us was a tall building, perhaps of 10 storeys with yellow strips. My guide told me, this is the main building of my university, where I am going to spend two and half years making new shape of my life.

The time passed away. It was a nice combination that my hostel had a common kitchen. It is by my nature, I love to talk with people. Within a month, I had my good friends-Joergen and Konrad, in the hostel. I did not stay longtime in the hostel; however, we had wonderful time. I went to an apartment after my wife and daughter joined me.

Apart from the beauty and massiveness of the Cologne, the culture, as I found, was very rich. Right from the first day, most of the people whom I met, they used



to talk about carnival. Whole city comes out into the street making fun. The caravan of decorated vehicles and music with colorful presentation were the specialty of the festival. I was in Cologne in the month of April.

People were talking; Cologne carnival is one of the biggest street festivals in Europe. In Cologne, the carnival season officially starts on 11 November at 11 minutes past 11 a.m. with the proclamation of the new Carnival Season, and continues until Ash Wednesday.

But the so-called *Tolle Tage* (great days) don't start until *Weiberfastnacht* (Women's Carnival) or, in dialect, *Wieverfastelovend* (Thursday before Ash Wednesday), which is the beginning of the street carnival. Hundreds of thousands of visitors flock to Cologne during this time. Generally, around a million people are celebrating in the streets on the Thursday before Ash Wednesday.

I was still sensing the after effects of the carnival that took place in the month of February. I was belated by one month. There was no other way except to wait for the day to come. I was desperate to participate in the carnival. I imagined *Gaijatra* and *Fagupurnima* festivals. Almost everyone coming in to the humorous mood and making fun during *Gaijatra* is always fascinating. I remember, even the news papers having special edition during *Gaijatra*, is a kind of ecstasy that I cannot forget. Similar to this, colorful festival *Fagupurnima* is making fun with colors within nears and dears and is manifestation of extreme happiness. As I heard from colleagues, carnival resembles these both festivals.

Initial days were full of curiosity for me. I was trying to explore the city and its culture. I went to the museums as well. There was a small documentary about the World War II in the St. Augustine museum (?). It was horrible. The city was the ruins of bombs. The information said; during the Bombing of Cologne in World War II, Cologne endured 262 air raids by the Western, which caused approximately 20,000 civilian

casualties and almost completely wiped out the center of the city. During the night of 31 May 1942, Cologne was the site of "Operation Millennium", the first 1,000 bomber raid by the in World War II. 1,046 heavy bombers attacked their target with 1,455 tons of explosives. This raid lasted about 75 minutes, destroyed 600 acres (243 ha) of built-up area, killed 486 civilians and made 59,000 people homeless. By the end of the war, the population of Cologne was reduced by 95%. This loss was mainly caused by a massive evacuation of the people to more rural areas. The same happened in many other German cities in the last two years of war. At the end of 1945, the population had already risen to about 500,000 again. I was also touched by the information that by that time, essentially all of Cologne's pre-war population of 20,000 had been deported or killed by the German regime of the time. The six synagogues of the city were destroyed. The synagogue on Roonstraße was rebuilt in 1959. I imagined, human history, so cruel and inhuman. Time changed, people were also changed. Cologne city was rebuilt in to new shape.

This is initial memory only, So many things happened during my stay in Cologne. Whenever, I think of Cologne, It is a place that made me matured, built my confidence on professionalism and equipped with knowledge. Nepal, my motherland that gave my existence is in my heart. Cologne/ Germany is other place that gave shape to my personality and has also a place in a corner of my heart.

My journey to education in Germany

Prof. Dr. Dilip Subba



As a school boy of sixth or seventh standard, I often imagined while walking on the long road to school (my school was bit far) of visiting an European university in my adulthood.

While working as a lecturer at college in Dharan, I applied for DAAD (German Academic Exchange Service) scholarship for a one-year's training course in Germany. I submitted the application to German Embassy which was then situated at Kantipath. One day much to my astonishment and disbelief, I received a telephone call (then trunk-call) at the campus from the German embassy informing me about my selection for the scholarship. They requested me to contact their office soon. Later in the embassy I was told that I was the only applicant selected for that year. I did not know how to express my joy, as my childhood dream was finally coming true.

The time to leave for Germany was short. I did not have a passport and it was taking time in its making. The embassy was frequently reminding me to produce the passport so that they could issue the visa. How silly I was then as to ask them to issue the visa without passport! I remember they had laughed when they heard me saying this.

A day before I left Nepal, I paid a quick visit to German embassy to

learn some German words. I knew I would have difficult times in Germany if I had little or no native vocabularies. I recall Ram Thapa, a young cheerful handsome man at the reception. I noted a few German words learned from Ram in my diary like wasser for water, tee for tea, essen for food and wohin for where to go. Next day I flew with German Airline, Lufthansa to Frankfurt in Germany. In Frankfurt I boarded a train for Freiburg where I had to stay for six months for German language course. Late in the evening I reached the station. Now I had to find an ordinary hotel to spend the night. Suddenly an unknown fear gripped my mind. It was about the taxi driver who could victimize me driving unnecessarily long roads and asking me huge money. But it was an unnecessary suspicion. The taxi driver took me to a nearby hotel. The fare I paid was pretty small. I thanked him heartily. I tend to write this as this compels me to compare with the taxi drivers of Kathmandu.

Early next morning I checked out of the hotel and took the road to Goethe Institute. For a new person in town, it was not that easy to find the way to my designated spot. Luckily, I found a young man, seemingly a university student, who to my enquiry showed me the right way. That was my very first right conversation with any German citizen. I was impressed by his manner as he spoke so politely while showing me to the

right direction. People say first impression is the last impression.

Receiving university degree is not alone education. During my stay in Freiburg, I came to know a lot of people from almost all continents. We all lived together in a house owned by Goethe Institute. This strengthened the feeling of fraternity and helped in enhancing the harmonious relationships among different religions, faiths and geographical areas. For me it was another form of acquiring a real life education.

I used to take lunch in university canteen (mensa), but evenings I cooked for myself. One afternoon I entered a nearby grocery to buy chicken. I wanted to buy the cheapest possible and so picked up a frozen whole dressed bird which later proved a very good lesson for me. The bird I purchased was a soup making chicken. My German language by that time was not good enough to read and understand the label sticker on the package. The soup chicken was old, culled bird which never cooked to adequate tenderness. The more I cooked, tougher like leather it became. I went to bed that evening starved, wishing I had bought another bag of poultry instead of the cheaper one.

One morning Mr. Ulrich Lins who looked after DAAD affairs of Asia region came to Goethe Institute to visit the participants of language course. He was meeting them

country-wise in separate groups. Before me was there a Japanese group whom I sat next to. I heard them talking about requesting Mr. Lins to raise their monthly scholarship. I never had this idea in mind but listening to them helped me. I thought what would be the harm, if I would make this request too. Indeed I was lucky to get a hike in my scholarship from the following month. I learned from that incidence that listening to people when they talk can be rewarding.

After the language course, I went to Kulmbach, a small town in the state of Bavaria for one year's training program in meat production, processing and analysis. Federal Meat Research Institute of Germany is situated at this very place. My training course was coming to an end when one day an idea struck my mind as why not apply to DAAD for an scholarship for Ph. D study as well? There had always been a hidden desire in my heart to hold doctor title and write it before my name. So I applied and I was blessed one more time to get the scholarship. I have the feeling that Mr Ulrich Lins of DAAD was personally very considerate and sympathetic

executive and by his support I got the opportunity. I believe coincidences make differences in people's life.

I came to Stuttgart, a big city in Baden-Wuerttemberg state. First, I appeared for PNDS, German language proficiency examination that every non-German student must write and pass before studying in German university. As I had studied the German language hard in Freiburg and so the test was not that difficult for me. A large number of foreigners holding scholarship had to go back home without studying in Germany, because they do not learn German language properly. I still recollect it as yesterday when I wrote an essay in the test exam on agricultural occupation in Nepal. Later, I appeared for a colloquium comprising of three different food technology subjects and after that I was enrolled as Ph. D student in Hohenheim University. The work was hard. You had to develop the topic by your self, write the justification and prepare the full proposal. The supervisor professor would not help you much. During the Ph. D study you fall down so often and you undergo tremendous mental pressure. But then you rise

up later with deep satisfaction and confidence. That is the style of teaching in Germany.

The day I was awarded the doctoral degree of Dr. rer. Nat. was one of the happiest moments of my life. I remembered my mother who always encouraged me to study, took pride to see her son a university lecturer, and took pains to support my study. Her consistent encouragement has been a strong power to drive me to higher studies. Else, I might have been in the army as many of my friends did.

Apart from the university degree what else I obtained from Germany- I ask myself. The equally valuable learning and observations I received in Germany are punctuality, hard work, and honesty, discipline, helping attitude, quality education and quality work. A nation can only be built when it has these qualities. Do we have these qualities (here)? I tend to ask.

Prof. Dr. Dilip Subba, Tribhuvan University (TU), is President Nepal German Academic Association (NEGAAS), Former Secretary, Nepal Academy of Science and Technology (NAST).

*We express our hearty congratulations and
best wishes for the grand success of
the **NEGAAS-Souvenir***



PREMIUM ACADEMY

*Kalimati (Opp. to Chandi Complex), Kathmandu, Nepal
Tel.: 01-4277632, 01-4301871*

Opportunities and options for higher education



Dr. Prem Bahadur Thapa

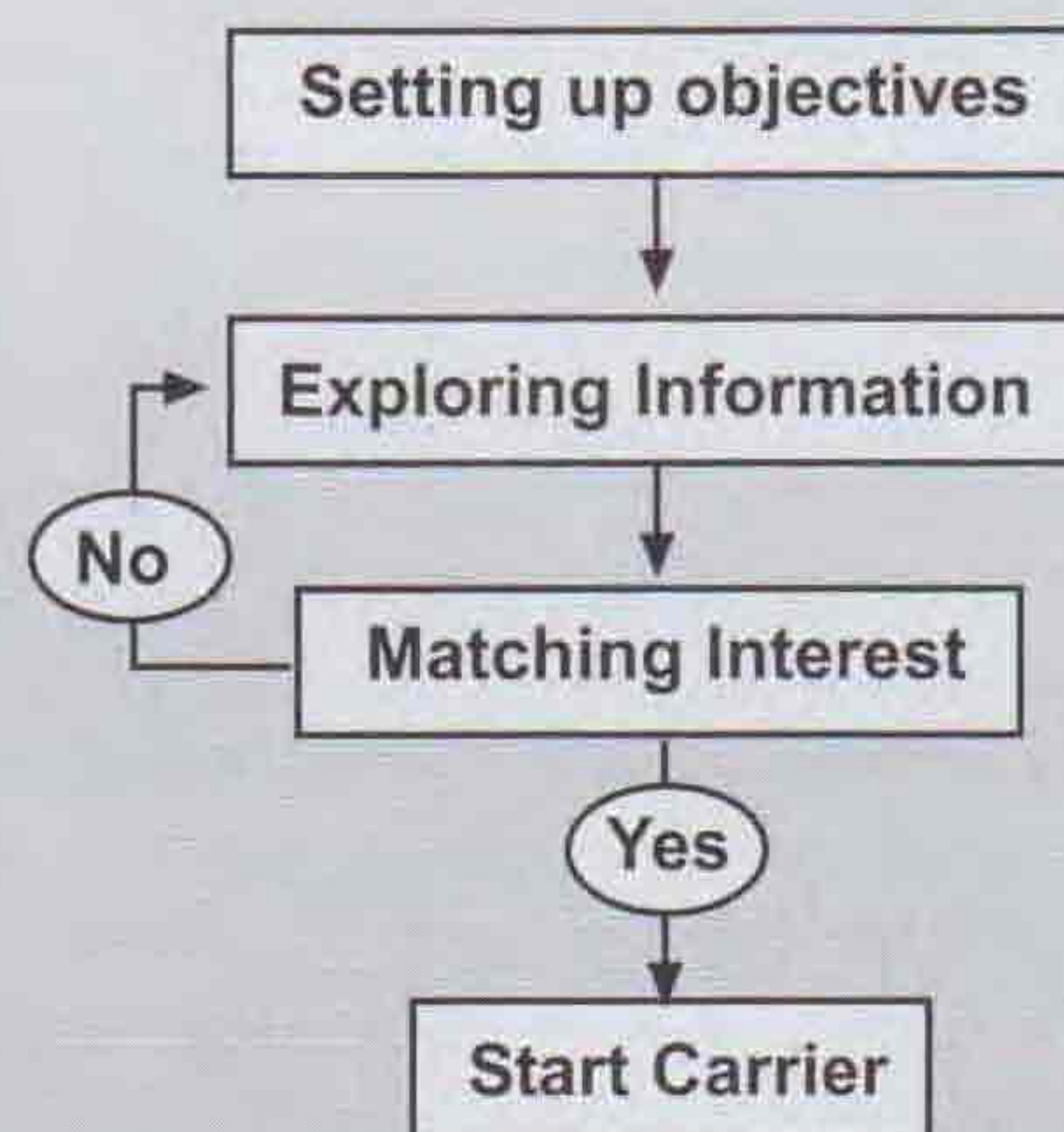
Background

Education is potentially a key factor in reducing the incidence of poverty, raising overall levels of labour productivity and economic growth and improving the quality of life through empowering the population to take informed decisions across a wide range of activities. Currently, the younger generations in Nepal are increasingly gearing towards achieving their higher education. The youth of our country have so much potential, but with a series of inequalities in the educational system faced in the post secondary education, they have limited opportunities for progress. Creation of the most comprehensive platform offering the widest possible range of choices, options and opportunities in higher education, skill development and vocational training leading to gainful employment is the critical concern in Nepal.

