ISSN-0971-8400

A DEVELOPMENT MONTHLY

YOJANA

Vol 48 February 2004 No. 2 Rs. 7



Regional Trade & Cooperation

Swami Vivekananda / National Youth Day



NARENDRANATH DUTTA 'Swami Vivekanand' was born on 12 January, 1863 at Kolkata. From the very beginning Narendranath's energy was diverted towards the search for God and the absolute truth. This quest brought him in contact with Maharshi Debendranath Tagore, Keshab Chandra Sen and Shivnath Shastri of the Bramho Samaj. In 1882, he discovered Sri Ramakrishna as the man who had 'seen' God. He realised under his guidance the Absolute Truth in 1886. Before passing away on 16 August, 1886, Sri Ramakrishna entrusted him with the responsibility of carrying on his work.

Narendranath undertook an all-India tour to get a first hand information of the degraded social, economic and spiritual condition of the motherland. While sitting on the Rock of India (now known as Vivekananda Rock at Kanyakumari) the idea dawned on him to enlighten not only the Indians but also the people overseas about the greatness of India, its age-old religion and civilisation. Swamiji's famous speech on universal ideas of Vedanta in the Parliament of Religions in Chicago was widely appreciated and made the people aware of India's greatness, which other movement could not do so far. He returned to India on 26 January, 1897 and reached Kolkata on 20 February, 1897 where he established the Ramakrishna Mission on 1 May, 1897 and Belur math on 9 December, 1898. He wrote a number of books, travelled far and wide, preached and set up a powerful and efficiently run organisation to carry forward the message of Sri Ramakrishna. Swami Vivekanand passed away on 4 July, 1902 at Belur math.

His birth anniversary is also celebrated as 'National Youth Day'. The attainment of political Independence in 1947 marks a definite stage in the progress of the Indian youth. Before Independence, under the inspiration of Gandhiji, Nehru and Subhash Bose, large number of Indian youth had emerged on the political horizon of India. After Independence, expectations for better living were raised. People's participation and self-discipline could not be promoted through government agencies alone. Therefore, voluntarism was strengthened and actively promoted. In order to enable welfare of youth in the country, the government has framed several schemes. ❑

Courtesy : Research, Reference & Training Division (RRTD), Min. of I&B

Sri Thyagaraja

by Sri T.L. Venkatarama Aiyar

SHRI THYAGARAJA was born in 1767 at Thiruvarur, which is one of the well-known sacred place in South India. While he was still a boy, his father Ramabrahman migrated to Thiruvayyar, another sacred place on the banks of the Kaveri. Here Shri Thyagaraja learned music from Sonti Venkataramanayya, who was a musician attached to the Tanjore Court. It is not necessary for me to dwell at any length on the life of Shri Thyagaraja. I now propose only to refer to his outstanding qualities as an eminent Vaggeyakaraka, or Composer. To truly evaluate him, it is necessary to emphasise two of the prominent traits in his character, which bear strongly on his music, one is his Bhakthi to Rama and the other is his worship of Nada as divine. He was initiated in the Tharaka Rama Manthra and threw himself heart and soul in the contemplation and meditation of Rama and of his great qualities. Though Shri Thyagaraja describes Rama as a Para-Brahma, transcending Brahma, Vishnu and Shiva, actually his conception of him was a personal God. In other words, his was a 'Sagunopasana'. In his songs he is in raptures in describing the beauty, the grace, the sweetness of speech and the life of Rama. Secondly, he worshipped music as divine. In the song, "Shobhillu Sapta Swara" in Raga Jaganmohini, he extols the beauty of the Sapta Swaras. In the Kriti "Nada Tanum Anisam" he declares, adopting the invocation stanza in Sangita-Rathnakara, that the Sapta Swaras constitute the body of Lord Shiva. Thus, 'Rama Bhakthi' and 'Nadopasana' are the two cardinal features of the music of Shri Thyagaraja. ❑

Courtesy : Sangeet Natak Akademi, New Delhi.

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YOJANA seeks to carry the message of the Plan to all sections of the people and promote a more earnest discussion on problems of social and economic development. Although **published by the Ministry of Information and Broadcasting,** Yojana is not restricted to expressing the official point of view. Yojana is published in Assamese, Bengali, English, Gujarati, Hindi, Kannada, Malayalam, Marathi, Oriya, Punjabi, Tamil, Telugu and Urdu.

EDITORIAL OFFICE : Yojana Bhavan, Sansad Marg, New Delhi Tel.: 23096738, 23717910, (23096666, 23096690, 23096696–Extn. 2509, 2510, 2565, 2566, 2511). Tlgm.: Yojana. **Business Manager (Hqs.) :** Ph : 24367260, 24365609, 24365610

For new subscriptions, renewals, enquiries please contact : Advt. & Circulation Manager, Publications Division, Min. of I&B, East Block-IV, Level-VII, R.K. Puram, New Delhi-110066, Tel.: 26105590, Telegram : Soochprakasan and Sales Emporia : Patiala House, Tilak Marg, New Delhi; Sales Counter : Asst. Business Manager, Publications Division, Min. of I&B, old Secretariat, Delhi-110054; Rajaji Bhawan, Besant Nagar, Chennai; 8 Esplanade East, Kolkata; Bihar State Cooperative Bank Building, Ashoka Rajpath, Patna; Press Road, Near Govt. Press, Thiruvananthapuram; Hall No. 1, 2nd Floor, Kendriya Bhavan, Aliganj, Lucknow; Commerce House, Currimbhoy Road, Ballard Pier, Mumbai; Block-4, 1st Floor Gruhakalpa Complex, M.J. Road, Nampally, Hyderabad; 1st Floor 'F' Wing Kendriya Sadan, Koramangala, Bangalore; Ambica Complex, 1st Floor, above UCO Bank, Paldi, Ahmedabad-380007; Naujan Road, Uzan Bazar, Guwahati-871001; PIB Sales Counters : CGO Complex, 'A' Wing, A.B. Road, Indore, 80 Malviya Nagar, Bhopal, B-7/B, Bhawani Singh Road, Jaipur.

SUBSCRIPTION : 1 year Rs. 70, 2-Rs. 135, 3-Rs. 190. For neighbouring countries by Air Mail Rs. 500 yearly; for European and other countries Rs. 700 yearly.

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EDITOR'S NOTE

A Victory for Peace

SAARC has ended on a happy note. India and Pakistan have agreed to resume talks. This is a giant step forward in normalising relations. The joint statement issued after the meeting between Prime Minister Atal Bihari Vajpayee and President Pervez Musharaff indicated that the dialogue would promote progress towards the common objective of peace, security and economic development for our peoples and for future generations.

This could lead to opening up of the markets with the neighbours in the foreseeable future. The agreement on SAFTA would lead to a boom in the border trade. Daily use consumer items could perhaps lead the way. Trade would be a binding force between nations and could give sustainability. The treaty seeks to remove trade barriers.

There is scope to develop links in a variety of fields like agriculture, industry and the service sectors. Areas like IT and IT-enabled services and healthcare have a lot of scope. There are a number of patients from these countries being treated at our super-speciality hospitals. If coastal trade facility for cargo were to be opened merchant ships could call at each other's ports.

There is a vast potential that can be tapped through trade. Connecting of business hubs in the diaspora would give the country and its diaspora competitive advantages in the global market at the same time enabling the diaspora to enhance its presence in the world markets.

Last few weeks have seen an increase in forex reserves, boom in the stock market, a better growth in exports. The economy grew a massive 8.4 per cent in the second quarter. India's software capabilities have earned her international respect.

This issue focuses on Regional Trade and Cooperation. Prime Minister Vajpayee's address to the SAARC Summit focuses on Regional Cooperation.

Our next issue will focus on Biotechnology—the emerging science.

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Breakthrough at SAARC Summit

V. Mohan Narayan

Realizing that they are missing out a lot on the trade front as also the need to unshackle the existing barriers, the seven members signed a far-reaching South Asian Free Trade Area (SAFTA) Framework Treaty that would lead to free trade and movement of goods in the region paving the way for South Asian Economic Union along the lines of European Union.

IT WILL be no exaggeration to describe the just concluded Summit of the South Asian Association for Regional Cooperation (SAARC) as "historic" as it brought India and Pakistan closer and paved the way for a path-breaking Islamabad Declaration to jointly fight terrorism. Moving away from a mind set of mutual distress, suspicion and reservations of bigger countries in the region trying to take advantage at the cost of smaller states, the seven member regional grouping also arrived at a far-reaching agreement for free trade.

Though declarations are an integral part of all SAARC summits, the one at Islamabad approved by Heads of State and Governments from India, Pakistan, Sri Lanka, Bangaldesh, Nepal, Bhutan and Maldives, is of special significance. Differences over formulations on issues relating to terrorism between India and Pakistan have always been a stumbling block to any tangible forward movement on this key issue by SAARC.

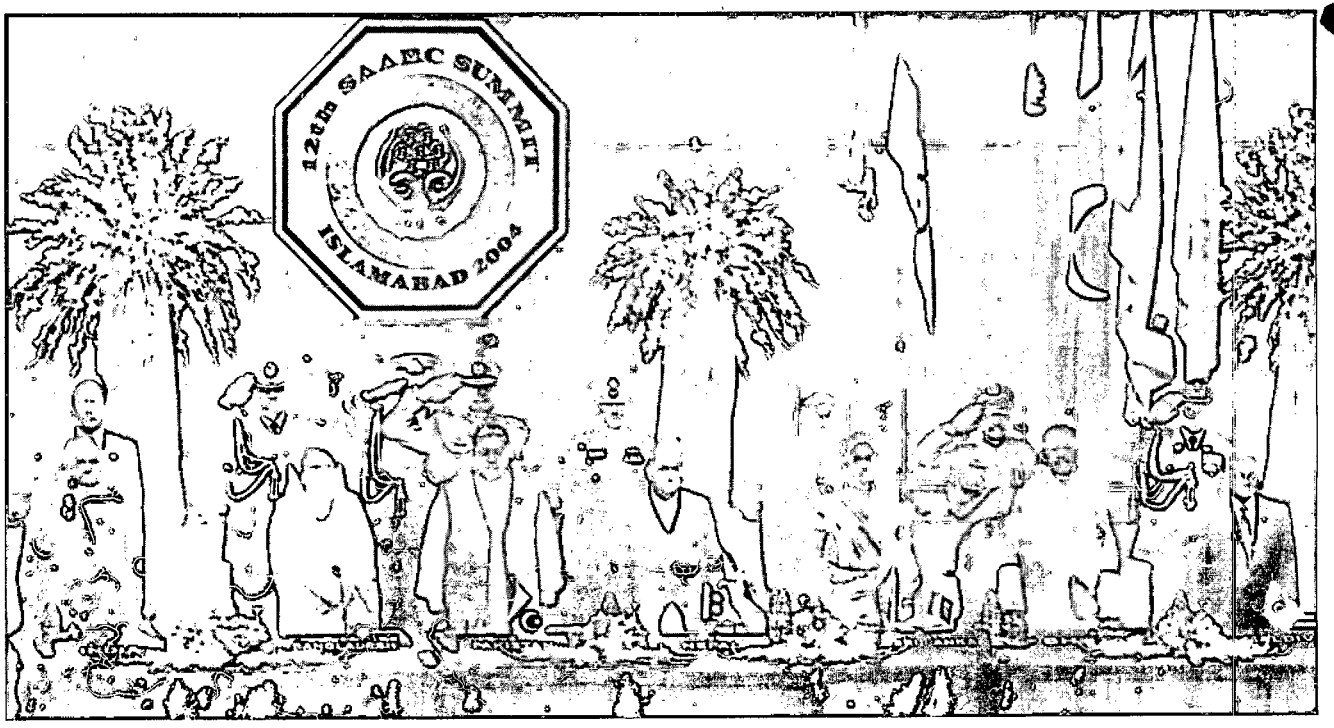


For the first time in over two years, the two sides showed a spirit of accommodation, understanding and willingness to pragmatically address terrorism-related issues. While Pakistan had sought to draw a distinction between terrorism and freedom struggle, the Indian sides took the line that cross-border infiltration and terrorism cannot be justified under and circumstances.

Reflecting a new maturity in thinking, the seven-page 43-point Declaration envisions South Asia to be a peaceful and stable region where each nation is at peace with itself and its neighbours and where conflicts, differences and disputes are addressed through peaceful means and dialogue. The grouping also pledged to promote good neighbourly relations on the basis of principles of sovereign equality, territorial integrity and national independence besides emphasizing on non-use of force, non intervention and non-interference.

Significantly the Declaration seeks recognition of the importance of informal political consultations in promoting mutual understanding and re-inforcing the confidence-building process among member states. There is also a mention of

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Heads of States at SAARC Summit in Islamabad.

small member states in the Declaration which spirit the SAARC nations are mindful to the problems that arise from particular vulnerabilities that should be firmly addressed by scrupulous adherence to the UN charter.

Prime Minister Atal Bihari Vajpayee, widely acclaimed as a visionary and statesman, did some plain speaking at the conference as he recalled that at the last summit in Kathmandu (Nepal) two years back he had noted that SAARC was sixteen yeas of age and needed a doze of economic and social realism to move from adolescence to adulthood. Mr. Vajpayee spoke about mutual suspicions and petty rivalries that continued to haunt countries in the region, resulting in the peace dividened bypassing it.

To drive home his point, the Prime Minister looked back at his visit to the Andaman Islands where during the colonial days, political prisoners were kept in confinement. On the inscriptions in the Cellular Jail there, many names have been found of brave martyrs and freedom fighters from what are today three South Asian Countries.

Mr. Vajpayee touched a philosophical note when he remembered that the forefathers had fought side by side, transcending religious, regional and linguistic differences against a common colonial oppressor in the 1857 Independence War. He suggested that India, Pakistan and Bangladesh can together celebrate the 150th anniversary of that uprising in remembrance of the joint stuggle against a common adversary.

The need to learn appropiate lessons from the experience of other countries was strongly urged by Mr. Vajpayee who noted that after centuries of fratricidal conflicts and wars, Europe is now uniting to emerge as the World's powerful economic grouping. He also observed that closer home,the ASEAN Countries have found it possible not to allow their political problems to come in the way of economic cooperations.

Examples of ever deepening regional cooperation can also be seen in Africa, Latin America and the Caribbean Region where countries have a long history of bitter hostility towards each other. A strong case thus exists for rational economics, to triumph over political prejudice in South Asia.

Pakistan Prime Minister Mir Zafarullah Khan Jamali, who inaugurated the three-day summit from January 4-6, 2004 observed that regional cooperation is a function of growing inter-dependence in a fast globalizing world. He regretted that South Asia, which is home to one fifth of the humanity, is out of step with other regions of the world, which were able to transcend their differences and disputes to embark on a steady course to economic growth and development.

The issue of terrorism and the threat posed by it figures prominently in the Declaration. The group condemned terrorist violence in all forms and mainfestations, sending out a strong messages that they shared a common view in the fight against the scourge.

The Declaration highlighted the importance of maintaining the momentum of progress on economic issues and to move towards further broadening of economic cooperation while ensuring equitable distribution of benefits to trade and catering to the special needs of the small and least developed countries by providing them special and differential treatment.

India's suggestion of creation of a South Asian Economic Union, a proposal made at the Kathmandu Summit, will be dealt at length in coming days. The member states felt that creation of a suitable political and economic environment will be conducive to the realization of this objective.

Poverty alleviation was another key issue that came under focus during the deliberations. Recognizing poverty alleviation as the greatest challenge facing the peoples of South Asia, the seven countries agreed that this is the "overaching" goal of all SAARC activities. It is imperative to relate regional cooperation to the actual needs of the people.

Special emphasis was made on the need for undertaking effective and sustained poverty reduction programmes through pro-poor growth strategies and other policy interventions with specific sectoral targets. The SAARC leaders have decided to continue to collaborate with international organizations and UN agencies on the issue of poverty alleviation. A recommendation has been made for establishment of a Regional Food Bank.

SAFTA

Realizing that they are missing out a lot on the trade front as also the need to unshackle the existing barriers, the seven members signed a far reaching South Asian Free Trade Area (SAFTA) Framework Treaty that would lead to free trade and movement of goods in the region paving the way for South Asian Economic Union along the lines of European Union. The treaty

Mr. Vajpayee touched a philosophical note when he remembered that the forefathers had fought side by side, transcending religious, regional and linguistic differences against a common colonial oppressor in the 1857 Independence War.

which was signed by the seven foreign ministers seeks to remove trade barriers and phased elimination of tariffs and establishment of a Ministerial level mechanism for administering the treaty and dispute settlement among members.

The treaty will operationalize the free trade area by January 1, 2006 by when tariffs will be brought down to 20% in non-least developed SAARC countries and 30% in least developed countries. The tariffs will be further brought down to 0.5% in non-LDC countries in subsequent five years and in LDCs it will be subsequent eight years.

As per the agreement, the SAARC members will have to accord national treatment to each other's products as also undertake additional measures including harmonization of standards, reciprocal recognition of tests and accreditation of testing laboratories and certification of products.

Apart from simplification procedures of business results, SAFTA provides for making exceptions to foreign exchange restrictions relating to payments for products under the scheme as also simplification of banking procedures for import financing, removal of intra-SAARC investment barriers and harmonization of import licensing and registration procedures.

Apart from providing for special and differential treatment of LDCs, safeguard measures and a sensitive list of items, the treaty paves the way for creation of SAFTA Ministerial Council and a committee of experts to look into it.

Social Charter

The SAARC leaders agreed on a 10 point Social Charter to promote the welfare of the people of South Asia and accelerate their economic growth. They agreed to adopt a strategy to deal with key issues like poverty alleviation, promoting the status of women and population stabilization.

Under the charter, signed by Mr. Vajpayee and other leaders, the grouping agreed to establish people-centred framework for social development and to respond to the immediate needs of those who are affected by human distress.

Disadvantaged and vulnerable sections will be included in social development as per the agreement to ensure this. Elderly persons also have an assurance to lead meaningful and fulfilling life while

enjoying all rights without discrimination.

The SAARC countries agreed that access to basic education, adequate housing, safe drinking water and sanitation and primary health care should be guaranteed in legislation, executive and administrative provisions.

On the health front, they agreed to share information regarding the outbreak of any communicable disease among their population. It was agreed to share the capacity for manufacture of drugs and other chemicals as also these products when sought by a member nation.

Realizing that health issues were related to livelihood and trade issues which are influenced by international agreements and conventions, they agreed to hold prior consultations on such issues to arrive at a coordinated stand. The need for this has been strongly voiced by India and some other SAARC countries.

Deeply conscious that education was the cutting edge in the struggle against poverty, they reaffirmed the importance of attaining the target of providing free education to all children between six to 14 years of age. Though this is a laudable objective, it may take quite some time for this goal to be achieved by all the SAARC countries.

It was decided to revitalize the Organized Volunteers Programme under which volunteers from one country would be able to work in other countries in the social fields.

Significantly, the SAARC nations declared that all forms of discrimination and violence against women were offences against human right and dignity and must be prohibited through legislative, administrative and judicial actions.

This again is likely to be a tough task to be achieved. Male chauvenism, feudalistic tendencies, social prejudices and apprehensions may come in its way. The SAARC promised to take appropriate measures to ensure women on equal terms with men and enabling environment for their effective participation in the local, regional and national development processes.

The treaty will operationalize the free trade area by January 1, 2006 by when tariffs will be brought down to 20% in non-least developed SAARC countries and 30% in least developed countries. The tariffs will be further brought down to 0.5% in non-LDC countries in subsequent five years and in LDCs it will be subsequent eight years.

Terrorism

After intense negotiations spread over two years which were bogged down by sharp differences between India and Pakistan, the grouping agreed on an additional protocol on Regional Convention on Suppression of Terrorism which outlines measures to prevent and suppress financing of terrorist acts. These measures include detection and monitoring of movements across national borders for cash, bearer negotiable instruments and other appropriate movements of value.

The SAARC Countries agreed that the Convention, signed in 1987, needed to be updated in the light of development in recent years including UN Resolutions after the terror attacks in the US in September 2001. The protocol proposes that countries consider measures to establish and maintain a financial intelligence unit to serve as a national centre for the collection, analysis and dissemination of pertinent money laundering and terrorist financing information.

It commits SAARC nations to take appropriate measures in accordance with their domestic legal principles for the identification, detection and freezing or seizure of funds used or allocated for terrorist activities.

With the complexities involved in relations between India and Pakistan, it is still a bit too early to prognosticate on how these measures will be effectively implemented. The intent has been shown and a good beginning made. Political sagacity and collective will can do wonders. One has to wait and watch how things shape up.

It remains to be seen whether the two sides will pick up threads from the eight point composite dialogue mechanism on which they had earlier agreed to and which was put on hold subsequently. These include peace and security, Jammu and Kashmir besides other outstanding issues like Tulbul Navigation Project, Siachen etc. Whatever the format the two sides agreed to move ahead on, there is no denying the fact that the ice has definitely melted and a new warmth in bilateral relations is visible. Caution, restraint and a concerted effort to avoid needless rehetoric will foster the new spirit of understanding and cooperation. □

Regional Economic Cooperation Signing of SAFTA

G.K. Sharma

SAFTA being post WTO accord is designed to be compatible with WTO provisions in its form and contents.

ON JANUARY 6, 2004, at the Islamabad summit of SAARC nations the member states inked a historic framework agreement to establish free trade among the member countries, called SAFTA (South Asian free Trade agreement). SAFTA supercedes SAPTA (South Asian Preferential Trade Agreement). The industry and business are full of optimism after this agreement about anticipated resurgence in trade and economic cooperation among the member nations which are evident from the reactions received from apex chambers of commerce.

FIEO (Federation of Indian Exporters Organization) termed this agreement as a big leap forward for the region. It sees in it an opportunity to unlock huge potential of SAARC economy that may also encourage formation of South Asian Association of Chamber of Trade and Industry (SAACTI) mooted by it long back in 1982, three years before the establishment of SAARC. Hopefully, agreement shall also change the complexion of India-Pakistan trade that was hitherto informal. FIEO sees in it unbounded promise of huge growth in bilateral trade particularly in service sector viz. health, tourism and entertainment. If smooth transport links are established, visa regime is relaxed and system of compulsory reporting to the police station is done away with, the trade may outgrow all the conservative estimates, opines FIEO. Today Indo-Pak- trade is estimated at around US Dollars 250 million as Pakistan allows import of only select goods from India while it has trade worth another US Dollars one billion which is routed through Dubai and other countries and/or through smuggling activities. This situation may be reversed now.

Like WTO, any member country will have the right to pull out of the treaty/accord at any time after it comes into force on Jan 1, 2006. All that a country has to do is to give six months notice in writing to the Secretary General of SAARC.

According to the agreement signed, SAFTA shall come into force from January 1, 2006. The whole process of instituting the free trade in the region shall be completed in 10 years. The trade liberalization will take place in two stages. In the first stage, the tariff rates shall be brought down to 20% by India and Pakistan in two years time while other countries shall achieve this goal in three years time. In the second stage India and Pakistan shall further bring down the imports duties to five percent or less in next five years. This goal shall be achieved by Srilanka in six years and others can do so in eight years time.

SAFTA being post WTO accord is designed to be compatible with

Prof G.K. Sharma is visiting Professor IIM (Calicut), IIM (Indore) and member IIFT (New Delhi).

WTO provisions in all its forms and contents. It leans heavily on WTO institutions and practices which get reflected in dispute settlement, safeguard measures, BOP exceptions and special & differential treatment to least developed countries (LDCs) like Bhutan, Nepal, Maldives and Bangladesh.

Like WTO, any member country will have the right to pull out of the treaty/accord at any time after it comes into force on Jan 1, 2006. All that a country has to do is to give six months notice in writing to the Secretary General of SAARC.

Like WTO, there will also be SAFTA ministerial council consisting of Commerce or Trade Ministers of all the member countries. It will also have a committee of experts for the administration and implementation of the agreement.

Again, the Dispute settlement mechanism is also modelled along the lines of WTO dispute settlement mechanism. The SAFTA agreement envisages amicable settlement of all disputes pertaining to interpretation and application of SAFTA provisions regarding rights and obligations of member states through bilateral consultations under the auspices of SAFTA forum.

The Accord provides for special regards to LDCs and consultations with them on anti-dumping and countervailing measures. Many additional measures have been provided and suggested for economic cooperation and integration of economics. These include removal of barriers into intra SAARC investment, harmonization of customs classifications, transit facilities for efficient intra SAARC trade, simplification of procedures for business visas, customs procedures, import licensing, insurance and competition rules.

The SAFTA agreement has given a new hope and optimism to the region raising the expectation level to a new high among the business community.