Opportunities & Options

Colleges and universities of today carry a heavy price tag. It is of great importance not to let that discourage the youth from obtaining their higher education. While the cost of tuition continues to rise, so too does the number of available financial aid options are available. It is vital to search these possibilities before they go to college and the large payoff they often provide. From local and federal options, to categorical and corporate options, college-bound students have a variety of

opportunities worth exploring when attempting to gain financial aid. A common mis-representation of financial aid packages (e.g. scholarships, grants, loans, work study programs) is that they provide funding for college education. The reality is that most of these packages are smaller and it may take several of them to add up. This is why it is important to explore all of the options before enrolling into college (Fig. 1). Only some organizations provide optimum funding coverage to



achieve higher education in well recognized universities or research institutions.

There are various platforms from where students can launch their higher education. Many subjects can be learned from Germany where students could have incomparable international experience waiting ahead of them. Almost any discipline of study is available in programs ranging from a summer to a year long. Germany

offers a rich historical background and cities such as Berlin, Munich, Frankfurt and Heidelberg where one could seek the best in arts, culture and entertainment (Fig. 2). Students are engaged in high-tech studies, international business and commerce, political studies, language and literature, and hospitality and tourism to name just a few. The German Academic Exchange Service (DAAD) is a German organization whose primary focus is to provide educational exchange between international undergraduate and graduate students. Through its many international centres, DAAD provides information for education in Germany as well as scholarships that attract top talent and highly-qualified students who consider a study abroad program in Germany a significant piece of their academic experience. Unless selecting an international course of study (also requires IELTS or TOEFL), language proficiency must be proven. The German-run Goethe Institutes or Centres offer German language courses all over the world where language diploma examinations can be performed which suffice the admission to an institution of higher education in Germany.

Experience of amazing culture can be also found in Japan (Fig. 3). If you are exploring your scholarship options for studying in Japan, you are in luck. There are literally dozens, may be even hundreds of scholarships that are available through all types of resources as government, collegiate, and private. Japan continues to intrigue

and mystify the Western world; thanks to its contrasts in culture, religion, language and even landscape. It rivals the United States as a world power and certainly continues to be a bugaboo when it comes to technological savvy and educational aptitude. Students engaged in studies in Japan are involved in all types of studies, from language and culture to business and industry, technology, religion and the arts. More than 226 Nepalese students have already graduated from Japanese universities.

One can study just about anything in France too from the language, to the humanities and the sciences.



Fig. 3: Two little Maiko girls posing in front of Heian Jingu Shrine in Kyoto, Japan

France remains one of the most alluring and sophisticated of all the European destinations and students regularly flock to all corners of the country. Of course, Paris attracts many while smaller regions offer more in depth cultural experiences. There are limitless programs to consider, from those offered through study abroad organizations to those targeting specialized studies, and more general programs sponsored through colleges and universities. While perusing educational career in France the students can take

time off from their studies to hit the Alps, take trip down to neighbouring Spain, and of course, get imbibed in much French wine and cuisine.

Many options of higher education are in USA, Canada, India, China, Korea etc. USA always remains the land of dreams and opportunities. The USA offers high-quality educational preferences for students from around the globe. Be it for the quality of education or the career prospects after graduation, the USA has attracted the attention of most of the study abroad aspirants. Similarly the voluminous information of the other countries can be obtained in their respective official websites.

Not only are the opportunities abroad, Nepal Academy of Science and Technology (NAST) offers Ph.D. Fellowship, Research Grants, Research Assistantship, M.Sc. Dissertation grants. Ph.D. Fellowship is honoured to Nepali students who have been doing their researches in Science and Technology (S&T) fields. Rewarding of this fellowship is based on the evaluation carried out every year and can be awarded up to 3 years period. This is given to those individuals who have finished their M.Sc. (the date of M.Sc. completion should be less than three years) and have registered their name(s) for PhD. NAST awards up to 10 research grants annually to Nepali professionals to encourage scientific research activities in the country. The program gives priority to need based research utilizing local resources. Research Assistantship is rewarded to the fresh M.Sc. graduates (M.Sc. completion date should be less than three year) with keen interest in S&T researches, and is awarded every year. The internship will be provided one year at the most. NAST also provides financial assistance every year to the M.Sc. students to work on their dissertation work. At present thirteen such grants are given to



Fig. 2: Students live and relax "downtown"

department of science faculty of the Tribhuvan University.

Concluding remarks

Key question that pops out while trying to plan for achieving higher education (either planning to study abroad or within) is how to arrange the finance for studies. It would not be a serious problem to worry at the current situation with the availability of numerous options, such as loans, scholarships opportunities, financial aid programs, etc. Most of the universities have their own scheme of scholarships and financial aid programs. Therefore, extending the options and opportunities often depends upon the institutions, where you are undergoing your studies. Choosing a degree or higher education course requires a lot of research with a huge choice and variety in the types of courses available, their location and free time/social/leisure opportunities. It is also crucial to make sure that the study and research requirements for the career prior to enrolment in the university are sufficient.

Bibliography:

- Choices, Options and Opportunities* (<http://www.edex.lk>)
- College Scholarship* (<http://www.collegescholarships.org/scholarships/country/nepal.htm>)
- College Education* (http://www.collegeview.com/importance_of_college_education.html)
- NAST official website* (<http://www.nast.org.np>)

Resource Sharing in a Federal System



Surendra Dhakal

Introduction

A complete federal system of governance is the optimum practice of a democratic system. The success of the system as such results in the equal sharing of resources and benefits that thus guarantees socio-economic equalities. The failure or the mal practices in a federal system might cause a political and territorial disintegration.

Political Economy of a Federal system

A political system based on federalism guarantees an optimum degree of autonomy in four tier of Resource Economy to its States, Provinces and Communes. They are

- Right to resource identification
- Right to resource collection
- Right to resource mobilization and
- Right to resource conservation (proper utilization and maintenance)

To materialize this type of total decentralization, an agreement is made among federal government, state government and local government (Provincial and Communal government) as to determine, which is the federal property, which is the property of state and which is of local government. The three bodies (Federal, State and Local Government) should clearly agree on which resources belong to

whom. For example:

- Federal forest, federal highway or federal river,
- Regional highway, regional forest and regional river
- Provincial highway, provincial river and provincial forest,
- Communal Road, Communal River or Community Forest

On this basis a total autonomy is granted to them so as to manage the resources for the equal development of the country.

Right to Resource Collection

In a federal economic system, there are two rights of resource collection. The local governments collect the tax and fees from the resources identified as their own. Whereas being the representative of State Government and Federal Government at their respective locality, they also collect tax and fee on behalf of state and federal government. It is because in a citizen friendly system of governance, the citizen receives all the services to be provided by federal or state government from the window of their own local government. For example let us take the issuing of passport. The local governments issue passport at their locality on behalf of Federal Ministry of Foreign Affairs and collect the fees.

Way of resource sharing

In the first case as mentioned above the local governments collecting the tax from the

resources identified as their own have right to keep with themselves 80% of the taxes collected for their local administration and development purpose and send 10% to State Government and 10% to Federal Government whereas in the second case where the local governments act as representative of Federal and State Government, keep with them only 20% as service charge and send 80 % either to the State Government or to the Federal Government. Such theory is also applied in the case of resource sharing between the State and Federal Government.

The Role of State Government & Federal Government

In Federal Democratic System, the role of Federal and State Government is like that of a father. A father receives the salary of a working son and invests that to the education of younger son. In a similar way, the Federal Government receives more from the states earning more and invests in the states earning less. Similarly a State Government receives more from the local governments earning more and invests in the local governments earning less. In Germany such a system is popular with the name *Fiananzausgleich* i.e the Maintenance of Financial Balance. Such system of financial decentralization if carried out properly guarantees the equal economic growth every where.

The Planning Mechanism

A supreme planning body like in a Socialist Country does not exist in Federal System of Governance. In a federal system planning is regarded as an integral part of governance and thus autonomy in planning is granted to the state and local governments in their areas of jurisdiction. There is no interference from the Federal Government to State Government and from the State Government to the Local Governments in matters of planning and implementation thereof. The line departments of the State and Local Government formulates the plan on the basis of the resources collected by themselves and the grants to be received from their upper tiers and implement them on their own as their right to resource mobilization.

Settling disputes related to Resources and Risk of Disintegration

When disputes concerning resources take place between or among local governments, the State Government mediates the dialogue and rectification and resolves them. If the same takes place between and among the State Governments the Federal Government mediates and resolves them. When the disputes arise between Local Government and State Government or the State Government and Federal Government, the Constitutional Court gives verdict upon deliberation as to the owner of the resources. The verdict given by the Constitutional Court should be agreeable to the concerned parties and if not, there is the risk of the disintegration of Federation, the State Government and Local Government. If there is disintegration in State Government or Local Government there appears new State and Local Government and if same thing happens in Federal Government a new and

independent country emerges.

Federalism Nepalese Perspective

Nepal has no experience of Federalism till now. Feudalistic political system from the time before 1951 and again in a period from 1959 to 1990 in the name of Panchayat System made the political and economic system totally centralized. The then local institutions had neither autonomy nor capability of resource management. The democratic system based on parliamentary type of governance of twelve year i.e. from 1990 onward never tried to make local institutions fully autonomous as regards to resource management. On the other hand national democracy to some extent was achieved. But because of the lack of intra party and inter party democracy, there always lacked the lobbying forces for making local self government very strong and responding to the aspiration of the people. The democratic leader turned themselves as dictator and always denied the devolution of their authority even to their state and assistant ministers. Thus 12 years of so-called democracy could never contribute towards establishing a fully decentralized system of governance based on fully autonomous local government. The gloomy scenario as such could not play effective roles for creating an institutional basis for the development of federalism in Nepal.

The People Movement II and after Federalism and election of constituent assembly are agenda of Nepal Communist Party Maoist. With this agenda, they waged a 12 year long people's war and finally other political parties entered in these very agenda with a view to responding to the aspiration of people expressed through the People's Movement II. But leaders

are always same, their convictions and level of performance have also not changed as demanded by the situation and people's movement. Alone the questions of constituency delimitation waged violent anger on the part of *Madhesiz* and made Interim House stand still for more than one month. What happens when tomorrow the question of resource ownership between State and Federal government and among State Governments and Local Governments comes up? The question as such is very crucial because if the issues are not settled judiciously, the country can easily be disintegrated.

What to do?

India itself is not a fully federal country rather a quasi federal one with president of Republic having the power to rule directly the State in case of urgency. The Federal President of Germany has no such power. So federalism in Nepal should be developed in such a way in a long run so that a territorial disintegration of the country because of resource issues could be avoided. For this, all the political parties and their leaders should be enlightened with the norms of federalism and be empowered therewith. As the process of federalism should be tight in the beginning and be loose in a course of time, the political parties ruling the country must have passion and capability to convince the people about their long term plan and strategies through continuous training and awareness building. The capability of civil societies should equally be enhanced, so as to work as watch dog against inequitable sharing of resources among federal, state and local government. All such requires a long process of actions including education, training, empowerment, method of dialogue and rectification.

Notes from my diary: Study in Germany in Shaping my Destination

Sandhya Regmi Shiwakoti
Ho Chi Minh City, Vietnam
E-mail: sandhya_regmi2000@yahoo.com



I had got an opportunity to study Electrical Power Engineering with specialization in automation technology and electromagnetic compatibility from Dresden University of Technology from 1990 to 1995 under DAAD scholarship program. To my knowledge, I was the first Nepalese female student to have completed Diplom Engineering from a German University.

Early Days in Germany

Start of my student life in Germany was marked with struggles and confusion. I felt as if suddenly I were in the middle of Atlantic Ocean. First and the largest shock I felt was the cultural contrast. Grown up and trained in traditional Nepali culture and value system, I sensed that it would be impossible for me to adjust with such a sea change in culture and with such sharp contrast in value system.

Frankly speaking, after my initial observations and considerations, I had even packed my bag to return to Nepal, and gone to say goodbye to my advisor, whose two pieces of challenges or warnings forced me reconsider my decision, who then had said "if you run away without achieving your set goals, you are more likely to be unsuccessful lifelong in your subsequent endeavors as well", and that "if you can't digest the culture here, you don't need to adopt it, take only part of what you like, ignore what you think is not acceptable for you, focus on your mission, achieve it, then return to

your own world". My advisor was obviously upset with my decision, because he had noticed that I was among the brightest students in the class. In fact, he was so proud of me to see that I had mastered German language within three

goals. Some foreign students said they were there to have more relaxed and carefree life as they could not dream of enjoying such social liberties in their own countries, while some others were busy exploring ways and means for



Abstract Painting by the author, titled "Eternity" (Oil on Canvas, 1 m x 1m) (Nov. 2010)

months of joining language classes and that he had recognized my distinct ability and appetite for studies.

My class was full of diversity not only in terms of geographical distribution, age group, religion, culture, language, etc. but also in terms of interests, priorities and

permanently settling there, or focused more on making money than on completing their studies. There was also sizable mixture of talent based foreign students, with the ones apparently based more on political credits than on prerequisite academic capabilities and backgrounds.

months was very good starter to adjust the new environment and to know each other coming from different part of the world.

The master study started on September 2005 in

carrier. I was so influenced by German System and status of technology during my Stay there that I used to miss Germany a lot. Therefore I decided to begin my carrier again in Germany. Mr. Rishi Shah and Mrs. Sulochana Shah had

to Frankfurt for interview. Unfortunately the company denied with the reason of poor German language skill.

I continued applying further. One of my well known relatives, named Mr. Gerhard Mersmann, helped me to find the vacant position via Magazine and internet. As a foreigner coming from Nepal, it was not easy to recognize the appropriate magazine, which is specialized for job application. Later I came to know the papers like Süddeutsche Zeitung, VDI Nachrichten, Newspaper on Saturday are especially good for finding vacant position.

I searched personally as well on internet. Here in Germany, no one is employed on know how basis. It is a very special culture. One can forget about getting the position if s/he has only good contact with chief of the company. It is very fair, applicant has to meet the criteria as well is able to do the job. It is tougher as a foreigner from non European country. In order to get the job, s/he should have work permit (Arbeitserlaubnis). The work permit is given only when no one from European Union (EU) is available for specified position provided s/he has job offer from the company. The first requirement to get the job is the job offer/contract from the company. The second requirement is to get work permit. These are the two must requirements for a non EU citizen.