This is not the first time but the third time when SAARC leaders have fixed target date for setting up free trade area. On all the previous

The SAFTA agreement has given a new hope and optimism to the region raising the expectation level to a new high among the business community.

occasions, the SAFTA always remained hostage to the political belligerency of our westward neighbour. This time two things happened which give hope that free trade area may succeed this time unlike before. One, the thaw in India-Pakistan relations and two, adoption of a framework agreement on SAFTA out lining schedule of lowering of tariffs and addressing the concerns of Least Developed Countries (LDCs) of the region. Till now, the economic fears and political hostility among member countries have constrained the growth of trade in the region. It was not only confined to India-Pakistan relations. South Asia is one of the few regions without an effective economic grouping. The SAFTA has now paved the way for it.

However many daunting challenges lie ahead in making SAFTA a success. First, the Momentum in improving India-Pakistan relations will have to be maintained. Two, the economic insecurity concerns of the smaller nations will have to be addressed. This is possible only when India and Pakistan come forward with significant unilateral trade concessions. India has already made an autonomous commitment to lower its peak rate 20% in the next fiscal itself. It is hoped that India's tariff reduction schedule would be swifter than anticipated in the SAFTA agreement for the reason she has already signed free trade agreement with Thailand and is in the process of signing one with Singapore. In the process she has already done the necessary homework required for undertaking this task. Three, there is a quick need to develop economic infrastructure. India and Pakistan have only one land crossing at Wagah. In such a situation, it is only an ambitious aspiration to handle trade of such an anticipated huge magnitude. Finally, there are certain fears in specific sectors in each country that need to be allayed. To conclude, SAFTA is a historic

SAFTA is a historic achievement coinciding with the melting of ice between India and Pakistan

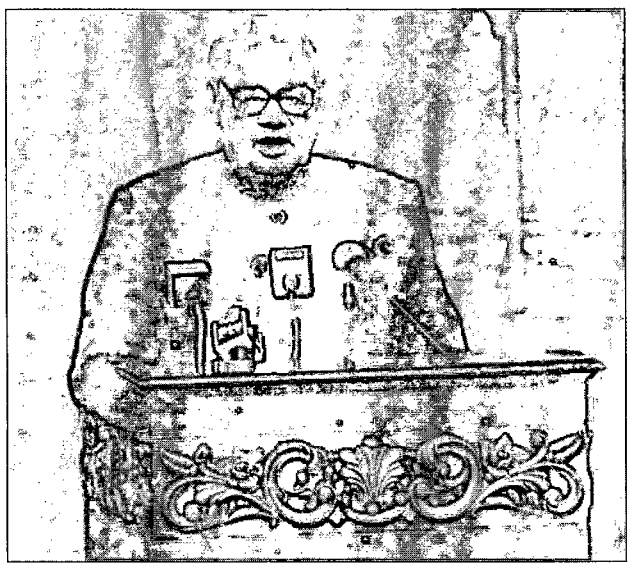
achievement coinciding with the melting of ice between India and Pakistan which augurs well for it. Let us hope this part of the world where one fourth of the world humanity lives will march towards prosperity and occupy its rightful place in the world. Long live South Asian Unity. ❑

PM's Statement at the 12th SAARC Summit

History can remind us, guide us, teach us or warn us; it should not shackle us. We have to look forward now, with a collective approach in mind.

"I join my other colleagues in congratulating the Prime Minister of Pakistan on his taking over as Chairman of SAARC. I would like to convey our sincere appreciation to the Government of Pakistan for the excellent arrangements made for this Summit, and for the warm hospitality extended to our delegation.

I also join other delegations in commending the immediate past Chairman—Nepal—for the energy and dedication with which it guided SAARC activities during these last two years. This was in spite of the many important domestic preoccupations of His Majesty's Government of Nepal. The spadework for many of today's successful outcomes was done in the various meetings of Ministers and officials in Kathmandu.



The Prime Minister Shri Atal Bihari Vajpayee delivering his speech at the 12th SAARC Summit in Islamabad, Pakistan on January 4, 2004.

At the last Summit in Kathmandu, I had said that, at sixteen years of age, SAARC needed a does of economic and social realism to move from adolescence to adulthood. Our organization is now 18 years old. I think we can look back with considerable satisfaction over what we have achieved since the last Summit. We have finalized a Social Charter. We have moved forward on Preferential Trading arrangements and have concluded a framework agreement for SAFTA.

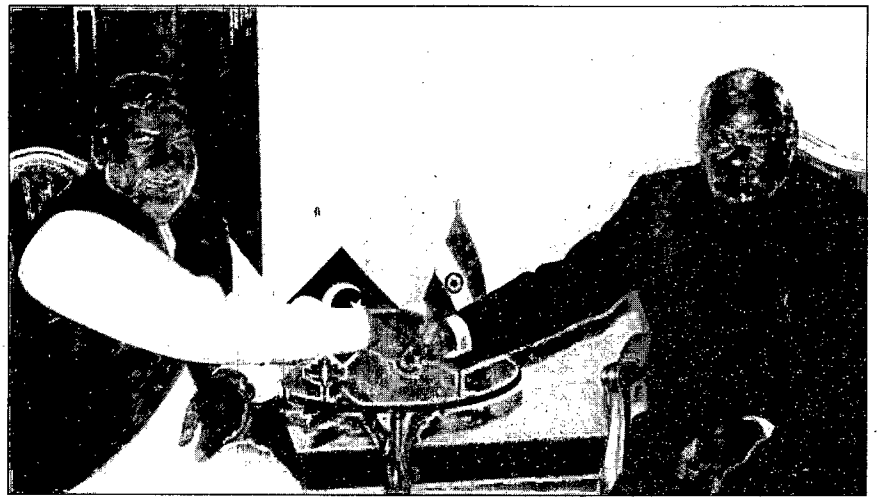
We have agreed on an additional protocol, which significantly updates our 1987 Convention against Terrorism. Our Independent Commission on Poverty Alleviation has done sterling work in putting together a set of substantive recommendations for a regional approach to poverty alleviation.

Much more remain to be done. In its 18 years of existence, SAARC has created high expectations amongst the people of the region. We should be candid in accepting that these expectations have not been fulfilled in the measure of the potential. The benefits of SAARC have not yet touched the lives of ordinary people.

A Group of Eminent Persons, which we set up after the Male Summit, had reviewed the strengths and weaknesses of SAARC and made certain recommendations for its improvement. We are still debating how to make progress on many of these recommendations We need to move from the realm of ideas to plans of action. Our statements of good intentions have to be translated into programmes for implementation.

The work of our Independent Commission on Poverty Alleviation illustrates this point. The Commission has noted that in spite of the endemic and widespread

Text of the statement of the Prime Minister, Shri Atal Bihari Vajpayee at the 12th SAARC Summit in Islamabad, January 04, 2004.



The Prime Minister Shri Atal Bihari Vajpayee meeting with the Prime Minister of Pakistan Mr Mir Zafarullah Khan Jamali on the sidelines of SAARC Summit in Islamabad, Pakistan on January 4, 2004.

poverty in all our countries, South Asia has a rich tapestry of best practices, cutting across sectors and regions. Many of these practices have attracted global renown.

Yet we have done almost nothing to document them systematically, to disseminate the lessons from them and to expand their application to regional poverty alleviation programmes.

I would urge all our fellow South Asian Countries that we should now act with purpose and focus to implement the Commission's recommendations.

Let us set up a dedicated Task Force—with representatives from each of our countries—to carry forward this implementation work. This Task Force can be set up either under the umbrella of the SAARC Secretariat, or independently. In the latter event, India is willing to host the task force. In either case, we are willing to fund the establishment and logistical costs of establishing and running such a task force.

I would propose, in addition, a Poverty Alleviation Fund, which can be professionally managed and can fund specific poverty alleviation programmes and projects in our countries. Once we have agreed on the modalities of creation of such a fund, and on its charter, India would be willing to make an initial contribution of US $100 million to this Fund, on the understanding that this money would be used entirely on projects within SAARC, but outside India.

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The Poverty, Alleviation Commission has proposed that before 2010 South Asia could reduce poverty by half, and also reduce by half the number of people without safe drinking water and sanitation.

The UN Millennium Development Goals aim to achieve these targets by 2015. With our rich natural resources, our technical manpower base, and our recent economic resurgence, South Asia can—and should—achieve these targets faster.

Let us now resolve that we will try to achieve all the Millennium Development Goals by 2010.

Again, India is willing to support the establishment of a SAARC Group, which could drawn up strategies to ensure this, and would specially support those countries which are falling behind this schedule.

Any joint endeavour needs mutual trust and confidence. For many decades, South Asian countries—which have a complex and troubled colonial legacy—have been unable to forge an integrated economic understanding, circumventing political differences.

Mutual suspicions and petty rivalries have continued to haunt us. As a result, the peace dividend has bypassed our region.

History can remind us, guide us, teach us or warn us; it should not shackle us. We have to look forward now, with a collective approach in mind.

Not very long ago, I had visited the Andaman Islands, where during our colonial days, political prisoners were kept in confinement. On the inscriptions in the Cellular Jail there, I found many names of brave martyrs and freedom fighters from what are today three South Asian countries.

Our forefathers fought side by side, transcending religious, regional and linguistic differences against a common colonial oppressor in our first war of Independence in 1857. It reminds us that many of us have a shared history, which pre-dates our more recent divisions.

In two years' time, we will enter the 150th Anniversary of that

stirring uprising. Perhaps India, Pakistan and Bangladesh can together celebrate that anniversary, in remembrance of our joint struggle against a common adversary.

We have to learn appropriate lessons from the experience of other countries. After centuries of fratricidal conflicts and wars, Europe is now uniting to emerge as the world's most powerful economic grouping. Closer home, the ASEAN countries have found it possible not to allow their political problems to come in the way of economic cooperation.

Examples of ever deepening regional cooperation can be seen if Africa, Latin America and the Caribbean region where also countries have a long history of bitter hostility towards each other. All these examples remind us that rational economics should triumph over political prejudice in South Asia.

We should undoubtedly encourage free movement of people across the SAARC region. At the same time, we need sufficiently strong controls so that illegal migration is prevented.

We have to create more opportunities for free commercial interaction between us. This also requires jointly tackling smuggling, drug trafficking, money laundering and gun running, all of which today flourish across our borders because of our mutual rivalries and inadequate coordination.

The development of greater economic states in each other would naturally result in greater sensitivity to the concerns of each other. This would pave the way for the more ambitious—but entirely achievable—goals such as a Free Trade Area, an Economic Union, open borders and a common currency for our region.

In this context, I would like to draw attention to the courageous action taken by His Majesty the King of Bhutan and his government against insurgent groups, which were trying to use Bhutanese territory to launch terrorist activities in India. It is an outstanding example of sensitivity to the security concerns of a neighbour, which is at the same time in the direct longterm security interest of Bhutan itself.

World-class connectivity is key to faster development. The establishment of a modern Multi-modal Transport Infrastructure of road, rail, air waterways and sea-links should be one of our priority objectives.

Again, a Saarc Task Force can be formed, with representatives from all our countries, which could commission or prepare techno-economic feasibility studies of major transportation links. India would be willing to fully support this venture; we would also be ready to make a substantial contribution to actually creating the viable infrastructure links recommended by the Task Force.

Development is increasingly dependent on free information flows. An information society is emerging all over the world. A digital divide between and within SAARC countries could retard development and raise social tensions.

SAARC countries have to transform their societies into "knowledge economies". India is prepared to share its recent experiences with other SAARC countries in this regard. We are willing to contribute to the widest possible cooperation in the use of IT, bio-technology and other S&T inputs for achieving our priority goals in socio-economic development.

Regional water and energy cooperation projects merit high priority. Our common rivers are a valuable resource for energy, irrigation and transportation. We have vast untapped hydrocarbon resources. A rational exploitation of these shared resources, with equal benefit to all stakeholders, can take us a long way towards real integration of South Asian economies.

When I landed in Islamabad yesterday, a hoarding near the airport caught my attention. It said, "Together we stand a better chance in the world". This is not a mere slogan. It aptly expresses a profound truth, which south Asia is till to grasp fully.

We have to change South Asia's image and standing in the world. We must make the bold transition from mistrust to trust, from discord to concord, and from tension to peace.

The bonds of religion, language, ethnicity and culture which hold us together as a South Asian family are far more enduring than the relatively recent barriers of political prejudice that we have erected. We should renew these bonds to jointly overcome poverty, disease and hunger.

Our region is blessed with rich and varied human resources, a young population, vast market for intra-regional trade, large energy resources and a rich biodiversity.