On course of my job application, I



Figure 2: MSc. colleagues from Azerbaijan, Sudan, Bangladesh, Bolivia, Venezuela, Great Britain, India, Malaysia, Kenya, Mexico, Thailand, Germany, Vietnam, Korea and Nepal

Fachhochschule Südwestfalen (The University of Applied Science, Soest).

The course contents were oriented to practical application. The Professors were very open to share knowledge. They are also in close contact during lecture and solving assignments. It was a very worthy knowledge which I learned for instance – microprocessor, programming, system design. These are the important topic which I have to depend for my present job. I need these concepts repeatedly.

Opportunities & Challenges

After completion of Master study, I went back to Nepal on 22 March 2007. It was nice to see friends and family. Dr. Roshana Shrestha invited me for the NEGAAS (Nepal German Academic Association) monthly meeting. There I had the opportunity to meet NEGAAS Board members and others. NEGAAS is the platform where the academic people from Germany and Nepal meet together, share experience and promote different activities. I also registered there as a life member.

It was already 3 months since I left Germany. I had not started my

also given me the courage to start my new milestone.

I applied to some companies via internet. German Companies prefer to get the applications in its own language. I got the reply only when it was written in German language. One of the well known friends named Mr. Klaus Schubert (the Chairman of International Freundeskreis Soest) helped me a lot on grammatical correction and formulation of application letter.

Finally, I got interview invitation from the company – Securicor Sicherheitsdienste GmbH. I had a big hope to get the position as the company's portfolio was similar to my previous company in G4S Nepal. I packed my luggage and flew back to Germany on 16 July 2007. Next morning I took a train

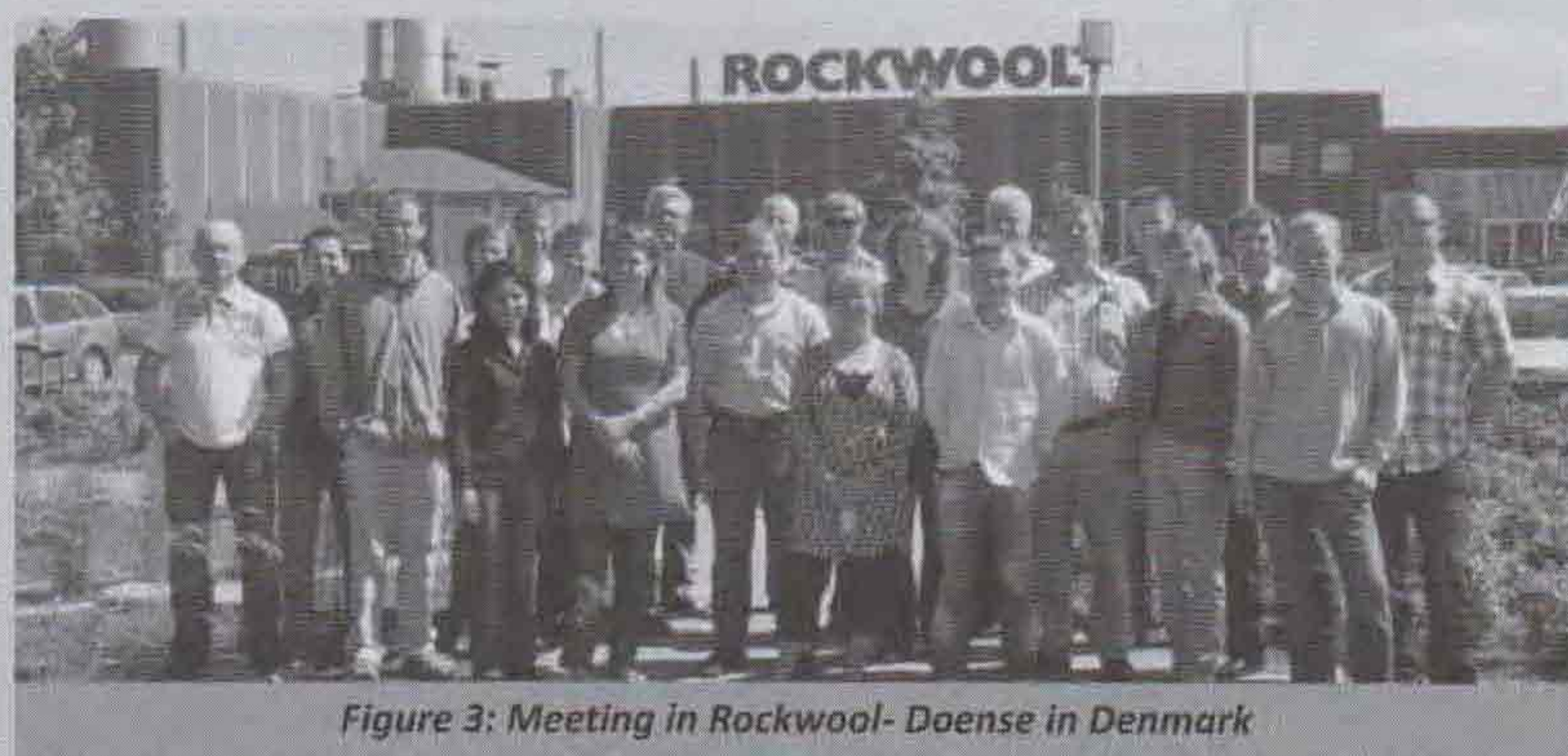


Figure 3: Meeting in Rockwool- Doense in Denmark

Being the lone Nepali student in the whole university, I had to travel to other cities when I wanted to talk to someone in Nepali. Writing letter was the main mode of communication to my family and friends in Nepal, which would normally take two weeks to a month. Making telephone call was costly affair, and was beyond affordable range to have regular communication, and could be considered only in case of emergencies or in urgent matters.

Some professors used to invite us in their home to celebrate their festivals. Such homely events were significantly joyful and they have continued to remain memorable moments.

While I was in Germany, Berlin wall was torn off by the waves of unification.

Later Years in Germany

In later years, in parts of summer vacations, I worked as an interpreter and a translator in several language bureaus in Frankfurt, Berlin, Korbach, Niirnberg, etc, which not only provided me supplementary financial means to visit Nepal or other parts of Europe, but also helped utilize my language skill and explore various parts and aspects of Germany.

Casually, I once met a German family (Martin and Eleonore Fehr of Korbach), who, over time, became my very close friends. Even today, I am in touch with them.

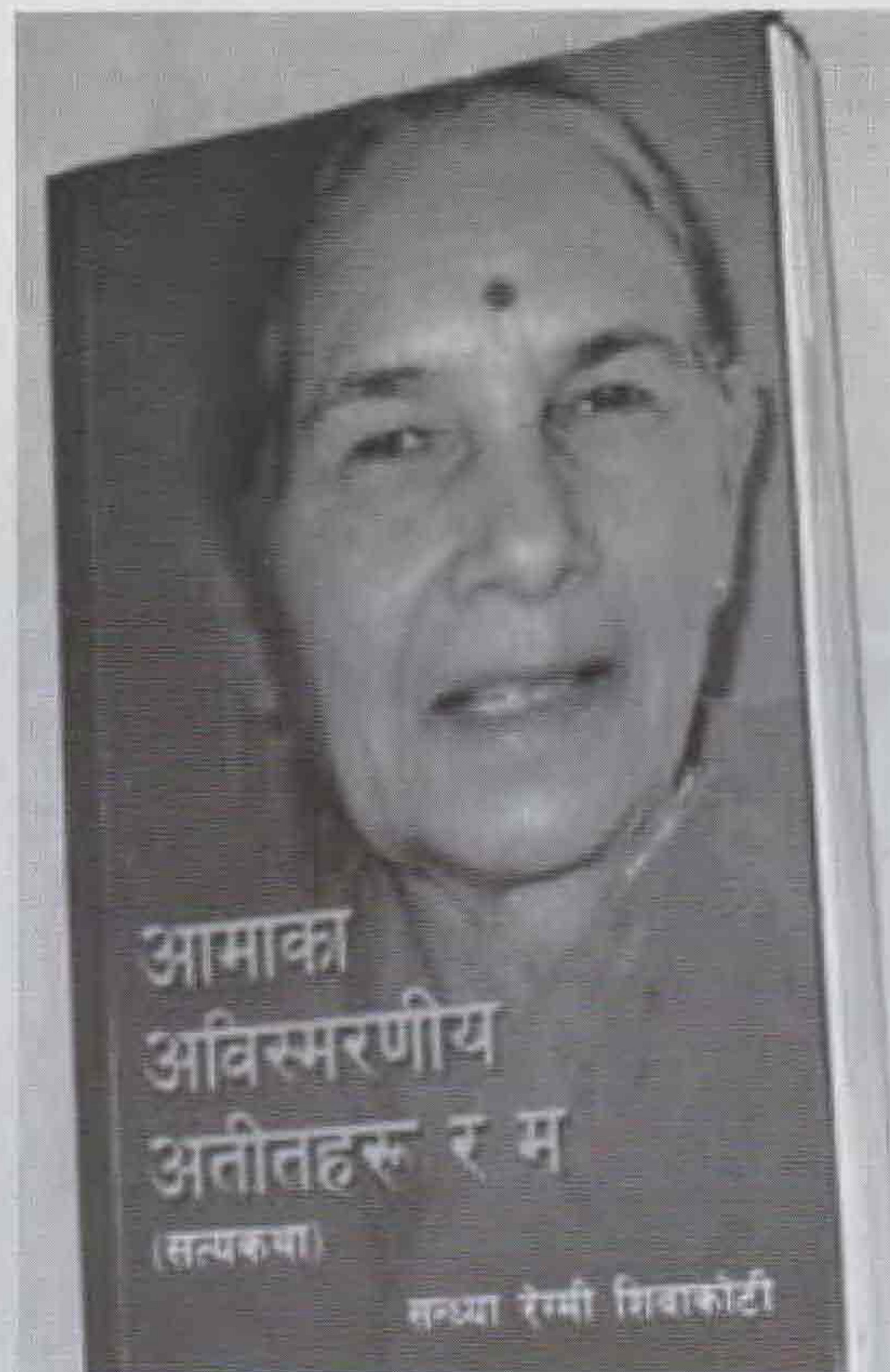
While in Germany, I traveled to most of the countries in Europe with my rucksack, and taking rests at youth hostels to youth hostels. Such trips helped me grasp general view of larger parts of Europe. During such tours, wherever I visited museums, I was always fascinated by spectacular treasures

of oil paintings.

Looking back today, it has been over fifteen years since I left Germany with my graduate degree, and 20 years since I first stepped in there. Compared to those days, I presume, remarkable changes have taken place in Germany, and is now the destination of ever increasing foreign students with dream of getting superior training in science, technology, medicine, management, culture, language, etc.

Work in Nepal After Graduation:

After much discussions and



deliberations, Tribhuvan University finally certified my degree as equivalent to Master of Engineering.

I joined Nepal Electricity Authority and was assigned as an Electrical Engineer in the Kaligandaki "A" 144 MW Hydropower Project, where I got broad experience in project's various aspects, working with professionals from Nepal, Germany,

Japan, Italy, USA and Canada. In my private time, I also worked with SKAT (Swiss Centre for Development Cooperation in Technology and Management) for small and medium size hydropower development in Nepal.

Subsequently, I worked in UNDP as a District Energy Advisor in Parbat District, a remote part of western Nepal- which was not yet connected with national power grid, for micro hydro power development and for promotion of alternative energy technology and with the view to preserve environment. I moved back to Kathmandu and worked as Program Manager in the Engineering and Industrial Development Department of the United Missions to Nepal for some time.

Further Studies, International Work Experiences & Explorations

In 1999, I joined City Net Organization (Regional Network of Local Authorities for Management of Environment and Human Settlement in Asia Pacific City) in Yokohama, Japan as an Assistant Program Manager, dealing with preparation of new program proposals, evaluating existing proposals, advising authorities on relevant issues of environmental and human settlement of Asian Cities, editing newsletter, making correspondences with member cities, etc.

Works at City Net Organization motivated me to explore further in the world of Environmental Engineering. Subsequently, I attended the University of Tokyo as a Foreign Research Fellow, and was involved in research of various alternatives to coal energy in developing countries, and in Tokyo Half Project - which aimed to

reduce the Green House Gas Emissions by 50% within 10 years from the year 2000.

In February 2003, I joined NUS (National University of Singapore) for master degree in Environmental Engineering, and completed it in February 2005.

Since April 2005, I have been living and working in Ho Chi Minh City Vietnam.

I have worked as a Senior Engineer and Environmental Specialist for a Japanese Engineering Consulting firm in the Saigon East-West Highway Construction Project, funded by JICA ODA Loan, activities of which includes construction of road, bridges, flyovers and interchanges, cut and cover tunnel, immersed tunnel, river slope protection works, etc. passing through the centre of the city and demanding focused Environmental attention. The Project applied the first ever immersed tunnel technology for construction of tunnel under the Saigon river, for which 4 immersed tunnel tubes of approximate length 100m, width 33m and height 9m were casted in a casting yard 22 km away from its sinking place, and whose towing and sinking in the river bed was completed around the middle of

2010.

Over the years, I have been inspired by the rich contemporary fine arts to such an extent that I could not resist in involving myself in it. By

The book has been highly appreciated by all those who have gone through it. This has inspired me to work for the next book.



Towing of Immersed Tunnel Unit 1 for immersion in Saigon River, March 2010

now, I have completed over 105 oil paintings on canvas in various themes, including still life, landscape, Buddha, portraits & abstracts. In near future, I am considering to display my paintings in an exhibition in Kathmandu.

Besides, I have recently published a book titled "Aamaka awismaraniya ateetharu ra ma" (mother's unforgettable pasts and I), which is a perpetual and lively story of a mother - full of struggle, perseverance, deed, love, compassion, devotion, magnanimousness and eternalness.

I wish to conclude this note by recalling that my studies at Germany has not only trained me as an Engineer, but has also helped shape my destination by giving much needed insight and confidence to look into the life from magnificent perspectives, by encouraging to take challenges in life instead of give up or running away from it, and by giving vision for continued exploration and development of my latent potentialities and passions in life.

Sarangi- a spell of magic in music

 Pramesh Pradhan

Carved and short necked string instrument that perhaps best represents music in Nepal is *Sarangi*. It has fretless four screwable metal strings to it. It is considered as a smaller but Nepali version of guitar. A normal length of *Sarangi* is slightly more than a foot. Light in weight is *Sarangi* that somewhat resembles the shape of number 8. The body and the neck of the instrument are carved fascinatingly from a single piece of light wood, known as *Khirra*.

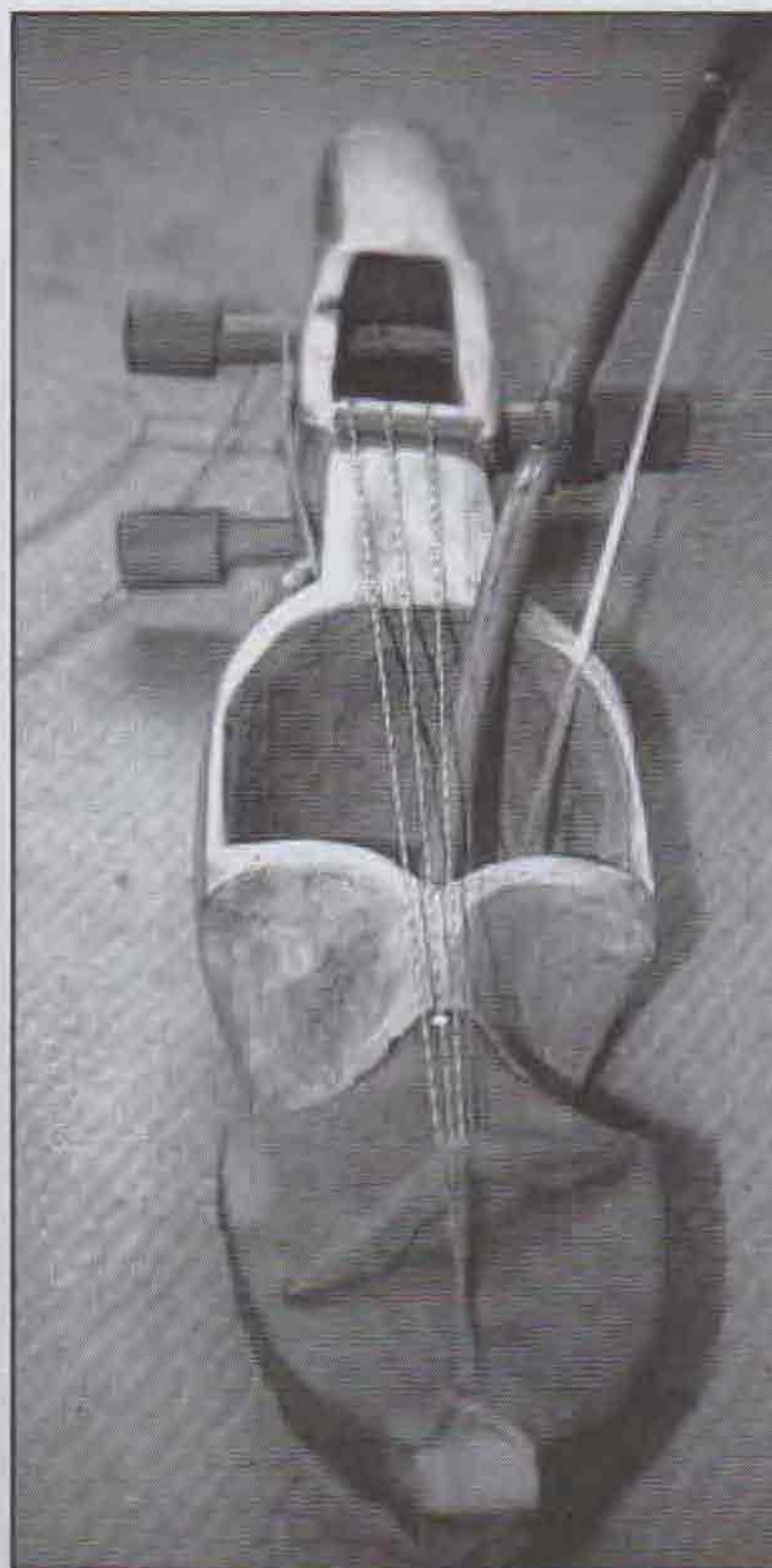
The music produced by *Sarangi* is captivating, melodious and acclaimed in Nepal as the closest resemblance to human voice than any other musical instrument. Uninfluenced by western music, *Sarangi* is considered notoriously difficult to play. Performance is usually solo supported by vocal by *Sarangi* player.

Arbaaj, an instrument once popular among *Gandharva* community, is considered to be the mother of *Sarangi*. It is not played nowadays. An octogenarian Mohan Bahadur is accredited with the lone *Arbaaj* master in the country. Twice to thrice bigger in size than *Sarangi*, *Arbaaj* is heavier and more difficult to travel with and play. The *Gandharvas* relate the legends when fairies used to dance in the tune of *Arbaaj* played by the *Gandharvas*.

Combination of two words *sa* – (the first musical note in the series *SA, RE, GA, MA, PA, DA, NI, SA*) parallel to *DO* as in *DO, RE, ME...*) and *rangi* meaning colourful compose the word *Sarangi*. The instrument that colours up all notes of music is literally *Sarangi* in Nepali. The word *Sarangi* probably may have derived from Hindi words: *Sau* (hundred) and *Rangi*

(colour). It is literally hundreds of colours of music which refers to richness of the sounds it produces.

The body of *Sarangi* is carved into a hollow frame with two openings. Strings were tied from *murra* (wooden tuners) on the upper end and to *kuchi*, the lower end. Between the upper and lower openings are the four strings tied tight between elevated wooden pieces *sundari* and *ghodi*. The instrument has no fret and finger board. The lower opening is



covered up with dried sheep-skin. The strings were traditionally made out of sheep's intestine. *Gandharvas* used to receive sheep's intestines during festivals. They would leave the intestines in a pot for few days until rotten to an extent. The finest nerves of the intestine are pulled out to prepare for the string which would, as *Gandharvas* put, produce the most sonorous quality of *Sarangi* sound.

Nylon or metal strings are used nowadays.

A *dhanu* is moved over the strings to produce sound. A small bundle of thin fibers and a bamboo stick curved is tied to make a D-shaped bow. The tail of the horse was traditionally used to make a bow. Different notes are created by pressing the strings with the cuticles of the nail of fingers of the left hand. *Gandharvas* relate legends that their community had descended from heaven to entertain people. Hindu myths relate them as well with musical entertainer of gods and goddesses. It is believed that King Prithvi Narayan Shah, who unified tiny scattered kingdoms to form Modern Nepal in late 18th century, engaged *Gandharvas* culturally to contribute to unification of Nepal by singing and entertaining for the people, traditions and to the glory of the Shah dynasty. They were sent to villages to transfer information and spread the message of unification. They may have been used to gather information culturally.

Gandharvas or *Gaine* (singer) is perhaps the lone musician community in Nepal. *Dalit* (untouchable) and a downtrodden caste is *Gandharva* in hilly regions of Nepal. They used to make living by receiving a meagre money and food by singing songs and narrative tales commonly known as *Gaine Geet* or *Gandarva Geet*. They would travel across the country playing music and spreading news relating to the stories ranging from vicissitudes of life to politics and the love of the country to the accounts of wars Nepalese fought in foreign soils. They would visit, nearly as nomadic musicians, door to door to provide entertainment, sympathy, frustration, sharing and

friendship. They are considered representing the pain and joy of Nepal. They had and still have a vital role in preservation and propagation of Nepali folklore. Census 2001 record around 6,000 *gandharvas* in Nepal.

There are several *Sarangi* players Nepal has produced out of which the contributions from Jhalak Man *Gandharva*, Shyam Nepali, Buddha *Gandhava*, Ram Krishna, Barta, Tikki Maya, Anil, Hom Bahadur and Rubin *Gandharva* cannot be forgotten. The song of "*Aama le sodhlin ni khai chhora vanlin...*" (My mother may ask where my son is...) that intones the heart-breaking last minute message from a dying Nepali soldier on a foreign battle

field is an overriding *Sarangi* song.

Sanu Kanchha *Gandharva*, a devoted *Sarangi* player for the last 25 years emphasizes the need to handover the tradition to new generation. He laments that the government refrains from protecting *Gandharva* community and to the moans of *Sarangi* His is a representative appeal against step-motherly treatment to *Sarangi*, despite being originally an instrument of the land. Establishment of *Gandharva* Cultural & Arts Organisation (GCAO) to form an organized *Gandharva* community in Kathmandu is a step forward. It has a major obligation among others to preserve and protect the great


heritage.

The contribution by the *Gandharvas* towards the society and the nation is sadly forgotten. The glory of the music that once vibrated in the blood of the people and captivated the nation, ironically, is dying away. *Sarangi* is in the verge of being a decorative hand-carved musical instrument and the device that used to be placed at the heart of the people that would spell magic over them for many centuries is endangered to be placed on the showcase as an antique. There is a need to protect it from extinction. If it is forced to extinct, it will be only us to be blamed.

German associated Organizations in Nepal (Part II)

<p>Goethe Zentrum Kathmandu G.P.O Box 1103 Thapathali, Kathmandu Tel: 4250871 Fax: 4250128 E-mail: gzk@wlink.com.np Web: www.goethe-kathmandu.com.np</p>	<p>GIZ Office Kathmandu Neer Bhawan, Sanepa P.O. Box 1457 Kathmandu Tel: +977 1 5523228 Fax: +977 1 5521982 Web: www.giz.de/nepal</p>
<p>University of Heidelberg South Asia Institute Kathmandu Branch office Neer Bhawan, Sanepa P.O. Box 4379 Tel/Fax: 5526915 Web: www.sai.uni-heidelberg.de/kathmandu</p>	<p>Friedrich Ebert Stiftung (FES) Sanepa- 2, Lalitpur P. O. Box: 11840 Kathmandu Phone: 5522526/5542406 Fax: 5521101 Email: fes@fesnepal.org Website: http://www.fesnepal.org</p>
<p>Nepal German Friendship Association Sanepa, Lalitpur P.O. Box: 19059 Tel : 5536914 Fax : 5536914 E-mail : info@negfa.org.np Website : www.negfa.org.np</p>	<p>Hermann Hesse Gesellschaft Nepal-2000 G.P. O. Box: 7402 Kathmandu Tel. 4256952, 4257245 Fax: 4428427 E-mail: hessenepal@hotmail.com</p>

Germany as Mathematics Education Destination & Relevance of Applied Mathematics Research in Nepal

 Tanka Nath Dhamala

We sketch very briefly the concept of mathematics education and understanding the impacts of mathematics in solving real-world problems abroad, in particular of Germany. We will highlight some of the conceptual gaps appearing in the developed and developing countries, particularly in Nepal. Preliminary proposals are appealed hoping for the improvement of the prevailing situation of the uses of mathematics in real-life of the third world not well considered in the past. Possibly, these ideas might be applicable also to Nepal.

Among renowned mathematicians contributing to today's beautiful world, German mathematicians play key role in the history of rigorous development of mathematical ideas and logic, and their applications. Revolutionary natured Prince of Mathematics, Carl Friedrich Gauss, exhibited his continuing intellectual brilliance from the childhood. Revolutionary contributions in many areas of mathematics, and also inspiration in the development of physics were made by a phenomenal genius mathematician, Georg Friedrich Bernhard Riemann, whose work was exceptionally deep, creative and rigorous. The most brilliant and prolific intellectuals from childhood IQ, Gottfried Wilhelm von Leibniz, has immense influence in mathematics. In addition, contributions of Karl W T Weierstrass, Carl G J Jacobi, Hermann K H Weyl, Johann P G L Dirichlet, Georg Cantor, Amalie E Noether, Kurt Gödel, Christian F

Klein, Julius W R Dedekind, Ferdinand G M Eisenstein, Johannes Kepler, Albert Einstein, Edmund Landau are highly valuable among others.

The noticed prominent mathematicians along with others from the fatherland Germany not only developed pure mathematics but also equally contributed in the field of applied, applicable and industrial mathematics.

A solution process of a real-world problem done by real people at real places involves the problem identification, a good mathematical modeling, obtaining reasonable theoretical and/ or numerical solutions and finally their practical realizations in the real society. One of the main issues of these people is to look: what is mathematics good for? The domain would be motivating to look in detail and model the real-world problems whose good solutions make difference in the real life and society.

Pure mathematics helps to develop the principles of mathematical sciences for their own sake rather than for their immediate usefulness. Applied mathematics concerns with the mathematical techniques typically used in the application of mathematical knowledge to other domains. Applicable mathematics includes many more areas of mathematics that are applicable to real-world problems distinguishing the traditional field of applied mathematics. Applied and

applicable mathematics are closely related to other mathematical sciences such as , , information technology, operations research, management science, statistics, a, biological sciences and physical sciences.

Some think that pure mathematics is often perceived as having a higher intellectual standing. Others consider that applied mathematics enjoys better opportunities to bring external funding from many sources like much of pure mathematics. The theories and methodologies developed by the former group supports in solving the real-world problems tackled by the latter group. While solving some challenging real world problems, the latter group usually does invent new branches of mathematics in the process of their research.

Industrial Mathematics (IMA) means mathematical modeling and scientific computing of considerable industrial problems. This is one of the most applicable mathematics, which mainly treats problems posed by industry, questions of managerial, technical or economic nature that are posed by different companies. Its handling is firstly to understand and transform the real-world industrial problems originally posed in a non-mathematical industrial language into appropriate mathematical framework (i.e., mathematical modeling). Then, one finds possible solutions of these problems by appropriate (in general,

approximate) solution methods of analytical and/or numerical nature, and tests the accuracy, validity and reliability of obtained solutions. Finally, it has to reinterpret or implement the realizations in terms of original real-world industrial language.