In other words, we have the potential, talent and resources to make south Asia an economic powerhouse of the world. We only need the necessary political will to make this happen. This is the agenda which we leaders of SAARC should strive to advance in the coming years." ❑

Global approach–need of the hour : Arun Shourie

World Summit on the Information Society

From Geneva to Tunis

AS A result of detailed and intensive exchanges, valuable declarations have been agreed upon. They set out important principles. They set out a sound work programme.

As a country that has secured many gains from Information Technology—India earns around $ 11 billion from the export of IT services and products every year. As a country that has contributed significantly to the growth of this field—one-third of the start-ups in Silicon Valley were by Indians. As a country that is one of the principal knowledge-generators in this field—over 100 of the Fortune-500 companies have set up R&D centers in India; as the country that today has three-fourths of the world's CMM Quality level V companies; as a country that is expanding the infrastructure for an Information Society rapidly—we are adding 1.3 million subscribers to mobile telephony every month, we have already laid out 500,000 kilometers of fiber optic network. India will participate vigorously in the work programme that you are adopting.

You are instituting a Working Group to ascertain the feasibility and effectiveness of setting up a Fund for advancing Information Society. Should such a Fund be set up, India will contribute financially in accordance with the formula that collective deliberations yield. To be of even greater assistance, we will contirbute in kind—by training and equipping people for this new society, by sharing the substantial experience that we have acquired in spheres such as e-Governance, Telemedicine, imparting literacy, Information Security, language technologies. Indian firms today equip people in over 55 countries for the Information Society. Our Government is itself setting set up Cyber cities and training centers in other countries. I am delighted to report that just day before yesterday the Prime Minister of India and the President of Ghana opened the Kofi Anan Center for Excellence that India has established in Accra for West Africa, Friends, the inauguration itself was a token of a new world—the Indian Prime Minister was in Delhi, the President in Accra; they inaugurated the Center via a video teleconference! We will redouble such initiatives.

Sir, one of the gains of your deliberations has been that important issues such as Intellectual Property, Interest Governance, and freedom of speech have been subjected to close examination. The declarations that you are adopting are carefully modulated, they embody a fine balance between several competing objectives.

Freedom

In India we value freedom for itself—in regard to the subject of your deliberations, Knowledge and Information Societies, we believe that they are predicated on creativity, and it is in freedom that creativity flourishes best. For the same reason, we are deeply committed to freedom of speech; on the rarest of rare occasions when a hand has been raised to curtail it, the people have signed that hand. Moreover, we recognize that the right to information is the foundation of freedom to speak one's mind.

Minister for Communication, IT and Disinvestment, Mr Arun Shourie's address at World Summit on Information Society at Geneva.

Internet Governance

You are requesting the Secretary General to set up a Working Group to think through issues concerning Internet Governance. India has considerable experience in this regard, and we will contribute in whatever way the Secretary General deems appropriate. I have two suggestions. In going through the deliberations that you have held on this matter, I feel that, the preliminary technical points having been discussed at length, we should now look farther afield. Consider just one example. As we modernize, our economies, our financial systems, our power grids, our rail and air traffic control systems get prograssively integrated. A vast literature is already available—it is available on the Internet itself—on how Information Technology can—and *should*—be used to disrupt such progressively integrating systems. All of us together have to devise ways to prevent terrorists and other adversaries from doing so. I am, therefore, confident that the Working Group will examine the issue more comprehensively than has been possible in the run-up to this Summit.

I would also urge that even as the Group examines issues relating to Internet Governance, it scout for impedances that are created in fact. This will ensure that the next time we deliberate on the matter we are dealing with actual misuse of servers and the like rather than warding off miasmas and hypothetical possibilities.

Felt needs

Sir, as you know this is a sphere in which technological change occurs at lightning speed, in which the technological possibilities are beyond what we can imagine today. In such spheres there is often the temptation of plenty. Everything seems worth doing. Someone in government or in a firm hears of something that has been doing somewhere—sometimes he even thinks up some bright applicational. As he has the position or reasources, work on that idea commences. Substantial sums are spent developing and then installing that application. But when after a few years it is seen that such pursuits did not yield any concrete benefit to people, they discredit the new technologies, they compound cynicism.

Therefore, we should, through the new technologies, address specific, and urgent needs of our people.

- There are many fancy applications for e-Governance, for instance. In India a few hundred applications have been developed and adopted. But the one that has brought immediate, tangible benefit to ordinary farmers is that in some states all land records have been degitized—so that the farmer can secure title documents etc. without having to wait upon the village official.

- Similarly, by installing telemedicine infrastructure and software, we have enabled patients in distant, isolated communities to receive the best medical diagnosis and advice in the foremost of our hospitals.

- Eighteen languages are recognized as official languages under our Constitution. To enable people to access these new technologies, software has been developed that transforms text—and will soon convert speech—automatically from one language to another.

- The script of Indian languages is phonetic. That of English is not. Therefore, software has been developed by which, while I type on a standard English keyboard, the computer transcribes and prints the text in the script of the Indian language.

- Many of us cannot read print—either because we are visually impaired or because we are illiterate. We have therefore developed software that transforms text into speech. This has already been done for anything available in electronic from—for instance, a person who is blind can by just a click or two get to his favourite newspaper on the Internet, and the computer reads out the paper to him.

Yesterday, Mrs. Kicki Nordstrom, President of the World Blind Union, drew out attention to the fact that she could not read the papers of this conference—they are not available in Braille. Let us reflect on that reproach for a moment. The papers of this Summit are available in print. In India we already use software to convert printed text into electronic form, and then print the text in Braille. As this Summit is about the Information Society, we can be confident that the papers will soon be available on the Internet. That is where we come in. I give you my assurance, Mrs. Nordstrom,

that within three months I will personally send you text-to-voice software that will read aloud all the papers the moment they are accessed on the website of the Summit. Imagine the liberation that such steps spell for a blind child, for the aged parent who has lost sight because of macular degeneration.

- Similarly, one of the doyens of the IT industry in India, Mr. F.C. Kohli, has developed methods for making people literate using IT that are bound to spell a revolution. Instead of teaching the person to read by first getting him to learn the alphabet, the method exposes her or him to the word as a whole; simultaneously, the person hears the sound and sees a depiction of what the word connotes. Through this "total immersion", and capitalizing on the fact that a vocabulary of just 500 to 700 words is sufficient for reading the average, daily newspaper, almost 40,000 persons who were totally, but totally illiterate have been brought to a level that they can now read newspapers on their own. This has been done through instruction of just 1 to 1½ hours a day for just 10 weeks.

I could readily give scores of examples of this kind. My suggestion is that even as, and specially because the new technologies make so many things seem attractive, we should sharpen our focus, and concentrate efforts on those projects that will spell immediate benefits to vast numbers, and which will lift them into this new Information Society.

Six areas for focused effort

Permit me, Sir, to suggest six areas concentration on which will yield immediate benefits:

- Abolishing illiteracy;
- Upgrading existing educational institutions—for instance, engineering and medical colleges—by connecting them with the best institutions in the country or region so that students in the less advantaged ones can share the teaching material, the lectures etc. of the best;
- Distant diagnosis and prescription of those who are not well;
- Enabling the disabled—specially the print disabled;
- Codifying traditional knowledge—for instance, household, indigenous remedies for common ailments.

Sir, I have one final suggestion, and I will conclude.

Four projects worthy of this gathering

After a great deal of sustained effort, declarations have been finalized. They will soon be adopted. The Summit should now go beyond declarations. We should agree on a few actual programmes that we will execute in mission mode—so that when we meet in Tunis two years from now, we are not just deliberating on the next declaration but are celebrating actual accomplishments.

In a word, in the coming months we should adopt a few specific projects of global reach and global significance, and organize coordinated research on them. Of the many projects that occur to one, I recommend four for your consideration:

- Use ICT to abolish illiteracy;
- Develop the Universal Networking Language—so that a person in India can put his data or message on to the Net in any of our 18 languages, the machine should translate it into the Universal Networking Language, and my friend in Iran should be able to receive it in Persian;
- Bring text-to-voice and voice-to-text software to perfection so that worlds from which they are today shut out are opened to the print disabled;
- Today one of the severest impediments to enabling people to avail the benefits of the Informaiton Society is the expense of laying the infrastructure to their doorstep; we should complete research that would enable wireless signals to go to a multiple of the 50/60 kilimeters they traverse at present.

Each of these is a do-able task.

Each of these will spell untold benefit to millions.

Together, they are worthy of a gathering as exalted as this one.

We should join hands so that they are accomplished—*before* we meet in Tunis. ❑

Regional Cooperation among China, India, Myanmar and Bangladesh

Gautam Purkayastha

Nearly 60 per cent of the regional trade agreements as of now have been concluded among the countries of Europe while only 15 per cent of such agreements have been concluded by the developing countries, indicating the relatively low degree of regional integration among developing countries.

THE GLOBAL trade scenario is very competitive compared to the 70's. when trading blocks came into existence. Economic cooperation among the less developed countries is a must to get success against the trading blocks formed by the industrialized nations. To devise an aggressive strategy to form a Growth Triangle or Quadrangle involving neighbouring regions with geographical proximity to each other is at the root of signing regional economic cooperation in different parts of the globe. Regional economic cooperation creates trade within the region. It also accelerates the inflow of foreign investment, transfer of technology, and improves the bargaining power of the region as a whole. Although non-economic benefits from such arrangements are also of high value, these are often either underestimated or not discussed with similar concern.

Regional economic cooperation has become a sound practical proposition in today's ever-discriminatory trade world as is evident from the success of EU in the western world and the ASEAN in Southeast Asia. Not to speak of developing countries, even the most developed countries of the world are seen entering into different agreements (EU, NAFTA etc) with the neighbouring countries for economic cooperation and in reducing the volume of pressures arising out of the unprecedented uncertainty in the newly emerging international economic order. Such a concept has made its way into India as well. Already it has signed/ renewed bilateral economic ties with many countries, it is making preparations for a switch over from SAPTA to SAFTA. It has also signed BIMSTEC (Bangladesh-India-Myanmar - Sri Lanka - Thailand Economic Cooperation) agreement with the objective of initiating joint ventures in the sectors of trade, technology, tourism, investment and industry, infrastructure, HRD, etc.

At present, the USA and the EU constitute largest share of India's trade. However, the markets of future importance to India are those of China, north Asia and ASEAN10 comprising over 2 billion people.

Although WTO rules envisages non-discrimination in trade among the member countries by incorporating clauses like national treatment and most favoured nation (MFN), in reality, most of the countries including the industrialized nations often try to define these terms on their own and joining in different regional trading blocks. It

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is estimated that more than two-fifths of world trade is carried out through the preferential trade operation, i.e., through different regional blocks. Nearly 60 per cent of the regional trade agreements as of now have been concluded among the countries of Europe while only 15 per cent of such agreements have been concluded by the developing countries, indicating the relatively low degree of regional integration among developing countries. The tariff rates within these blocks are much lower than MFN rates required to be offered to all members of the WTO. The incidence of joint ventures in trade and investment and FDI flows were also significantly higher in different trading blocks. The countries falling outside the blocks may find it extremely difficult to expand their trade to the major trade blocks. The urgency of the problem can be realized from the fact that even George W. Bush was forced to launch the Enterprise for ASEAN Initiative (EAI) during the APEC summit in October 2002 for strengthening trade linkages with ASEAN. Under such circumstances, India must come up with innovative ideas, to fulfil its aim of becoming an important player in global trade.

Economic experts of national and international statures visualize a strong ground for regional economic cooperation involving India, China, Myanmar and Bangladesh having close geographical proximity, socio-economic and cultural affinities-to bring prosperity to India vis-a-vis the landlocked NE region, Yunnan province of China in particular and the whole of Myanmar and Bangladesh—through specific agenda of cooperation particularly infrastructure and connectivity.

Emerging Growth Zone : China, India, Myanmar and Bangladesh together constitute nearly 38 per cent of the world population. Both Bangladesh and Myanmar recorded



On road to regional cooperation.

improved growth rates during the last decade, because of the introduction of a number of reform measures. India experienced over 6 per cent GDP growth rate during the last decade, which placed it among the top 10 fastest growing nations of the world. Bilateral trade between China and India was around 5 billion dollars during 2002-03 as against 2.6 billion dollar in 2001-02. Based on the buoyant trend in bilateral trade in very recent times both countries are aiming to achieve about 10 billion dollar trade by 2005. At present, India-China trade is more than India's trade with Russia, CIS countries and Eastern Europe taken together. Similarly, India's trade with Myanmar and Bangladesh have shown signs of improvement in the post piecemeal efforts made by the concerned countries in the late 1990s to make the border trade free.

Myanmar and India have signed an agreement to streamline trade and investment on July 15, 2003. Under the deal, India will give technical and financial assistance to Myanmar to make value-added products for the Indian market, improving transport links, continuous discussion on elimination or relaxation of non-tariff barriers on border trade, etc. India is hoping to double bilateral trade to 1.0 billion dollars by 2006, from the current level of below 500 million dollars.

Bangladesh is the sixth largest trading partner of India. To give a boost to trade and investment on sub-regional cooperation basis, both countries agreed to initiate discussions on Free Trade Agreement in the recently concluded Sixth meeting of the Joint Economic Commission at Dhaka.

India has a medium term target of raising its share in world exports from the 0.6 per cent (or, $44.56 billion in 2000-01) to 1 per cent $80.48 billion in 2006-07) during the

10th Plan period. India can achieve this target provided India does not miss any opportunity to enter into the important trading blocks, or it may face stiff resistance in the sphere of market access. At present, the USA and the EU constitute largest share of India's trade. However, the markets of future importance to India are those of China, North Asia and ASEAN comprising over 2 billion people. These three markets (already labeled as the engine econmy of the world) are likely to be the fatest growing global markets for the next 25-50 years. The recent initiative taken by India and china to open the ancient trade route at Nathu La (Sikkim state of India and Tibetan Autonomous Council of China) is likely of increase trade between the two countries manifold. Similar piecemeal initiatives can also be seen between India and Bangladesh and also, between India and Myanmar since Mid-1990s. Deepening regional economic integration will help widening the range of subjects for cooperation and collaboration such as transport connectivity, telecommunication, law and administration, health, education, energy (hydro electricity), marine technology petro chemicals and tourism. FDI flow in India is expected to reach the desired pace because of its look east strategy, bilateral ties with a few ASEAN nations for joint collaborations in vital sectors, creation of Special Economic Zones (SEZs) etc. According to a study by Pricewaterhouse Coopers, India has a more favourable investment environment than Malaysia, Taiwan, Indonesia and even China. Regional Economic Cooperation among the 4 nations by increasing the trade prospects multiple times within the region will also give a boost to the FDI flow into the region apart from increasing joint ventures in trade, investment, technology etc.

Deepening economic integration among the 4 Asian nations will also supplement/suit India's current economic policy in many ways. India is making more systematic efforts in recent times to share its expertise (with reciprocity) in software, biotechnology, nuclear and fundamental research (including genetic engineering) with developed and developing nations. Already India and China have decided to coordinate their approach on several key WTO issues encompassing agriculture, Trade Related Intellectual Property Rights (TRIPS), public health and investment. There exist a number of potential areas where trade can be of mutual benefit to all the 4 nations. The important areas are computer software and hardware, auto components, transport equipment, leather manufacturer, telecom equipment, metallurgy, chemicals, rubber products textiles, marine products processed foods, pharmaceuticals, etc.

According to a study by Pricewaterhouse Coopers, India has a more favourable investment environment than Malaysia, Taiwan, Indonesia and even China.

Opening up of the border trade through the ancient Stilwell road (apart from the already agreed Silk route which is the best route for tourists wanting to visit Lhasa, Mount Kailash and the holy Mansarovar lake) would generate huge employment opportunities in trade, transport, tourism, and related services for the youth which may subdue the tendencies of militancy and other anti-social activities in the region. Border trade is very important for the people of the border areas. In many points, it is still a barter trade of basic items. Since 1995, more than 37 border points have been opened to promote trade in the region. The initiative of the government of India towards development of trade with Bangladesh and Myanmar is very encouraging, although equal amount of reciprocity is not forthcoming from other sides. The existing infrastructure in these free trade points (only shortlisted items are allowed at present) is also acutely inadequate for bulk amount of trade.

There is no denying the fact that NE-states are yet not prepared both mentally as well as physically so as to take the advantage of the emerging situation. Fear of further influx of people into the region (particularly in labour scarce states) from the neighbouring countries and the rest of the India is playing a major role in its slow progress. Moreover, even with the region, states' economies are not healthily integrated. Joint efforts are seriously lacking in strategic areas including transport, communication, power, etc.

Under the circumstances, improved infrastructure may lead to a loss of natural protection for local producers, as lower transport costs and improved information flows lead to increased competition from national and international suppliers. To take full advantage of the much freer border trade, the NE governments and entrepreneurs and traders of the region urgently need to look afresh their current standings and future preparation otherwise they may loose out in the log run. It is high time that North East units make an all out effort to form economic union for closer coordination on check on insurgency, tourism, export promotion, an integrated transport system, among other matters of common interest for faster regional development. This is the minimum requirement to gain from liberal border trade and also to get maximum benefit from the world's fastest growing trade hub at its doorsteps. ❑

Nathula Border Trade An Overview

Ashok Chatterjee

India and China have always been known as the two Asian majors and the relations between them are considered crucial as much for Asia as for the world.

MANY PEOPLE read Future Shock by Alvin Toffler, marketed in India in the late 1970's, with considerable interest. The driving theme of the book is that the changes that have taken place all over the world in the last few decades have far exceeded the account of the previous 200 years. The changes could be seen at the macro level in science, technology, economy, international relations, social order and the people's lifestyle. Not that the perceptible changes were good for all people. But the fact that change is a way of the world was realized by many to readjust their outlook of life, even if some of the changes were shocking.

Futuristic events are on. Thus, a joint declaration signed between the Governments of India and China in Beijing on June 23, 2003 and also a specific Memorandum of understanding (M.O.U.) on resumption of Sikkim-Tibet trade on the historic 'Silk Route' across Nathula in east Sikkim which was abandoned after India-China relations deteriorated in 1962. The outcome of this development will be seen in due course first in the geopolitics of a new equation among the nations of the world and, secondly, in the economic, social and maybe,also in the political realities in Sikkim, the 22nd State of India since its merger in 1975.

India and China share a common perspective of a multipolar world, strengthening of the U.N. and right direction for globalization and, more particularly, about an uninhibited people-centric economic development of the two most populous countries of the world.

The India-China Joint declaration is the first of its kind in the history of Sino-Indian relations since the end of World War II (1945) and the formation of the Republic of India (1947), followed by the birth of the People's Republic of China (1949). India and China have always been known as the two Asian majors and the relations between them are considered crucial as much for Asia as for the world. In the present scenario, marked by stress on economic reform, market-driven economy and global trade, the role of India and China has assumed an added significance on several counts. The two countries account for two-thirds of the world's population. Individually they are large markets while jointly they are the largest in the world. Both the countries are recognized for their growing economy. They complement each other, especially in information technology and computer industry sectors.

China is known to be driven by its ambition to become an economic superpower in the world. Accordingly, an India-China allweather relation of understanding, friendship and cooperation-all in their economic interest-can be a sound policy for both the countries which have to individually provide for their large populations of over a billion each. Like the U.S., business is business for China. The reality in this regard is to be seen in how the country has progressed and become a major economy of the world mostly by a pragmatic

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utilization of its huge human resource along the path shown by Mao Zedong.

India and China share a common perspective of a multipolar world, strengthening of the U.N. and right direction for globalization and, more particularly, about an uninhibited people-centric economic development of the two most populous countries of the world. It is in this perspective that one has to see the significance of resumption of border trade between Sikkim and Tibet, even if it would be more symbolic and not much in volume or in value.

The government and people of Sikkim have received the border trade agreement with mixed feelings. The Chief Minister, Shri Pawan Kumar Chamling, has said that his government has been demanding resumption of Sikkim-Tibet trade along the historic 'Silk Route' ever since the Sikkim Democratic Front, of which he is the president, came in power in 1994. Accordingly, he sees the agreement as a fulfilment of a longstanding demand of his party and its government. However, Shri Chamling has formed a high-power committee for a detailed study of the enabling facilities, infrastructure, logistics and security that would be needed for starting the trade with a border market to be set up at Changu Lake.

Resumption of trade with Tibet, howsoever symbolic, will definitely open up many opportunities for Sikkim. It is up to the people of Sikkim to avail the opportunities for their economic gains, said Shri Chamling. An alternative road to link Changu with Ranka and Ranipool in East Sikkim is also being considered to avert the disruption of traffic in Gangtok once the trade beings. The Sikkim government has decided to request the Centre to include the State Chief Secretary, in the Joint Action Committee, which will be formed to finalize the details of the border trade. The Chief Minister has also discussed security arrangements for the border trade with his top officials, including the Chief Secretary and the Director-General of Police.

As to the people's reaction to the border trade arrangement, some leading businessmen in Gangtok have spoken with an optimistic note. The common man in Changu-Nathula area may be expecting opportunities of small trade that normally go with any big trade on a long-term basis. However, in view of the known limitations of hill roads in this Himalayan State, especially during the heavy monsoon from May to September, the prospect of any sizeable trade involving heavy transport appears to be doubtful to many. People are yet to be told what would be the trade items from the two sides of the India-China border at Nathula. (PIB Features) ❑

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Economy – An Update

Gross Domestic Product: According to the quarterly estimate of GDP released by the CSO, economy in the second quarter of 2003-04 grew by 8.4 percent as compared to 5.7 per cent in the first quarter of 2003-04. This is mainly due to the revival in the agricultural sector, which increased to 7.4 percent in the second quarter as compared to 1.7 per cent in the first quarter. Industry and service sector also performed well during this period and grew by 6.3 percent and 9.9 per cent respectively. The RBI therefore in its latest assessment has revised the GDP growth rate for the year 2003-04 to 7 per cent.

Infrastructure: The six-sector infrastructure index comprising of crude petroleum, petroleum refining, coal, electricity, cement and finished steel, which account for almost one-third of industrial output, grew by 5.2 per cent in November 2003 as compared to 3.0 per cent in October 2003.

Money market: The year on year variation in money supply was 12.3 percent as on 12th December 2003 while the variation in reserve money was 13.9 per cent as on 26th December 2003.

External Sector: In the foreign trade sector, exports in November 2003 recorded double-digit growth of 13.7 percent as compared to November 2002. But when compared to the export figures of October 2003, exports in November 2003 declined by 8 percent.

The current account of India's balance of payments registered a surplus of US $ 524 million in July-Sep. 2003 as compared to a deficit of US $ 317 million in April-June 2003.This is mainly due to the increase in net invisible receipts comprising software exports and private transfers.

India's external debt stock for the quarter ending September 2003 stood at US $ 112.5 billion as compared to US $ 109.7 billion in the quarter ending June 2003, an increase of 2.5 per cent. Among the components of external debt the main source of increase has been NRI deposits (long term), which increased by 6.6 per cent during this period.

As regards foreign investment, the increase in portfolio investment has been more than the increase in FDI in the first two quarters of 2003-04.

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Table-1 Macro Economic Indicators

	Items	Units / Base	2002-03	April-June 03	July-Sep 03	Oct 03
	ItemsUnits/ Base	2002-03	April-June 03	July-Sep 03	Nov 03 YoY*	
I.	**Gross Domestic Product** $_{at\ FC}$	% change	4.3	5.7	8.4	-
1.	Agriculture, forestry & fishing	% change	-3.2	1.7	7.4	-
2.	Industry	% change	6.0	5.8	6.3	
2.1	Mining & Quarrying	% change	5.0	3.1	2.3	-
2.2	Manufacturing	% change	6.1	6.4	7.3	-
2.3	Electricity, gas & water supply	% change	3.9	4.8	2.9	-
2.4	Construction	% change	7.2	5.7	6.4	-
3.	Services	% change	7.1	7.6	9.9	-
3.1	Trade, hotels, transport & communication	% change	7.8	9.6	11.9	-
3.2	Financing, insurance, real estate & business services	% change	6.1	7.1	7.3	-
3.3	Community, social & personal services	% change	6.8	4.3	8.9	-
III.	**Infrastructure** (Weight in IIP: 26.68%)					
1.	Crude Petroleum	% change	3.3	-2.1	-0.8	2.4
2.	Petroleum Ref. Products	% change	4.9	3.5	8.5	20.0
3.	Coal	% change	4.3	3.7	3.7	6.0
4.	Electricity	% change	3.1	3.9	1.3	4.3
5.	Cement	% change	8.8	4.9	5.4	3.9
6.	Finished Steel	% change	8.7	7.7	8.3	2.7
7.	Overall	% change	5.2	4.2	4.0	5.2
IV.	**Inflation**					
1.	Inflation (Wholesale price inflation)	1993-94=100	3.3	5.7	4.3	5.6**
		% change				
2.	Inflation (CPI-Industrial Workers)	1982=100	4.1	4.7	3.4	3.1
		% change				
3.	Inflation (CPI-Agricultural Labourers)	1986-87=100	3.2	5.2	4.0	3.1
		% change				
4.	Inflation (CPI-Urban non manual employees)	1984-85=100	3.8	4.1	3.3	3.4
		% change				
V.	**Money Market**					
1.	Money Supply (M_3)	% change	11.9	4.7	6.5	12.3+
2.	Reserve Money	% change	9.2	4.6	9.0	13.9+
VI.	**External Sector**					
1.	Imports	% change	19.4	25.0	16.2	26.5
2.	Exports	% change	20.3	9.0	8.6	13.7
3.	Net Invisibles	US $ million	17047	5537	6749	-
4.	Current account balance	US $ million	4137	-317	524	-
5.	External Debt Stock	US $ billion	104.7	109.7	112.5	-
6.	Portfolio Investment	US $ million	944	1376	2136	-
7.	Foreign Direct Investment	US $ million	3611	735	940	-
8.	Variation in Forex Reserves	US $ million	16980	5170	8360	30299+

Source: CSO, RBI Monthly Bulletin, Weekly Statistical Supplement, Labour Bureau, Ministry of Industry (O/o the Economic Adviser), DGCIS.