IMA has quite diverse varieties of disciplinary areas like for example, operations research, optimization and control, industrial statistics, mathematics in insurance and finance, partial differential equations and computational mechanics, biomathematics, mathematics in medicine and ecology. Within this framework practical problems are related to planning and manufacturing processes, scheduling and sequencing, quality control, pollution and environment, water distribution, flows and matching, transportation, communication, neurobiology, facility allocation, electricity, fluid dynamics, electromagnetic field, elasticity and heat conductivity.

IMA has been used to prove designs before manufacture, to test plant before construction, and to explain the occurrence of faults in processes. Thus, it arrives to reality departing with reality. Mathematical modeling and then their solutions are the bridges that only a real mathematician can cross. Although mathematical modeling have a very long history, extensive research experiences strongly suggest that the choice of a good model critically affects one's ability to solve the problem. Hence a strong formulation of a real-life problem is crucial.

IMA people connect the practical world to the mathematicians. They have to implement various ideas and methods from the field of mathematicians in order to solve practical real world problems. As

such problems occupy quite large range of applications, it is in general unexpected which types of mathematical methods are needed. From the views of scientific and human creativity, IMA is one of the most enjoyable, exciting and very active field which a mathematician could consider and do. The principle "mathematics is only learnt by doing" is equally applicable in IMA. Investigations of new ideas, methods, algorithms, implementations and analysis of their realizations are central points in this area. Problems in the society are the main motivations in IMA, which in turn probably bring new challenging problems in the society of mathematicians.

IMA education appears worldwide, as the Division of Mathematics and Statistics at CSIRO, Australia; European Consortium for Mathematics in Industry, France, UK, Italy, Sweden, Germany, Netherlands, Norway, Denmark, Finland, Austria; Industrial Mathematics in Minneapolis, Claremont Clinic in Pasadena, US; Institute for Industrial Mathematics, Israel; Institute of Industrial Mathematics, Germany; Industrial Mathematical Modeling, England; Industrial Mathematics Competence Center, Austria and the Indian Society for Industrial and Applied Mathematics. Other centers are University of Firenze, Milano (Italy), Dresden (Germany), Kaiserslautern (Germany), Loughborough, Oxford (England), Chalmers (Sweden), Linz, Graz (Austria), Glasgow (Scotland), Eindhoven (Netherlands), Limerick (Ireland), etc. This naturally shows that the ideas and motivations of IMA have been explored quite broadly.

The main aim of the departments of IMA is to prepare students skilled to work in industrial environments. Financial

mathematics offers an efficient, practice-oriented track to prepare students for quantitative careers in the financial industry. Mathematical information technology focus on strong understanding of mathematics applied in mobile systems, telecommunication, embedded systems, software engineering, data mining, neural nets, image processing, networking, graphics, simulation and optimization. Mathematical biology with applications in biomedicine and biotechnology concerns with mathematical representation, treatment and modeling of biological processes, using a variety of techniques and tools. The success of modern numerical methods and software has led to the emergence of computational mathematics, computational science and computational engineering, which use high performance computing for the simulation of phenomena and solution of problems in science and engineering.

Germany has four types of secondary education schools: (for university education after grade 12 or 13), Realschule (for intermediate pupils after grade 10), Hauptschule (for vocational education after grade 9 or 10) and Gesamtschulen/Foerderschulen/Sonderschulen, where mathematics has been introduced as compulsory course. Though the schools and the German educationist have been paying great attention for the best mathematics educations over all their states, the findings demonstrate that the interests of the students and the results in mathematics are not taken as much ranked as German assume. Thinking of mathematics and technology in everyday life and logical development of mathematical ideas have not been

yet perfectly stabilized in the society.

Germany is an excellent place for studying mathematics that has been playing one of the leading roles for the development and implementation of higher mathematics worldwide. A contribution towards Nepalese mathematicians is also appreciable. German mathematicians have paved highest attention not only in the history of mathematics but also in recent days. In addition to high profile mathematics institutes at different about 80 major state-financed public and some private universities contributed by respective field leaders and pioneers of mathematics, many mathematics centers like Felix Klein Center, Fraunhofer Institute, Weierstrass Institute, and Max Planck Institute for Mathematics also carry out mathematics research. For instance, Fraunhofer Institute for Industrial Mathematics in Kaiserslautern concentrates on the research arising in the real-life problems in adaptive systems, financial mathematics, models and algorithms in image processing, optimization, flow and complex structures, transport processes, mathematical methods for dynamics and durability, and competence center for high performance computing and visualization.

The worldwide aspects of "Mathematics for Key Technologies" are adopted substantially in these centers and in many other applied departments of German universities. International Congress of Mathematicians, international conferences, workshops and seminars are the key factors for international communication in mathematics that they have been organizing. The Mathematics Research Institute in Oberwolfach

is one of the leading centres.

Creativity, originality and challenging problem solving are the main motto of German universities. A Habilitation is the minimum criteria for the application of professorship. The candidates are required to compete with scientific publications, field contributions and very broader knowledge as well as deeper knowledge on the subject matter. They run different categories of lecturers, with tutorials, with and without examinations, seminars for the students. Different universities and professors opt for their independent evaluation schemes in almost autonomy basis.

At the beginning of its modern education system, Nepal followed the pattern of then British India. This practice has been continued and changes are accepted usually when some changes are brought in other countries. In brief, implementations are inadequate and inefficient.

Mathematics is introduced as a compulsory course in school curriculum at all levels. Tribhuvan University, since its inception in 1959 remained the only institution of higher learning in Nepal for many years till other universities came into existence in the eighties and afterwards. Graduate and undergraduate level programs in Mathematics are offered at Tribhuvan University. The university offers mathematics at other institutions in Engineering, Management, Computer Science and Information Technology and Medicine supporting their major disciplines.

Other universities namely, Kathmandu University, Purbanchal University, and Pokhara University, established after 1990, are offering

courses more in technical, professional, and management areas. There was a growing demand for courses in these areas and many students were going abroad to study such courses. These Universities have fulfilled the growing social demand for more technical and professional courses compared to the pure science and liberal arts education provided by Tribhuvan University. Apart from major mathematics at undergraduate level, mathematics is given due importance in engineering and other applied science courses. Except Nepal Sanskrit University, all other universities of Nepal offer engineering and other applied science courses.

There are different agencies for regular curriculum development, text books and teaching material development, teachers training programs and examination control overlooking all aspects of mathematics education. But, the challenging task of affecting enough positive change has not been achieved yet. It is one subject wherein the gap between the intended curriculum and the implemented curriculum is the greatest.

It continues to be a subject taught more for enabling students to get through an examination than for enjoyment. Usually, classes have been adopted theoretically without emphasis on tutorials to develop the problem solving skills in students. Little care is taken to discuss the theory in detail, its implication and relevance to other mathematical ideas, and the historical development. Almost all the emphasis is on solving tedious and rather complicated problems with little explanation on the logic of the methodologies involved and their practical implementations. Although, it is considered as the

most prestigious subject, it is the most ill taught, ill understood and most difficult subject. As a result, the mathematics classes are less interesting. The subject itself is difficult to understand and less practical. Most of the students who do not understand the theory do not have enough skills to solve problems. Majority of the students fail in the examination and a small number of students pass in the first attempt.

If mathematics is viewed as a branch of knowledge, which is the key to the socio-economic and technological development of Nepal, this education at all levels have to be improved urgently. To make this improvement, community efforts involving students, teachers, administrations, parents and others are necessary.

These changes are being reflected in the attitudes of the professional bodies and of the technical colleges and universities. Candidates for the qualifications offered by these bodies are increasingly required to show competence in mathematics. Accordingly, relevant mathematics courses are introduced in all applied sciences and business courses. However, the product cannot yet develop a research project of its own and carry out independent study in any discipline. Most of these graduates choose teaching profession in various schools/colleges and do not seek to use their knowledge in any other professions apart from teaching.

There are less than four dozen Ph.D. Degree holders in Nepal spread across the country. Majority of them have been carrying out their research results under the

foreign supports from all over the world. As the research opportunity in mathematics in the universities of Nepal is very less, a few competent graduates seek opportunities of advanced study in the universities abroad. Unfortunately, most of those who obtain such opportunities would not like to come back and work here because of lack of opportunity. So the educational institutions in the country are deprived of good professionals for teaching and research though some talents have been contributing to the education and research with quite a hard struggle.

The investigation of applicable and industrial mathematics in the developed world, especially in Europe including Germany, and in USA, is much stronger. But, the development of this field in the developing and/or under developed countries, like in Asia and in Africa, is relatively low. Nepal is still in backward situation though the neighboring China and India are gearing up. Naturally, many real-life mathematical problems that could be caused by different disasters, pollution, climate change and environment, health and medical, low-performance communication technology, well-managed low-cost tours and planning, protection of declined agricultural plants are some of the examples.


The main reasons for it to be backward are the inadequate knowledge of this area itself, the lack of awareness of science and technology in the government policy and managerial sector and the highly import dependence market system. Who cares in science and internal technology, if usable things are imported and

available easily and cheaply? The education policies at universities are also responsible for it.

As mathematicians are the best multipliers of ideas and views for the better understanding of real-life problems, the focus should be given on their education and research. To improve the prevailing situation in third-world, a lot of awareness and importance in the society, industry, policy-level and governmental sectors must be promoted at high priority. Every responsible sector should have realized that a good education diverted to the industrialization of a country is the most essential factor for a sustainable development of the society.

Achieving these goals will be impossible in the places where adequate prerequisites are not met. Nepal naturally needs to improve its overall situation from the curriculum development, teaching methodology, and rating of mathematics for social uplift, students' aptitude towards education, political and social commitment, instructors' dignity, and the evaluation system. Schools, colleges and universities teachers should be provided with opportunities for advanced study, training and research. More than this, produced manpower in the respective fields should have environment to the national development rather than their frustrations and brain drain. It is very urgent to promote research by motivating researchers with their prestige and promotion. Absolute fact is that the implication of good internal technology has marked the developed countries as the first world!

The Topi and the Teacher: Intercultural Observations in the Nepalese Himalayas

 Manfred G. Treu

I have always been listening with great interest and gain when members of Carl Duisberg Society of Nepal spoke about their experiences in connection with the people, language or culture of Germany. It often bears a freshness and originality which is thought provoking and stimulating. Those speakers hail from the time of the very first contacts of Nepalese and Germans in the 60s when Nepal had just passed her first decade of opening herself to the outside world and diplomatic ties with Germany had been established. It must have been that virgin situation which invited completely new and unexpected experiences. They have often anticipated the present worldwide discussions on intercultural processes like migration, integration, multi-cultural society, parallel societies, identity, and globalization. The following is the description and discussion of an intercultural process arising from an official project of knowledge transfer that happened in the Kathmandu valley.

In the late 1960s, may be in 1969, at a time when the Technical Training Institute (TTI) at Thapathali, Kathmandu had been established through the assistance of the German Government, technical classes were held with teachers and trainers from Germany. It so happened that a technical teacher had a class with Nepalese students. Most of the students came to class wearing a headgear, the so called '3fopi ((Nepali), a brimless hat or cap made out of either black (Bhaktapure topi) or multi-coloured cloth (Dhaka topi) in the form of a bowl turned upside down, similar to the Nehru topi

known in German as Nehru-Schiffchen, but differing in colour, and shape of the upper part. While attending class the students did not take off their headgear. The teacher disapproved of the students' behaviour and asked them to take it off. The students refused to, until, finally, the teacher took off the caps himself.

When I heard the story from the mouth of a former student of the Technical Training Institute, I immediately asked him whether he continued his class or not, because he must have found this acting on behalf of the teacher quite rigid. He said that he continued attending the class for a couple of months, but later quit. The former student is of the opinion that it was rightly done by the student to not take off the topi and that the teacher should have known it. It should have been taught to him before coming to Nepal, he said. The person is of this very opinion even now, after more than forty years.

From the way in which the incident was told it appeared to me that the completely harmless classroom activities of teaching and learning technical matters had suddenly turned into a case of a cultural shock event, something both parties did not intend to have and also were not prepared for. It seems the teacher was not aware of the meaning of the Nepali topi and the students were in no way aware of being on a path of tangible cultural exchange, and possibly, from the point of view of the teacher, on a path of acculturation. Is there somebody to blame as the former TTI student tried to insinuate? If so, then who

is to blame?

The parties involved at the surface level are the teacher and the students. To find out whether there is someone to blame we will take a look at the relation between the students and the topi at first.

Wearing a topi is a common form of dress in the Nepalese society. A topi can be worn on any occasion and any time of the day or night in the private or in the public sphere. Exceptions do, however, exist. One normally takes off the topi at the time of taking a meal¹. One also does not wear a topi at the occurrence of death in the family². Nepalese culture has it that the topi qualifies a person from the outside as a good citizen or member of society. The wearing of a topi by young people and also in the classroom is something recommended by elders or, in other words, something completely normal and socially respected and even praised. At a time when nation building was of high priority³ the wearing of a topi was recommended by the state authorities, in those days the King or his representative. It was and still is a part of the Nepalese national dress.

In Germany, however, a national dress is something that does not exist. There is also nothing prescribed for undergraduates what to wear at college, not even at school or kindergarten. Everything which is a or smacks of uniform has been regarded with a certain amount of suspicion after the 2nd world war experience with militarism and subsequently has vanished from the visible spectre of predominant cultural forms of

civilian society.

In Nepal, rules and regulations at schools do not forbid the wearing of a topi inside the classroom. Neither is there any compulsion to wear a topi and not wearing a topi is by no means an unaccepted form of behaviour in the classroom, it is as normal as wearing a topi. Taking off the topi thus does not go against any rule or norm.

In the late 60s, we were still far away from the time when wearing a topi became to be recognized as a sign of conformity and not wearing it became to be regarded as a sign of latent protest against the prevailing political ideology of that time. The incident, I think, cannot be linked to any one of these two models of behaviour for historical reasons.

Nepalese women in general, however, never wear a topi with the exception of high mountain settlers like Sherpas and others who wear thick cloth, wool, even leather or fur caps to protect from cold. Women may cover their head with a piece of cloth which is the corner of their sari depending on the purpose of either to protect from heat, cold or dust. Inside their home, married Brahmin and Chettri women should cover their head, be it with the corner of the sari or a shawl majetro is the traditional Nepali term for this shawl⁴.

The students in the incident were either open to experiment in taking off the topi or stuck to their regular pattern of everyday behaviour in not taking off the topi. At the surface level, there is no indication that the students were to blame.

On the other hand, it could equally be argued that to respect the wishes of the guest is a part of the duty of the host. Therefore, it may also be asked, what harm was done

by fulfilling the wish of the teacher and taking off the topi during class-time since it does not break any law or violate any custom of Nepal? If, at that time, the German teacher had been confronted with the bald head of a young Nepalese man he would have learned something about Nepalese culture, here the annual reverence for the deceased family father by shaving one's (male) head which is somehow awkward to handle for many of the followers of that custom, and, therefore, to my mind, the only plausible reason for the reluctance of some or one student to take off the topi. But this open gesture could have started a process of familiarization with or a deeper understanding of Nepalese culture in the teacher and could have resulted in high respect. Here is a point where the students could be blamed.

Being a German the teacher followed the German socio-cultural convention. Taking off one's hat or cap is the way to be polite. European, North American, and Australian etiquette has it that one does not wear a headgear inside a closed room or a church. One takes off one's hat or cap, when meeting or talking to a person, especially one that is older or higher in rank than oneself. One also takes off one's headgear at the time of the last farewell at the burial ground, at the time of standing up to keep silence for a departed soul or when the national anthem is played. Even when greeting somebody from far, on entering a shop or leaving it, men lift their hat for a brief moment to show respect or be polite. Uwe Fenner, a specialist in western etiquette brings it to the point when he says, "In case of doubt, a gentleman avoids making a mistake by taking off his hat"⁵.

From the gender perspective, however, it is interesting to note that this kind of behaviour applies

to men only, since women, in contrast, are allowed to keep their headgear on wherever it may be.

The male German teacher stuck to his cultural norms while in a foreign country and, in the case of Nepal, a very different culture from the German one. From a purely Nepalese perspective, however, it might even appear as if the teacher took his culture as the measure of all things. Primarily, I think, he like everybody else has every right to do so as long as it does not interfere with an individual's safety or dignity. But then the argument will be brought forward: he is not in his country. That is the case and there is no doubt that in another country, the rule or custom of that country is valid and not the rule or custom of the guest's country. In Kathmandu, the custom of Nepal is valid. In this case the teacher could be blamed.

The question, however, remains: by following solely the custom and rule of the host country would the teacher really have fulfilled his task and duties well and would he have given something to the students that he as a German teacher was in a position to give or to convey what a Nepalese teacher was in no position to give or to convey at that point in time?

It may well be argued that by asking his students to take off their headgear in the class room the teacher introduced, exposed, and trained the students for German ways. He prepared them for a potential stay in that country, he led them onto the path of acculturation. He, actually, did that what his critics demand from him, but what he himself, obviously, did not receive. Training the students solely in Nepalese customs and norms would mean that the teacher would not utilise his full potential which includes his capacity as a facilitator for acculturation under the aspect of

had interview with Roche Diagnostics GmbH. the job profile and experience suited me very well and I was quite hopeful. But the result was negative. The company wanted to give the job to the person, who already had work permit. But I as a non EU citizen had no work permit and the company did not want to process the application. Therefore, it is very challenging to get the position. There are lots of criteria to be fulfilled however one has the skill/capabilities to do the job.

Finally, I got the job offer from

Inform GmbH. The company also supported work permit application procedure. At the same time Deutsche Rockwool offered the job also with support for work permit application. Later I decided to join Deutsche Rockwool as job profile more challenging and the company is more international.

Now I am engaged in Research and development department in I.A.S. Induktions-Anlagen + Service GmbH & Co. KG. I am very much satisfied with my present responsibilities. I can develop my personnel and technical

knowledge and happy being an important part of the company. On the other hand, company is also growing on our joint contribution and giving us the immense opportunities on research works.

Experts of Bundesagentur für Arbeit had announced that the job market in Germany is in lack of specialists. In addition to having skilled knowledge, it is better to bear sense of duty, precision, reliability, discipline, hardworking and determination to grasp the available challenges.

*We express our hearty congratulations and
best wishes for the grand success of
the* **NEGAAS-Souvenir**



Events, Corporate Promotions and Professional Training

Kathmandu, Nepal. Contact: 9841910277

*Dante Society Nepal Chapter wishes the 23rd
Annual General Meeting of
Nepal German Academic Association
a grand Success.*

Dante Society Nepal Chapter

Putalisadak, Kathmandu, Nepal,

Tel.: +977-1-44418212, Fax: +977-1-4494323

paying a visit, studying or other forms of migration to the western world. The foreign European teacher is permanently regarded as an ambassador of the developed world and all of his actions are believed to have a model character. It carries something that has a value either immediately or, at least, in the future of the student. Sticking exclusively to Nepalese customs would also mean that the student would not learn to know about cultural differences or something from beyond the horizon of his/her enculturation. The students would not learn easily about a behaviour that is valid in another society, a behaviour that would help in another country or in coping with an unexpected situation, especially at a time before the arrival of TV in Nepal and long before the invention of the Internet.

Apart from the actors visibly involved and who have seemingly received a culture shock there are others who do not appear in the incident but who have a strong hand in the intercultural acting taking place. They are the authorities at the giving and at the receiving end. One could therefore ask whether the authorities who sent the teacher are to blame.

The person who told the incident is of the opinion that the teacher was ill prepared for the situation. He should have been given an appropriate training through which he would have learnt that Nepalese students have the habit of wearing a topi in the classroom or that wearing a headgear in the classroom is allowed in Nepalese colleges. In this case, the question of feasibility arises. Who could have taught this teacher about Nepalese ways in the late 60s, when there was hardly anybody in Germany who knew Nepalese cultural habits, not to speak of rules prevalent at the school or

university level. Even if there had been anybody, would he have thought about the intricacies of the Nepalese topi? Suppose a staff member or the Nepalese ambassador to Germany himself would have been the teacher, can we expect him/her to have talked about this peculiarity?⁶ In order to recognize the potential conflict situation beforehand he/she would have had to know the rules of the house at German schools. Where and when could he/she have learnt about it under the circumstances of those days?

The authorities had sent the teacher with the educational priority of technical knowledge transfer. Since it is a foreign teacher it also includes an essential issue which is inexplicitly a natural part of human expectation and behaviour, namely that of cultural exchange. Everybody, be it curious technicians or potential migrants, favoured this highly welcome and unique opportunity to experience not only the subject related technical language, but also something from the culture of the country where the teacher comes from and where some students were longing to migrate to in order to learn or earn. In the given context of time, it seems the authorities who sent the teacher are hardly to blame. The next question would then be, are probably the authorities who accepted the teacher to blame?

It is imaginable, at least from the perspective of today that a cultural coaching would have been given by the Nepalese counter-part on the arrival of the teacher in Nepal. Whether, however, this particular situation would have been foreseen and premeditated by somebody at that time remains highly questionable. Neither the authorities in Germany nor in Nepal seem to have been in a position to cope with the hidden

problem due to the novelty of the situation and their unawareness of this potential conflict situation.

This incident of intercultural acting in knowledge transfer between Nepalese students and a German teacher shows a certain degree of socio-cultural convergence and a certain degree of disparity. Surprisingly, it is as well mannered to take off the headgear on given occasions in Germany as it is well mannered and respectful to wear a headgear in the form of a topi by people in Nepal. In Nepal and Germany, the strive for uniformity on the head is actually the same, but its manifestation is different or the opposite to be precise: The teacher demands uniformity in the classroom in the form of wearing no headgear whereas the Nepalese custom, historically speaking at least, would also like to see uniformity, but in the form of a topi for the sake of a demonstration of national unity and consciousness⁷. It must, however, be clearly spelled out that the Nepalese custom prevailing at the time of the incident implies a choice behaviour whereas the German custom leaves no choice.

Cultural convergence exists in taking off or not wearing a headgear

1. at the time of taking a meal
2. at the time of death (in the family) while performing the last rites
3. convergence also exists in the difference in etiquette for men and women in regard to the wearing of a headgear. What is culturally expected from men is or must not be followed by women and vice versa⁸.

Cultural disparity exists in the use of a headgear

1. at a place of worship
2. at school, college, university

The completely unexpected

situation arose from different cultural embeddings and norms of behaviour. These norms of behaviour are opposing each other and are mutually exclusive in practice. The psychological shock effect exists in the fact that the students are doing something good in the eyes of society at that time, but are not allowed to continue doing it by their teacher; instead they are requested to change their behaviour from an advanced civilized stage back to a simple, ordinary, and sort of un- or underdeveloped level. In his attempt at acculturating the students the teacher does not allow exceptions and prevents the breaking of German etiquette through physical intervention. Here, the guiding mental concept would be that a classroom, similar to the theatre stage, is partly also a laboratory for social behaviour. Acculturation in the class room is nothing unusual since the classroom is for most of the time a place of a non-natural, artificial situation, a place where real situations are imagined, simulated, played, often with the purpose of providing training. In the foreign language class, for instance, the goal is clearly defined as the acquisition of the target language (*Zielsprache*). The target language, however, is closely connected with

the culture it stands for in the sense that language learning is inherently also a familiarization and training in the respective culture and its etiquette. Thus, for instance, the German learner of how to greet a person in Nepal has to not only learn the lexical items *namaskar* and *namaste* but he/she must familiarize himself/herself with the fact that he/she has to fold his/her hands in front of the chest and bow the upper part of the body slightly. He/she as a German has also to learn that, traditionally and still in general, you do not stretch out your hand to say hello or goodbye to your *vis-à-vis* and shake hands. In case you do, sometimes, especially with women, your gesture is not reciprocated and you get a sobering, sort of cold feeling around your heart what actually points to the direction of experiencing a culture shock.

Unlike the generally held view about getting to know foreign cultures as a pleasant occupation it is apparent from the incident at TTI that it can also involve irritation, conflict and pain. The insight about foreign cultural learning (*fremdkulturelles Lernen*) confirms partly the findings by Redfield, Linton and Herskovits who, in 1936 and probably for the first time, spoke of a "psychic conflict" that

may arise from conflicting cultural norms⁹. From the perspective of today and demanding a higher degree of awareness and ability, we could add, the conflict arose because the persons lacked intercultural competence. "A person who is interculturally competent captures and understands, in interaction with people from foreign cultures, their specific concepts in perception, thinking, feeling and acting," in short, "intercultural competence is the ability of successful communication with people of other cultures"¹⁰. Seen from this angle the teacher could be blamed.

Things have definitely changed over the last 50 years and there is a lot of intercultural knowledge around, especially in the Kathmandu valley and in Germany. Therefore, it is quite unlikely that this incident would repeat itself today in the way it did in the 60s.

In the meantime, we know very well what a *topi* looks like, what it is made from, who wears it and on which purpose, but we have to admit that former and recent developments with people and politics in the Nepalese Himalayas show that we still know little about what is actually inside a *topi*.

¹The Nepali expression *topi jhiknu* (to take off the *topi*) signifies *bhat khana tayar hunu* (to be ready to take ones meal), cf Mahananda Sapkota. *Nepali Sabda Paricay [Anukramanika Sahit]*. Biratnagar (Nepal): Author, BS 2037 (1/2036). This custom is valid among Brahmins and Chettris, but not necessarily among Newars and some other ethnic groups.

²The Nepali expression *topi jhiknu* (to take off the *topi*) signifies *kiriya garna basnu* (to celebrate the death rites). *ibid.*

³See for instance Rishikesh Shaha. *Heroes and Builders of Nepal*. Kolkata: Oxford University Press 1970 (1/1965)

⁴*majetro* is the traditional Nepali term for this shawl.

⁵www.uwefenner.de/wann-zieht-der-gentleman-seinen-hut/

⁶One of the first comprehensive descriptions of Nepalese culture given by a German and supported by personal experience was written in the years 1973-76. It mentions the *topi*, but only in a reference from Regmi's *Medieval Nepal* stating that the city dwellers of the Kathmandu valley towns wore "coloured caps (*topi*)". H. Seemann. *Nepal 2031, Till yesterday a forbidden country*. Stuttgart: Emil Bandell AG, 1979, p.66

⁷Important though it is, the aspect of change in cultural behaviour has not been discussed in this paper.

⁸In Nepal, as it was very common to wear a *topi* in the past, it has now become very common among city dwellers not to wear a *topi*. Similarly, as it was very common to wear a headgear in the form of a hat by men in Germany until recently, it is nowadays more of an exception to wear a hat. These observations would also belong to the category of cultural change which, like fashion, can develop backwards at any time in future, but what is not discussed here.