*Note: *YoY- Year on Year variation, ** as on 13 Dec 2003, + w.r.t. Dec 2003.*

Compiled by Mrs A. Srija, Senior Research Officer, Planning Commission Govt. of India.

Rising Market for Gold Jewellery vs Plight of Goldsmiths

C.V. Kannaji Rao

India is estimated to hold more than 11,000 tonnes of gold at present. The significant feature of the market is that 60 to 70 percent of the total gold is being purchased by 70 percent of the total population living in rural areas.

THOUSANDS of years ago when a child found a shiny rock in a creek, the human race was introduced to Gold for the first time. Its brilliance, natural beauty and its great malleability and resistance to tarnish made it enjoyable to own it. Humans in ancient and modern civilizations almost intuitively placed high value on gold by equating with Gods, Power, Beauty and Cultural elite. India became the largest consumer of gold in the world in recent times. Indian demand for gold has been hovering around 20 percent of the world demand (Table-1).

India is estimated to hold more than 11,000 tonnes of gold at present. The significant feature of the market is that 60 to 70 percent of the total gold is being purchased by 70 percent of the total population living in rural areas. Since agriculture and its income are highly dependent on rains and weather conditions, a good year for agriculture assures higher demand for gold. According to Mr Vijaya Sarada, one of the Directors of Bombay Bullion Association, there are two very important reasons for the demand of gold from rural India.

i) The main reason for such a high rural demand for gold is the non-taxable agricultural income that results in substantial disposable income for landlords whose natural preference is to use the funds for the purchase of gold.

ii) Since women in rural areas have low level of education, males will invest much of their savings on gold so that women can encash it without any legal hassles when they are in need of money.

Table 1

Gold Demand in India

(In tonnes)

Year	1998	1999	2000	2001	2002
World total	3843.6	3922.1	3800.3	3770.0	4200.1
India	795.4	753.9	749.0	756.7	850.0
Percentage	20.69	19.22	19.71	20.07	20.23

Source: Complied from World Gold Council, Gold Demand Trends No. 42

Dr C.V. Kannaji Rao is Associate Professor, Department of Commerce and Management Studies, Andhra University. Visakhapatnam, Andhra Pradesh.

Gold jewellery has a history of over 5000 years in India. Excavations at Mohenjadaro and other sites of Indus valley civilization have unearthed a wealth of ornaments made of gold, silver, copper, ivory and, precious and semi-precious stones.

Basically jewellery can be classified into two types.

i) Religious jewellery also called as Temple jewellery crafted for Gods, ceremonial elephants, and horses.

ii) Secular jewellery, called Aesthetic jewellery, is made practically for every part of human body. Since pre-historic period both men and women used to wear gold jewellery/ ornaments. The use of jewellery depends on occasions like daily use, festivals, functions and religious ceremonies like marriage, etc.

The demand for jewellery in India accounts for nearly 18 percent of the world jewellery demand (Diagram-1).

Further it is interesting to note that out of total demand for gold in India about 83 percent demand is for jewellery (Diagram -2). The share of jewellery in the total gold demand of the country is almost consistent during the last five years (Table-2).

Diagram-1 : Demand for Jewellery in the World

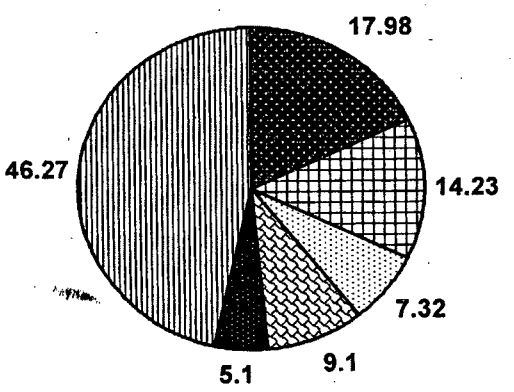


Diagram-2 : Indian Gold Consumption Pattern in 2002

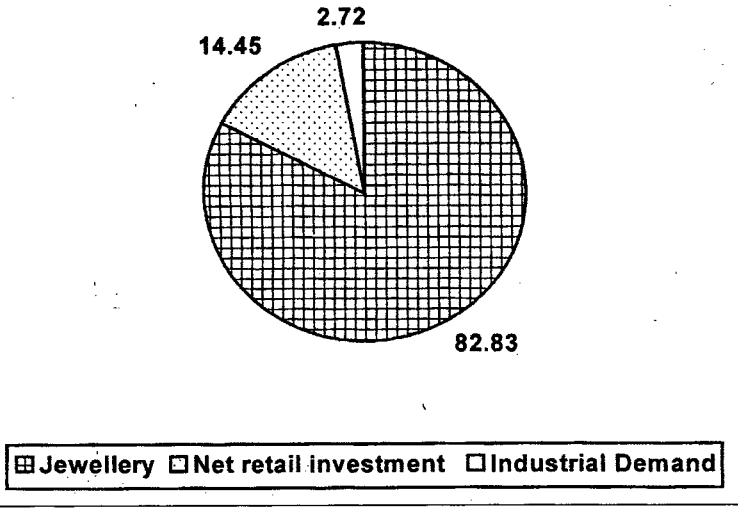


Table 2

Jewellery Demand in India

(In tonnes)

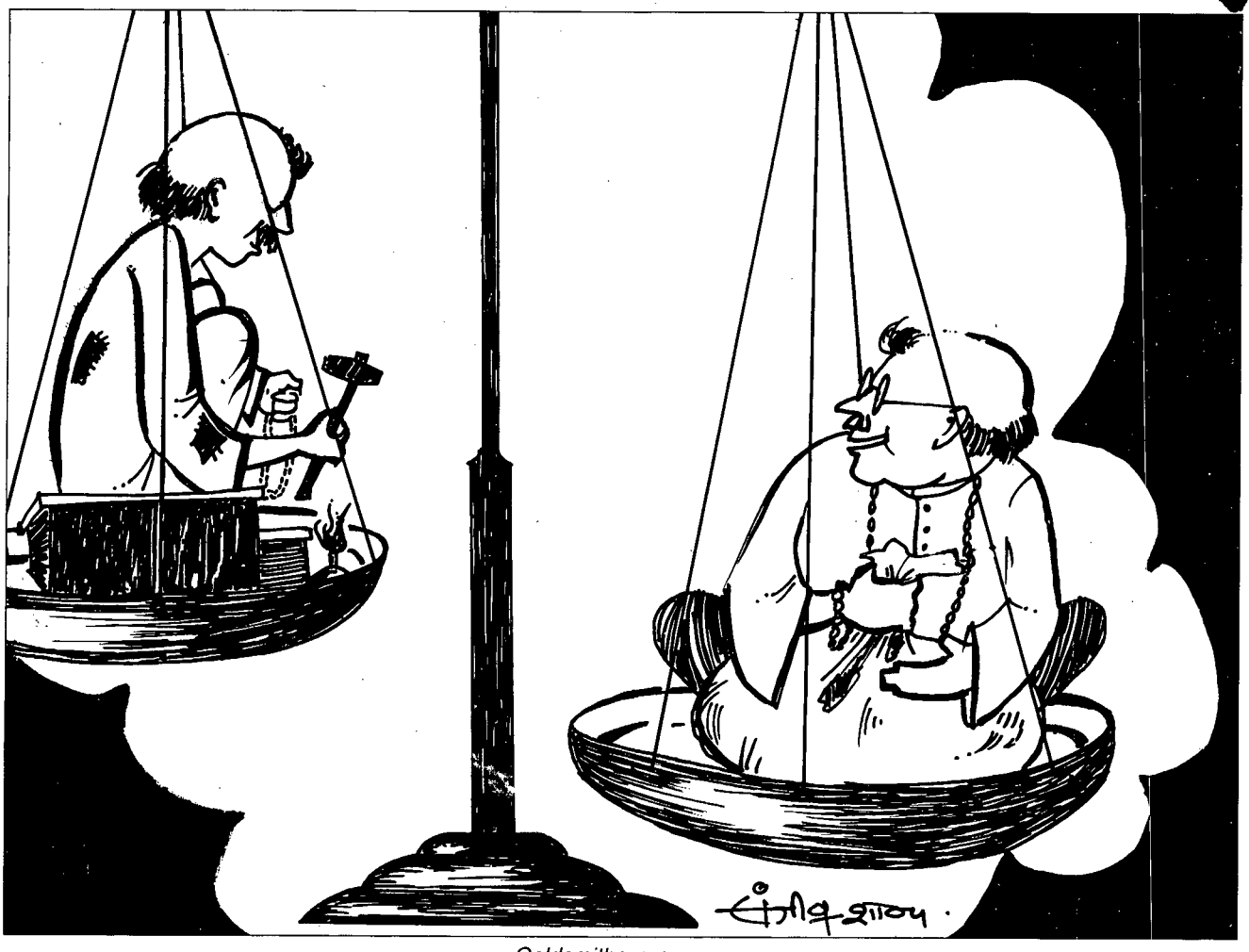
Year	T.G.D.	Jw.D	% to total
1998	795.4	658.2	82.75
1999	753.9	629.7	83.52
2000	749.0	620.0	82.77
2001	756.7	614.7	81.23
2002	850.0	704.0	82.83

- T.g.d. = Total Gold Demand,
- Jw.d: = Jewellery Demand

Source: Compiled from World Gold Council, Gold Demand Trends No. 42

Goldsmiths

In India, making of gold jewellery is a hereditary profession of *Swarnakar* (goldsmith) community, which is a sub-caste of the Viswakarma Community. The goldsmiths (artisans) are referred by different names in different regions Viz., *Viswakarma, Swarnakar, Sonar, Kamsali, Viswabrahmin, Thattan, Panchaller*, etc. As per 1994 census the population of Viswakarma Community in India



Goldsmiths are poor.

is 11 percent of the total population. 'Jewellery making' is a man oriented activity traditionally, though there is no technical hurdle for the entry of women into the profession. The majority of goldsmiths involved in 'jewellery making' belong to Viswakarma community. However, persons from other communities also entered the profession. For instance in Andhra Pradesh the majority of goldsmiths belong to Viswabrahmin community, while others belong to Muslims, Padmasali, etc.

In rural areas a goldsmith generally performs all the operations involved in making a finished ornament. But in cities, may be due to over population in the profession/ specialization, different operations of ornament making are being performed by a lesser number of goldsmiths having different types of skills. For example, Goldsmith prepares the skeletal framework, *Chatera* (Engraver) engraves, *Kundansaaz* (Stone fitter) sets the stones, *Meenasaaz* (Enameller) enamels the ornaments.

In rural areas a goldsmith generally performs all the operations involved in making a finished ornament. But in cities, may be due to over population in the profession/ specialization, different operations of ornament making are being performed by a lesser number of goldsmiths having different types of skills.

Apart from the goldsmiths directly associated with making of jewellery, so many persons (mostly from Viswakarma community, and also from non-viswakarma communities) are

associated with the activities of gold jewellery business as refiners, polishers, brokers connecting buyers and sellers, wire and sheet making machinists, *Dharmakanta* (weighing machines), roadside repairers, gold appraisers, buyers of old ornaments and, wholesale and retail traders of new ornaments.

In ancient times, goldsmiths had a much higher position than other artisans. The reason might be that they worked with a precious metal. They had royal patrons as they mastered in various skills required to make fine jewellery i.e., mixing alloys, moulding, drawing fine wires, sheets, studding stones, etc. Over the years the living condition of goldsmiths degraded significantly. At present 95 percent of goldsmiths are living below the poverty line. The reports of suicides and suicidal attempts of many goldsmiths along with their family members in recent times stands as a testimony for this. The reasons for this plight can be attributed to the following :

The goldsmiths were recognized as a backward community and were included in the official list of Backward Classes. When compared with other backward classes their identity in political, social and economic fields is insignificant.

Almost all the goldsmiths are depending on this age-old traditional profession. They are culturally backward and looking after large-sized families. A typical family unit contains a minimum of 6 to 8 persons. Their monthly income is too low to meet the expenditure to maintain their families. They have to spend some amount of money on festivals, cultural ceremonies like marriages, etc. The majority does not possess any fixed assets. 95 percent of them are illiterate. Due to lack of guidance as well as poor financial position their children are not having even primary education. They prefer to put their children in the profession to earn livelihood for the family. Due to illiteracy, they are not able to occupy higher official positions and their political awareness is very less. They are unable to change themselves on par with the fast changing conditions of the society.

Out of the total sale of jewellery, about 95 percent is machine made. The manufacturers and wholesalers of machine made jewellery have been supplying a large variety of designs in huge quantities to the retail jewellers (traders) on credit basis for a minimum period of one or two months. Therefore, the traders prefer to sell machine made jewellery.

Day-by-day their earning position has been deteriorating due to severe competition from various directions.

Out of the total sale of jewellery, about 95 percent is machine made. The manufacturers and wholesalers of machine made jewellery have been supplying a large variety of designs in huge quantities to the retail jewellers (traders) on credit basis for a minimum period of even 1 to 2 months. Therefore, the traders prefer to sell machine made jewellery to hand made. Only for ornaments of local designs/models the traders give orders to the goldsmiths. This leads to decreasing rate of volume of work available to them. Moreover, the terms and conditions imposed by the traders are also difficult. Apart from that the number of new persons, both from viswakarma and other communities, entering the profession is increasing. Due to a lot of internal competition traders have exploited them by offering lower making charges and manufacturing loss of gold. It can be said that the goldsmiths have become puppets in the hands of traders.

An interesting feature of 'jewellery making' is, due to the nature of processing involved an excess gold (working capital) of 25 percent of the required weight of the ornament must be added in the raw material stage. But it is very difficult for the poor goldsmiths to hold such volume of working capital. Hence, they are not able to handle huge quantity of work.

The human factor involved in the profession needs to be recognized. The government should extend helping hand for the upliftment of the goldsmith community and promote the valuable and traditional skills of the goldsmiths. ❑

No Fresh Water – No Future

K. Pandimuruga Chinnan

India is heading towards a freshwater crisis mainly due to improper management of water resources and environmental degradation which has led to a lack of access to safe water supply to millions of people. This freshwater crisis is already evident in many parts of India varying in scale and intensity depending mainly on the time of the year.

WATER IS the most vital resource for the existence of life on earth. It is indispensable for the existence of plant and animal eco-systems and forms an essential element in the development of economic activities. No other natural resource has had such an overwhelming influence on human history. World oceans cover about three-fourths of earth's surface. However, freshwater constitutes a very small proportion of this enormous quantity. About 2.7 per cent of the total water available on the earth is freshwater of which about 75.2 per cent lies frozen in polar regions and another 22.6 per cent is present as ground water. The rest is available in lakes, rivers, atmosphere moisture, soil and vegetation. What is effectively available for consumption and other uses is a small proportion of the quantity available in rivers, lakes and ground water. According to World Health Organization, less than one per cent of the world's fresh water or 0.007 per cent of all the water on Earth is readily available for human world consumption. As the human population increases the demands on freshwater resources will continue to grow.

About 2.7 per cent of the total water available on the earth is freshwater of which about 75.2 per cent lies frozen in polar regions and another 22.6 per cent is present as ground water.

No Freshwater-No Future

The world is facing a freshwater crisis. People already use over half the world's accessible freshwater and may use nearly three-quarters by 2025. If per-capita consumption of water resource continues to rise at its current rate, humankind could be using over 90 per cent of all available freshwater within 25 years, leaving just 10 per cent for the rest of the world's species. In other words, over 1.5 billion people lack ready access to drinking water and if current consumption patterns continue at least 3.5 billion people-nearly half the world's projected population-will live in water stressed river basins in just 20 years.

On top of this, contamination denies some 3.3 billion people access to clean water and 2.5 billion people have no water sanitation services. In developing countries, an estimated 90 per cent of wastewater is discharged without treatment into rivers and streams. Each year, there are about 250 million cases of water-related diseases with some 5 to 10 million deaths. It is not only people who are threatened by water shortages and pollution, freshwater ecosystems which harbour the

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Cities face water crisis.

world's greatest concentration of species are amongst the most vulnerable on Earth. Half the world's wetlands have been destroyed in the last 100 years. Two-fifths of the world's fish are freshwater species-and of these, 20 per cent are threatened, endangered, or have become extinct in recent decades. In addition to this, freshwater demand will increase greatly during the 21st century, not only because of demographic pressures, but also because of improved living standards, urban and industrial growth.

The world's thirst for water is likely to become one of the most pressing resource issues of the 21st century. Global water consumption rose six fold between 1990 and 1995-more than double the rate of population growth-and continues to grow rapidly as agricultural, domestic and industrial demand increase. In some areas, water withdrawals are so high relative to supply that surface water supplies are literally shrinking and ground water reserves are being depleted faster than they can be replenished by precipitation. As a result of over exploitation of ground water, water tables are dropping and some rivers often run dry before they reach the sea.

Future Requirements

Freshwater is available as rainfall, atmosphere moisture, surface water and ground water. All these different forms and locations of water vary over place and time, both seasonally and from year to year. Paucity of funds, over exploitation of water resources, degradation of water recharge structures, competing demand on the available water resources, depleting water availability due to continuous failure of monsoon are some of the factors that cause concern on the supply front. In addition, on the demand side, factors like growing urbanisation, increase in population, changing life styles, inadequate institutional and legislative frame work also increase the complexity of the problem. At present, thousands of Indian cities do not have sources of water and in future,

it would have to be transported over larger distances as the water sources move much more away from the cities. The country's current and future situation can be gauged by the trend in water availability. Water requirement for different uses in India is projected to the years 2010, 2025 and 2050 respectively in table no. 1.

The table implies that irrigation (surface and ground water) alone accounted for 83 per cent of the total water use in 1997-98 on the demand side and it is likely to slow down to 69.5 per cent by the year 2050 due to the impact of technological advancement in irrigation. In particular, demand for water on domestic, industrial and thermal power generation is expected to increase rather sharply. Demand for industrial uses (surface and ground water) is likely to go up to 81 km^3 by the year 2050 from 30 km^3 in 1997-98. Water requirement for domestic uses (surface and ground water) has been estimated to be 111km^3 in 2050 which is almost three fold increase on demand side from 30 km^3 in 1997-98. The dependence is more on ground water where there is competition on exploitation leading to the depletion of the water and encountering drought situation. The limited ground water sources have not been able to keep pace with recharge and discharge to renew the balance.

The amount of water available per person in India has decreased steadily from 3450 cm in 1951 to 1250 cm in 1999. According to the Ministry of Water Resources, it is expected to decrease further to 760 cm per person in 2050. It could be predicted with complete certainty that the world in the year 2050 will be largely different from what it is today. Water sector will undergo dramatic changes in the years to come in order to keep with the advances in technology

According to estimates, by the year 2025, the country will face a severe water shortage

and burgeoning population. Much of the project increase in water demand will occur in developing countries where population growth, agricultural and industrial expansion will be greatest. Fresh water will be just the same in the future to a certain extent as in the past and this is precisely the problem for the future generation. Therefore, we have no option but to depend on the available sources of water and have the responsibility to save and conserve them without fail.

Water Crisis

Widespread aquifer depletion in the ground water areas, water logging in the canal regions and soil

Table 1

Water Requirement for Different Uses

Sl. No	Uses	Water Requirement (Quantity Km^3)			
		1997-98	2010	2025	2050
	(a) Surface Water				
1.	Irrigation	318	339	366	463
2.	Domestic	17	24	36	65
3.	Industries	21	26	47	57
4.	Power	7	15	26	56
5.	Inland Navigation	-	7	10	15
6.	Environment (Ecology)	-	5	100	-
7.	Evaporation losses	36	42	50	76
	Total	**399**	**458**	**635**	**732**
	(b) Ground Water				
1.	Irrigation206	218	245	344	
2.	Domestic and Municipal	13	19	26	46
3.	Inustries	9	11	20	24
4.	Power	2	4	7	14
	Total	**230**	**252**	**298**	**428**
	Grand Total (a+b)	**629**	**710**	**933**	**1160**

salinisation due to sea water ingress in the coastal zones are undeniable symptoms of an imminent 'Water Crisis' in India. The water crisis has both quantitative and qualitative dimensions. We have already glaring instances of serious water sharing conflicts not only at the macro level i.e., between States but also at the micro level i.e., between farmers or other water users. One had not heard of river water disputes till about the middle of the 20th century. Disputes and riots over river water are of a recent origin. And quite possibly, rivers and the distribution of their waters will become one of the most politicised ecological issues in the near future.

Water is scarce even for drinking purpose, not to talk about its availability for agriculture, industries etc. India already faces an alarming situation. Its fragile water resources are stressed and depleting while various sectorial demands are growing rapidly even as about 200 million people in the country do not have access to safe drinking water and nearly 1.5 million children under five die each year due to water-borne diseases. The drought conditions in several parts of the country like Gujarat, Rajasthan, Orissa and Andhra Pradesh are unfortunately on the rise and disputes over sharing of the water resources are becoming grimmer. India will face a severe water crisis if the available fresh water resources are not managed properly. Presently, six of India's 20 major river basins already fall into water scarce category. By the year 2025, five more river basins are feared to be water scarce. Even Brahmaputra, Barak and west flowing rivers will be water deficient in the times to come. According to estimates, by the year 2025, the country will face a severe water shortage leading to serious struggles and it is also feared that within a few decades availability of water in the country will be about 1700 to 2000 cubic metres per person as against the world average of 5000 to 9000 cubic meters per person.

India is heading towards a freshwater crisis mainly due to improper management of water resources and environmental degradation which has led to a lack of access to safe water supply to millions of people. This freshwater crisis is already evident

The world's thirst for water is likely to become one of the most pressing resource issues of the 21st century.

in many parts of India varying in scale and intensity depending mainly on the time of the year. Ground water crisis is not the result of natural factors. It has been caused by human actions. During the past two decades, the water level in several parts of the country has been falling rapidly due to an increase in extraction. One of the reports blamed the State governments for being a catalyst in accelerating the depletion of the water resources by giving farmers free electricity who use it to pump water out of underground aquifers faster than rain that recharges them.

According to estimates, over three billion people of about 65 countries will be affected by the year 2025. India will be one among the water scarce countries. The most tragic part is that water is a finite natural resource and no technology, till date, has successfully contributed to making or producing water for mass consumption. In the context of India, the poverty-stricken regions tend to be in the climatic zones subject to drought and other water problems as they are least able to afford alternative sourcing. The crisis about water resources development and management thus arises because more of the water is not available for use and secondly it is characterised by its highly uneven spatial distribution. Environmentalists like Sunderlal Bahuguna are not wrong in saying that the acute scarcity of water may force the powerful nations to wage a new global war for the control of the depleted sources of water. Such a parallel makes the future picture essentially depressing.

Essential Steps for tackling Water Crisis

The main constraints that are faced in the water sector are inadequate trained personnel, inability to mobilise internal and external resources, inadequate project preparation, uncoordinated development approach, institutional weakness, technological shortcomings, poor quality of water resources itself, water losses through leakage intermittent services, haphazard garbage collection and disposal systems, inadequate drainage of surface run off, non-involvement of community in project planning development, operation and maintenance activities, etc., The following suggestions for solving the water crisis are given below:

- A large share of water to meet new demands must come by saving water from existing uses through comprehensive reform of water policy.

- New strategies for water development and management are urgently needed to avert severe national, regional and local water scarcities that will depress agricultural production, damage the environment and escalate water related health problems.

- Major institutional policy and technological initiatives are required to ensure efficient, socially equitable and environmentally suitable management of water resources.

- In facing the enormous challenge of meeting the requirements of water supply for domestic, irrigation and industrial uses, it is natural to expect that the R&D sector should play an important rule.

- Since a major portion of water resources are used in agriculture, the farmer's co-operation is a must in the process of water management at all levels. An efficient irrigated cropping system alone can sustain India's large and expanding population. During the years of poor monsoon, the farmer can go in for crops demanding less irrigation such as gram, barly and mustard during the rabi system.