⁹Redfield R., Linton R., Herskovits M.J. (1936) Memorandum for the Study of Acculturation. *American Anthropologist*, Vol. 38, No. 1, p. 152. (quoted from www.wikipedia.acculturation.december 2009)

¹⁰Quotations from www.wikipedia.intercultural.competence.september 2007

NOBEL PRIZE WINNERS OF GERMAN ORIGIN



K.F. Braun
1909 Physics



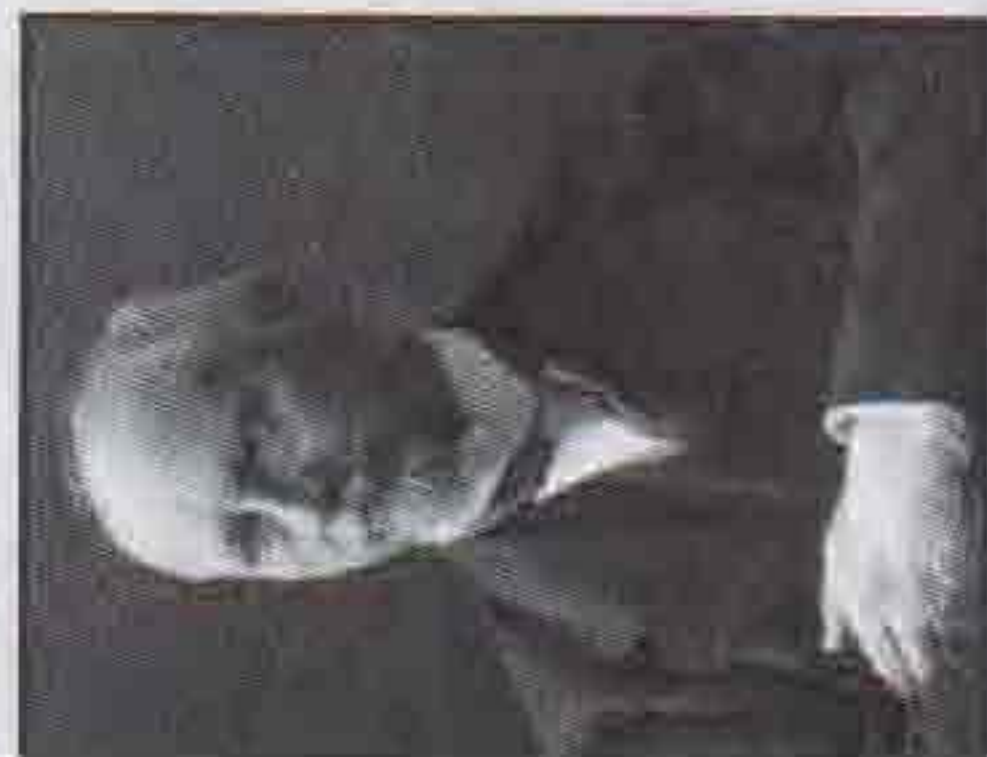
W. Ostwald
1909 Chemistry



O. Wallach
1910 Chemistry



A. Kossel
1910 Medicine



L. Quidde
1927 Peace



A. Windaus
1928 Chemistry



H.V.E. Chelpin
1929 Chemistry



T. Mann
1929 Literature



A. Schweitzer
1952 Peace



H.A. Krebs
1953 Phys./Med.



F.A. Lipmann
1953 Phys./Med.



H. Staudinger
1953 Chemistry



H. Boell
1972 Literature



E.O. Fischer
1973 Chemistry



K.V. Frisch
1973 Medicine



H. Kissinger
1973 Peace

NOBEL PRIZE WINNERS OF GERMAN ORIGIN



P.V. Heyse
1910 Literature



W. Wien
1911 Physics



G. Hauptmann
1912 Literature



M.V. Laue
1914 Physics



R.M. Willstaetter
1915 Chemistry



H. Fischer
1930 Chemistry



C. Bosch
1931 Chemistry



F. Bergius
1931 Chemistry



O.H. Warburg
1931 Medicine



W. Heisenberg
1932 Physics



W. Bothe
1954 Physics



M. Born
1954 Physics



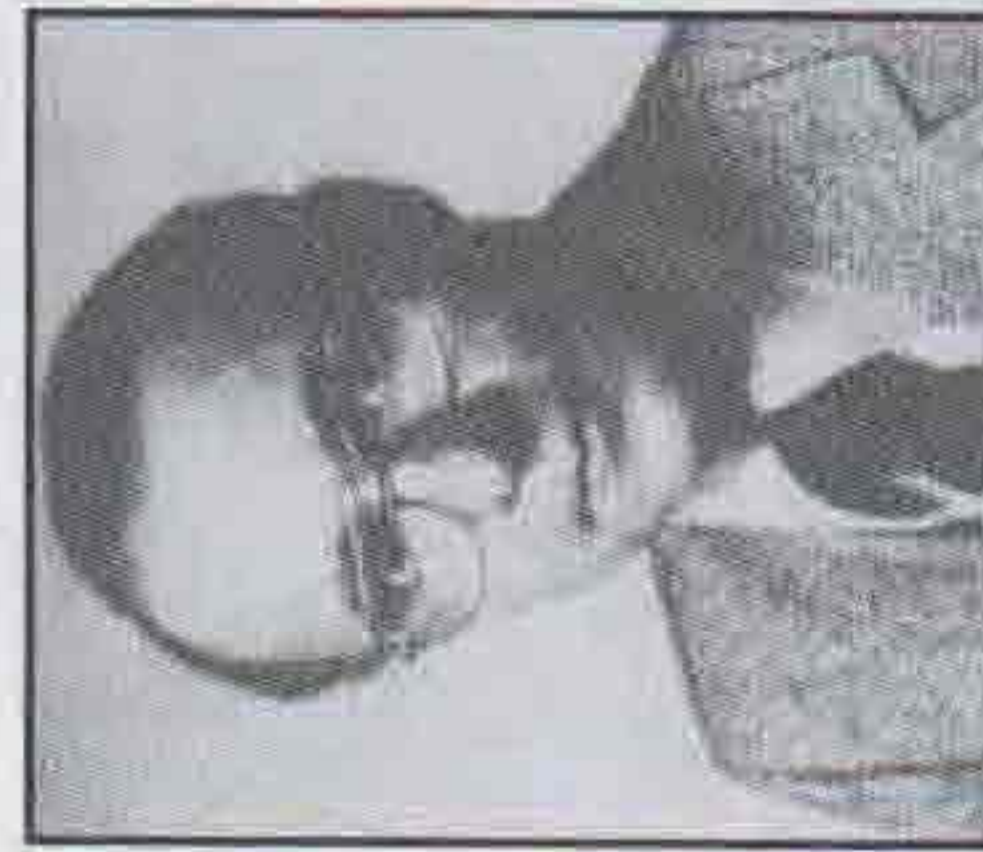
W. Forssmann
1956 Medicine



R. Moessbauer
1961 Physics



J.H.D. Jensen
1963 Physics



A. Penzias
1978 Physics



G. Wittig
1979 Chemistry



G.J.F. Koehler
1984 Medicine



K.V. Klitzing
1985 Physics



E. Ruska
1986 Physics

PRIZE WINNERS OF GERMAN ORIGIN



F. Haber
1918 Chemistry



H.C. Fisher
1902 Chemistry



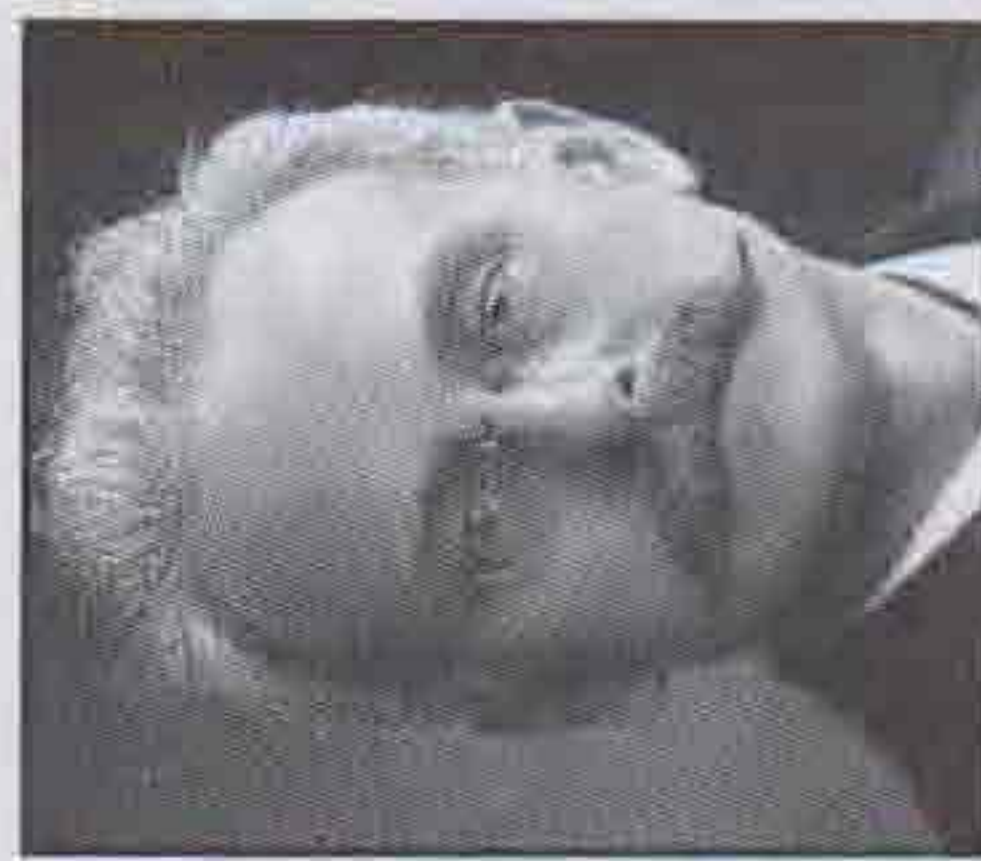
C.M.T. Mommsen
1902 Literature



P.E.A.V. Lenard
1905 Physics



K. Ziegler
1963 Chemistry



J. Stark
1919 Physics



W.H. Nernst
1920 Chemistry



A. Einstein
1921 Physics



V. Ossietzky
1935 Peace



R. Kuhn
1938 Chemistry



A. Butenandt
1939 Chemistry



G. Domagk
1939 Medicine



W. Brandt
1971 Peace



K. Bloch
1964 Phys./Med.



F. Lynen
1964 Medicine



N. Sachs
1966 Literature

NOBEL PRIZE WINNERS OF GERMAN ORIGIN



J.F.W.A.R.V. Baeyer
1905 Chemistry



R. Koch
1905 Medicine



A.A. Michelson
1907 Physics



E. Buchner
1907 Chemistry



P. Ehrlic
1908 Medicine



O. F. Meyerhof
1922 Medicine



J. Franck
1925 Physics



G.L. Hertz
1925 Physics



R. A. Zsigmondy
1925 Chemistry



G. Stresemann
1926 Peace



O. Stern
1943 Physics



O. Hahn
1944 Chemistry



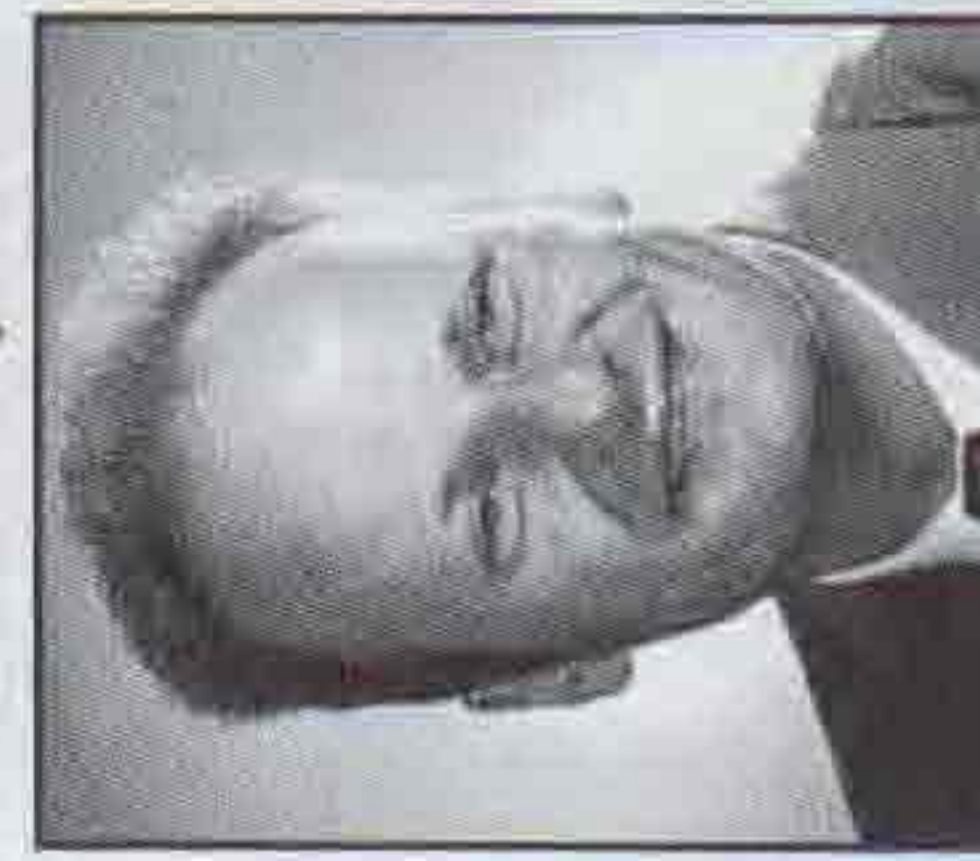
E.B. Chain
1945 Phys./Med.



H. Hesse
1946 Literature



O.P. Herrmann Diels
1950 Chemistry



H.A. Bethe
1967 Physics



M. Eigen
1967 Chemistry



M. Delbrueck
1969 Phys./Med.



B. Katz
1970 Phys./Med.



W. Brandt
1971 Peace



NEGAAS

*felicitates German agencies,
German diplomats in Nepal,
and Nepalese companies
running in cooperation with
Germans, Nepalese
Graduates/ Academicians
from Germany and German
people working in Nepal for
their success and prosperity
in their endeavors.*



NEPAL-GERMAN
Academic Association

Tel: +977-1-2113215, Web: www.negaas.org.np, P.O. Box: 4256, Kathmandu, Nepal,

It's a BIT crazy world!



Rajesh Joshi

Background

The globe has been continuously witnessing development of faster processors, larger memories, and software that make the most efficient use of available hardware resources. According to the document titled "**Internet Growth Trends**" (Dr. Lawrence G. Roberts, Chairman, Packetcom Inc.) *"In 1969 the Internet traffic was very small based on the average traffic in the peak busy hour. As host computers were added and the host protocol was implemented from 1970 to 1982, the traffic grew at about the same rate as computer performance, doubling every 21 months. In 1983, with the transition to TCP/IP complete, the traffic started doubling every 9 months. Then in 1998 the rate increased to doubling every 6 months. The latest trend is four times increase per year."*

The true measure of the success of "**Information Society**¹" is increased use of information by the general public for their individual growth, socio-cultural well-being, professional progress and national development. And, for doing all these, we depend on

the "**Information Superhighway**²" that consists of telecommunications network and computer applications. Although there are established facts that ICT plays crucial role in the development of education, health and overall economy of the people who have access to ICTs, there are still many people in our communities, regions and countries that do not have access to ICTs, and as a result the "**Digital Divide**³" exists.

Telecommunications & the Transfer of BITS

The telecommunications system is responsible for carrying voice, video and data over any distance across the globe. The miniaturization of electronic devices has stimulated convergence of the Internet, cellular phones and PCs, and has changed the way people work and live their lives. The options for access, including wireless, fiber optic, satellite and DSL have created a constantly connected global society.

The essence of mentioning all these is to highlight importance of

the word "**BIT**⁴" that gets transferred from one device to the other device, and interestingly, the distance between devices may be just a few centimeters or that they may be spread across the globe!

The 21st century users expect that the telecommunications and computer systems are simple to use, dependable, user friendly and secure. In addition to these, the ground level reality is that users do prefer high-speed networks and broadband services to the extent that those are within their affordability limits. The notion of high-speed networks and broadband services depends on the term 'bitrate' (or, bandwidth), and according to Wikipedia (http://en.wikipedia.org/wiki/Bit_rate) the term is defined clearly as, *"In telecommunications and computing, bitrate (sometimes written bit rate, data rate) is the number of bits that are conveyed or processed per unit of time. The bit rate is quantified using the bits per second (bit/s or bps) unit, often in conjunction with an SI prefix such as kilo – (kbit/s or kbps), mega – (Mbit/s or Mbps), giga – (Gbit/s or Gbps) or tera – Tbit/s or Tbps."*

1. "An information society is a society in which the creation, distribution, diffusion, use, integration and manipulation of information is a significant economic, political, and cultural activity." (Source: http://en.wikipedia.org/wiki/Information_society)
2. "The information superhighway was a popular term used through the 1990s to refer to digital communication systems and the Internet telecommunications network." (Source: http://en.wikipedia.org/wiki/Information_superhighway)
3. "The digital divide refers to the gap between people with effective access to digital and information technology and those with very limited or no access at all." (Source: http://en.wikipedia.org/wiki/digital_divide)

Global Trend: Exponential Growth of "Bit rate"

As mentioned in "Key Trends in ICT Development⁵", ". . . . as wireless technology evolves and markets expand, more people in both developed and developing countries are using mobile phones to access the Internet." The same

document also mentions that "In high-income economies, average per capita international bandwidth increased from 586 bps in 2000 to 18,240 bps in 2007. Between 2000 and 2007, bandwidth per capita increased from 12 bps to 1,114 bps in Europe and Central Asia and from 8 bps to 1,126 bps

in Latin America and the Caribbean."

As mentioned in the Wikipedia the physical layer **net bit rates** in proposed communication standard interfaces and devices are as follows:-

(A) WAN MODEMS				
Year	1986	1998	2003	2005
Standard/ Name	ISDN	ADSL	ADSL2	ADSL2+
Bit rate	two 64 kbps channels	up to 8 Mbps	up to 12 Mbps	up to 24 Mbps

That is, as the WAN modem technology evolved from ISDN to ADSL in about 10 years from 1986 to 1998, the bit rate increased by about 60 times. And, with the ADSL technology, the speed has grown by 1.5 times in just 5 years from 1998 to 2003, and by 2 times as the technology evolved from ADSL2 to ADSL2+ in just 2-years from 2003 to 2005.

(B) ETHERNET LAN					
Year	1985	1990	1995	1999	2003
Standard/ Name	10b2	10bT	100bT	1000bT (Gigabit)	10G BASE
Bit rate	10 Mbps coax thinwire	10 Mbps	100 Mbps (125 Mbps gross bit rate)	1 Gbps (1.25 Gbps gross bit rate)	10 Gbps

As shown above, in about 10-years time, the Ethernet LAN speed has increased 1,000 times from 10 Mbps in 1985 to 10 Gbps in 2003.

(C) WIFI WLANS						
Year	1997	1999	1999	2003	2005	2007
Standard/ Name	802.11	802.11b	802.11a	802.11g	802.11g (proprietary)	802.11n
Bit rate	2 Mbps	11 Mbps	54 Mbps (72 Mbps gross bit rate)	54 Mbps (72 Mbps gross bit rate)	108 Mbps	600 Mbps

As shown above, the WiFi WLAN speed has increased 300 times in just 10-years from 2 Mbps in 1997 to 600 Mbps in 2007.

(D) CELLULAR TECHNOLOGY								
Year	1G (1981)	2G (1991)	2G (2003)	3G (2001)	3G (2007)	3G (2008)	3G (2009)	3G (2010)
Standard/ Name	NMT	GSM CSD & D-AMPS	GSM Edge	UMTSFDD (WCDMA)	UMTS HSDPA	UMTS HSPA	HSPA+ (Without 2000 MIMO)	CDMA EV-DO Rev. B
Bit rate	1200 bps	14.4 kbps	57.6 kbps down, 28.8 kbps up	384 kbps	14.4 Mbps	14.4 Mbps down, 5.76 Mbps up	28 Mbps down, 22 Mbps up	14.7 Mbps down

Year	Pre-4G (2007)	Pre-4G (2009)
Standard/ Name	Mobile WiMAX (IEEE 802.16e)	LTE
Bit rate	144 Mbps down, 35 Mbps up	100 Mbps down, 50 Mbps up

As shown above, in 10-years from 1981 to 1991, as the Cellular technology evolved from 1G (NMT) to 2G GSM, the bit rate has increased by 12 times. Although there are intermediate developments like GSM-EDGE in 2003, the evolution of 2G-GSM in 1991 to 3G-GSM in 2001 has increased the bit rate by about 27 times. And, in about 10-years after 2001, the bit rate has just been jumping with every new product in cellular technology. For example, the bit rate of 3G-HSPA+ in 2009 has increased its bit rate by about 73 times to reach 28 Mbps, and the bit rate of CDMA 2000 EVDO Rev B has increased by about 38 times to reach 14.7 Mbps in 2010. There are two Pre-4G technologies, namely, **WiMAX**⁷ and LTE (Long Term Evolution). When IEEE specification 802.16e will be modified to 802.16m, then the average download speed will reach 100 Mbps. On the other hand, LTE is a modulation technique that has the potential to give individual users the performance that is comparable to wired broadband, and the designed bit rate is 100 Mbps per channel.

Applications and the impact of Broadband

Broadband infrastructures are essential, but the real value is on services, applications and user experience. Broadband allows for large volumes of data to be transmitted and facilitates cheaper voice communications (for example, by routing calls over the Internet). It also enables voice, data, and media services to be transmitted over the same

network.

Broadband applications can be mainly categorized into 'commercial', 'non-commercial' and 'governmental' applications. One of the main applications is "Tele-education & e-Learning" where the use of broadband is for distance learning, virtual conferences, etc. Similarly, under 'Telemedicine & e-Health', the use of broadband is for remote monitoring, guidance to the patients, etc. Other broadband applications include e-Commerce, e-Banking, entertainment through movie, music, games, etc., and social-networking for sharing photos, uploading information, etc. Broadband also enables the emergence of new business models, new processes, new inventions, improved production of goods and services, and also allows people to work from multiple locations at flexible hours.

The World Bank has found that in low- and middle-income countries every 10 percent increase in broadband penetration accelerates economic growth by 1.38 percent. This figure is higher than in high-income countries, and more than for other types of telecommunications services.

ITU (International Telecommunications Union) estimates that by 2015 at least half the world's population should have access to broadband content and communication. But, unfortunately, before the "Digital Divide" gets extinct from the world, the "Broadband Divide" is showing

up where there are individuals or communities that can afford Broadband and those that cannot afford it.

Context of Nepal: Towards Broadband

According to the **Broadband Policy (Draft) document**⁸, "Broadband in Nepal is, irrespective of access technologies used, an **always-on internet connection with minimum upload and download speeds of 128 Kbps and 256 Kbps, respectively, to an individual subscriber from Point of Presence (PoP) of the service provider. The committed speeds shall not be on a shared basis and service provider shall guarantee these minimum speeds for Broadband service.**"

Although it is mentioned in the draft (above) that the broadband service should be an 'always-on' service, definite explanation of the term 'always-on' is missing in the document. In the present context of the country where load-shedding is extremely high in the winter season, it would be quite a challenge to the service providers to provide 24x7 services. Similarly, in wireless technology, it is normal that the bandwidth gets shared among the users, and as such if the above draft is true to its words, then the present broadband (or broadband like) services on GSM and CDMA technology will have to be excluded since their minimum speeds cannot be guaranteed.

Presently, a number of telecommunication service providers and ISPs are providing broadband services in the country.

4. BIT: "A bit or binary digit is the basic unit of information in computing and telecommunications; It is the amount of information that can be stored by a digital device or other physical system that can usually exist in only two distinct states." (source: <http://en.wikipedia.org/wiki/bit>)
 5. "Key trends in ICT development" by David A. Cieslikowski, Naomi J. Halewood, Kaoru Kimura, and Christine Zhen-Wei Qiang.
 6. For example: The net bit rate of the Ethernet 100Base-TX physical layer standard is 100 Mbit/s, while the gross bitrate is 125 Mbit/second, due to the 4B5B (four bit over five bit) encoding.

Apart from dedicated co-axial cables, optical fibers, and Wi-Fi services provided by the ISPs, the telecommunication operator, and particularly, the incumbent operator of the country, NEPAL TELECOM⁹, is providing broadband services via four major technologies, they are:

(a) ADSL on Fixed Wireline network

The ADSL service is available in two flavors. The most popular scheme is "Always-on 128 kbps to 2 Mbps", and the other one is "Volume-based from 512 kbps to 1 Mbps". Presently, most of the ADSL subscribers seem to use ADSL for HSI (High Speed Internet) service. In future, other services, such as VPN, multicasting, video conferencing, video-on-demand and broadcast application, may be available.

(b) CDMA EVDO service

The EVDO (Evolution Data Optimized) Rel.0 service is also known as CDMA2000 1xEvDO service, and supports data rate of 2.4 Mbps in download side and 153 Kbps in upload side. For the convenience of the subscribers, this service is provided for use in various devices like USB EVDO modem, PCMCIA EVDO modem, EVDO mobile, etc.

(c) GSM 3G (W-CDMA) Service

Presently, this service is available in Kathmandu and Pokhara regions. Apart from 'High Speed Data' for connecting to the internet with a speed up to 384kbps downloading and 64kbps of uploading, other potential services include 'Video Call' for making call with voice as well as video, 'Video on Demand' for watching selected video that are available in NT's video server, 'Live TV capture and video Streaming' for watching live TV channel, and 'High-Speed Downlink Packet Access (HSDPA)' for

providing internet up to 14.4 Mbps.

(d) VSAT Services

The VSAT-based broadband services are mainly for providing intranet and internet for organizations, banks and businesses. The target applications are global Video-conferencing and data base applications that require more than 256 kbps.

Use of Internet in rural Nepal

As mentioned in a report titled "**Broadband Connectivity in Mountain Areas of Nepal**¹⁰", the use of Internet in rural Nepal is primarily for communications purpose - particularly for email and personal chatting. However, it is encouraging to know from the report that even in those rural areas, there are a few cases for finding new and improved technologies, competitors' product prices, advertising, identifying potential supplies, and even finding raw materials for industries, etc.

With increase in the coverage of Broadband services throughout the country with the efforts of different telecommunications service providers and ISPs, the application developers will also get the market share for developing affordable programs for video-conferencing, video-surveillance, video-on-demand, patient monitoring, remote medical check-ups (e.g., blood-pressure measurement through mobile sets), and transmission of video and data over broadband networks as per the pre-configured destination settings. These are just a few examples that seem to flourish in near future, and all these ride on broadband infrastructure.

Finally. . . .

The availability of huge bandwidth (or, better say 'broadband') "at a friend's place" or "neighbor's

home", possibly for use of cheaper international calls via IP technology, and/or possibly for better media viewing from live broadcasts will be some of the main attractions for those prospective users of broadband that are reluctant to subscribe at the moment.

The mobile service has revolutionized the telecommunications market, with its growth potential exceeding the total population, as seen in a number of developed countries. And, the prepaid scheme in cellular services is of particular importance as it enables even the low-income consumers. This has helped, initially, to increase mobile penetration rates for voice, and, then, will ultimately help to familiarize the users with data and contents. This will result into increased use of data and contents as and when those become accessible and affordable.

The fast paced development in data transfer speeds, and the amazing growth of applications that rely on high-speed networks, will be making more and more people addicted to use high-speed data and broadband internet connection for their daily chores.

In one hand, topographical, technological and financial constraints will continue to slow down broadband proliferation in remote, difficult terrains, and on the other hand, people will be more attracted to broadband services as prices of ICT services will continue to fall. So, it is difficult to visualize the extent of span of the Broadband Divide. But, considering exponential growth in the bit rate with release of every new telecommunication product clearly indicates that: **The crazy race after the 'BIT' will continue!**

7. WiMAX is originally designed as a wireless backhaul technology, and this is already being used around the world as an ideal technology for bandwidth intensive applications such as wireless video surveillance, traffic synchronization, etc. The IEEE specification also known as 802.16 e is designed to support as high as 12 Mbps data transmission speeds.

8. Available at <http://www.nta.gov.np>

9. The information related to NEPAL TELECOM and mentioned here in this paper have been published in different documents (e.g. Annual Report, etc.) and/or available in the company's website (<http://www.ntc.net.np>).

10. Asia Pacific Mountain Network (APMN) and ICIMOD, 2008.