- Attention should be paid by researchers and extension personnel in increasing the production per unit area/per unit of water in agriculture.

- Water management programmes should be implemented in a systematic way with integrated coordination of all relevant government departments at State and Central level. There is a need for revision of water legislation/ground water control regulation acts to maintain water table at a reasonable depth for sustainability.

- Clearcut water rights system is indispensable for the sustainability of our agriculture.

- Integrated watershed development actions have to be taken to use rainwater, soil water, ground water and run off water to increase production in rainfed areas.

- A data base should be created among all water boards and corporations for effective transfer of best practices.

- Immediate steps should be taken for drastic reduction of wastage of water in all sectors and protection of water sources from industrial pollution.

- The beneficiaries role should be modified from passive recipients to active participants in water conservation activities. As women know better all the matters related to water, participation even from the selection of the site for water projects to the maintenance is important.

- Above all, a strong political will of government to frame appropriate water policy and equally important indomitable conscience of water users to utilize water judiciously are absolutely necessary for sustainable utilization of water.

❑

Two Billion People are Dying for It

Rajan Nair

More than 90 per cent of the annual runoff in peninsular rivers and over 80 per cent of the annual runoff in the Himalayan rivers occurs between June and September. Many of the small rivers totally dry up during the summer. The depletion of forests has further aggravated the problem.

WATER IS a major component of the environment and the human beings occupy the centre-stage in it. Water is needed for agricultural production, for drinking and other purposes by the people and animals and for municipal and commercial use. Water is an essential input for all industries. Energy production and navigation are dependent on water. This all-pervasive need for water has brought into focus the fragility of environment associated with the fulfilment of these requirements and the need to guard against it.

The status of water in the environment is unique. Unevenly distributed, water is a scarce economic resource. The challenge in water resource development is to balance the needs for development with environmental health for sustainable growth.

Availability

It is hard to believe that the earth on which water seems to be the dominant element should ever face its shortage. But the reality is that 97.3 per cent of its reserve on earth is saline water. Only 2.7 per cent is fresh water. Of that nearly 70 per cent is frozen in the ice caps of Antarctica and Greenland and most of the balance is present either as soil moisture or lies in deep underground aquifers as ground water not accessible to human use. As a result, less than 1 per cent of all the water on earth is accessible for direct human use. This water is found in lakes, rivers, reservoirs and those underground and sources that are shallow enough to be tapped at an affordable cost. Only this tiny fraction of the planet's water is renewed by nature's water cycle.

Distribution

Water resources are very unevenly distributed. At one extreme are the deserts with almost no rainfall. On the other hand the humid regions can receive several metres of rainfall in a year. Most of the flow is in a limited number of rivers. Even in parts of the world with large river flows, there can be a great variation in the availability of water. Most of the annual water flow may come as floods following heavy rains or the melting of snow. Unless stored in reservoirs, the water flows to the sea, sometimes causing even seasonal flooding. Later in the year, the same areas may experience drought.

Water requirement for agricultural production and domestic needs like drinking, cooking, sanitation and municipal services on the one hand and for trade, commerce and industries on the other constitutes the bulk of its total consumption. The requirement is closely related to population, demand for food, production of non-food agricultural and industrial items, output and for improvement in the quality of life and for preserving ecology of the nation. Fresh water is a renewable but a finite and vulnerable resource, essential to sustain life, development and the environment.

Water scarcity is caused by population growth, environmental change and degradation and the un-equal distribution of water resources. Water is getting scarce due to rising population, rapid urbanisation and growing industrial demands.

The world's population in 2003 is estimated at 6.45 billion. Nearly 170 million people are being added to it annually and will increase upto 10 billion by the year 2025. The high growth ratio of population is posing a serious threat to the future prospects of human well-being. If the population continues to grow at this rate, it will perhaps be too large

Rajan Nair is Chief Engineer Monitoring (South), Central Water Commission, Bangalore.

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to be supported by the limited resources of the earth in a few decades.

Water scarcities are likely to occur sooner in regions where its per capita availability is already very low following the high population growth. The demand gets more and more serious if its per capita demand keeps growing up following changes in its consumption pattern. People dump wastes, untreated sewage and chemical discharges which pollute the sources of water like the rivers, lakes, ponds and the underground reserves. The ever-increasing demand for water has resulted in two billion people craving for this fundamental resources worldwide.

Indian Scenario

India has 2.45 per cent of the world's land resources and 4 per cent of its fresh water resources. Twelve per cent areas of the country receive an average rainfall of less than 610 million metres (mm) annually. Only 8 per cent areas receive more than 2500 mm of water. Cherrapunji in the eastern part of Meghalaya receives 11,000 mm of rainfall while western Rajasthan receives only 100 mm. The variability of the rainfall from month to month and year to year for the same place is very high. Even low rainfall areas, especially in some parts of Gujarat and Rajasthan, are prone to occasional high intensity storms.

More than 90 per cent of the annual runoff in peninsular rivers and over 80 per cent of the annual runoff in the Himalayan rivers occurs between June and September. Many of the small rivers totally dry up during the summer. The depletion of forests has further aggravated the problem.

Rajasthan has only 1 per cent of the country's water resources. Even those who live in areas of high rainfall often face drought. For instance, Cherrapunji in Meghalaya receives the highest level of mean rainfall recorded in the world and yet, because of heavy seasonal rainfall and the nature of topography, much of the runoff cannot be retained. The region now suffers from excessive flooding for 3 or 4 months and frequent droughts during the rest of the year.

India is the second largest country after China in terms of population. The Indians numbered about 108.8 crore in 2003, accounting for nearly 17 per cent of the world's population. India has roughly about 4 per cent of the world's fresh water resources to support 17 per cent of the total world population. It is evident that a large number of Indians are facing acute water shortage. The number of those with no access to safe water supply and sanitation is unacceptably high.

Solution

Of late, measures have been initiated for conservation and management of the available water resources in the country such as the move to interlink the rivers. The Centre has set up a task force for this. Due to the uneven distribution of rainfall, some parts of the country are affected by the fury of floods while some others reel under severe drought. In such a scenario, inter-basin transfer of water from the surplus Himalayan rivers to the deficient peninsular rivers through interlinking has been thought of as a viable solution. The Periyar Project, Parambikulam Aliyar Project, Kurnool-Cuddaph canal and inter sub-basin transfer (Beas to Sutlej at Bhakra) are some of the notable examples of inter-basin transfers.

At a micro level, rainwater harvesting is also being taken up. Some State governments have already amended building by-laws to make rain harvesting mandatory for new buildings. To some extent wastewater is also being recycled for use.

The Centre is actively involved in and preventing further pollution of the rivers as can be seen from the activities of the National River Conservation Authority which is implementing the Action Plans for de-polluting the Ganga, the Yamuna and the Gomti rivers. The Lake Conservation Plan at the national level aims at conserving various urban water bodies.

The main component of the Ganga Action Plan is the diversion of sewage flowing into the river to other locations for treatment and its conversion into a source of energy. As against a target of creating infrastructure capable of intercepting, diverting and treating 873 million litres per day (mld) of domestic waste, infrastructure capable of treating 835 mld of municipal sewage has been created. Out of the 261 schemes sanctioned, 258 have been completed.

The Ganga Action Plan Phase II has been merged with the National River Conservation Plan (NRCP). The expanded NRCP now covers 141 towns located along 22 inter-state rivers in 14 States. The total cost of the schemes is Rs. 2013 crore. Under this Action Plan pollution abatement works are being taken up in 29 towns in Uttar Pradesh, Bihar and West Bengal. About 618 mld of sewage is targeted to be intercepted, diverted and treated.

Under the Yamuna Action Plan pollution abatement works are being taken up in 21 towns in Haryana, Uttar Pradesh and Delhi at a cost of Rs. 496 crore. Similarly, under the Gomati Action Plan, 269 mld of sewage is proposed to be treated.

The people by and large have also to come forward in water conservation and supplement the governmental efforts. They have to develop a proper civic sense to do nothing that would spoil the element so vital for our survival. (PIB Features). ❑

Use Emotional Intelligence to Climb

S.S. Khanka

Emotional intelligence can be defined as the ability of a person to command respect by building relationships or the ability to get along with people or situations.

A SIMPLE but vital question has been haunting us for long: "What ticks success in life?" For quite some time now, almost everyone believed in the age-old paradigm that one's intelligence (IQ) is solely responsible for his or her success on the job, and for that matter, in life. However, there have been instances that we often come across that only intelligence, i.e., academic excellence does not necessarily contribute to success in career or even social life. There are people, who have high IQ but have not done so well. On the contrary, people with modest IQ have performed well. Then, this poses another question: What factors are at play leading to such differential performances? Psychologists and behavioural scientists have tried to answer this question. According to their findings, the difference quite often lies in their abilities, what they call 'emotional intelligence' (EQ). In a sense, this is what Schwartz (1997) views: "What actually matters is not how much intellect or mind one had, but how it is used what one had."

What is E.Q.?

Before we explain the meaning of the word EQ, let us first define the terms emotion and intelligence.

In its most literal sense, the Oxford English Dictionary defines emotions as "any agitation or disturbance of mind, feeling, passion, any vehement or excited mental state." Dr. Daniel Goleman a pioneer researcher in the field of emotional intelligence, takes emotions to refer to "a feeling and its distinctive thoughts, psychological and biological states and range of propensities to act." In simple words, emotion means a strong mental and instinctive feeling such as love or fear. Intelligence means the quickness of a person's thinking, reasoning, understanding faculty, etc.

Emotional intelligence can be defined as the ability of a person to command respect by building relationships or the ability to get along with people or situations.



Academic excellence not a must for success.

Mr S.S. Khanka is Professor & Dean, School of Management Sciences, Tezpur University, Tezpur.

Some view emotional intelligence as a position and proactive attitude towards all aspect of life.

Evolution of the Concept of EQ

EQ as a concept was evolved during the late '70s-early '80s when the validity of IQ as the only measure of a person's intelligence was formally questioned. The popularly assumed correlation between IQ and one's success was also found somewhat doubtful. As per the literature available on the subject, it was Peter Salovey of Yale University an John Mayer of New Hampshire University who used the term 'emotional intelligence' for the first time to describe a set of personal and social abilities of an individual.

In recent times, it was Dr. Daniel Goleman who took much initiative and made notable contribution to make this concept popular. It was mainly due to the concerted efforts made by Dr. Daniel Goleman, the concept of EQ earned and enjoyed goodwill in such a short period of time all over the world. Subsequently, the two renowned psychologists, namely, Robert Cooper and Ayman Sawaf made additions to this concept. In their famous book 'Executive EQ', they elaborated the concept at length with examples. They have identified four essential ingredients as corner stones for emotional intelligence. These are:

1. Emotional Literacy
2. Emotional Fitness
3. Emotional Depth
4. Emotional Alchemy

A brief description of these follows:

Emotional Literacy : Just as literacy enables people to be aware of what is happening around them, emotional literacy helps people become more aware of their as well as other people's emotions. By managing emotions in others, problem-solving becomes easier and better. Emotional Literacy also helps build self confidence through emotional honesty, energy, emotional feedback, intuition, responsibility and connection".

Emotional Fitness : What role physical fitness plays in doing physical/mental activities with confidence and resilience, so does emotional fitness in the case of feelings. Emotional fitness strengthens one's resilience and believability for listening and managing conflict.

Emotional Domain : Emotional Domain means realm of control by emotions. It explores the ways to align one's life and work with his/her unique potential and purpose.

Emotional Alchemy : Through emotional alchemy, one extends one's creative instincts and capability to flow with problems and pressures. It also enables one to compete for the future by building one's capacity to sense more readily and assess the hidden solutions and untapped potential and possibilities.

Emotional Intelligence in Management

EQ is found more useful and effective in management which involves decision-making. This is so because EQ enables managers to have skills motivating oneself, managing relationships and being able to get along well with subordinates and teammates.

Research studies have also established that emotional intelligence plays a prominent role in group effectiveness of an individual. It is often opined that one may get a good job with high IQ, but one must also have a high EQ to go up the ladder. EQ helps a manager manage himself/herself and others in a meaningful manner so that the goals-both individual and organizational-are achieved.

EQ being an inner element affects human behaviour. Acknowledging this, organizations lay much emphasis on EQ element in their selection process and EQ forms an integral part of selection criteria more especially being used for the induction of managers and officers in organizations. EQ is found useful for individual behaviour more significantly under stressful and trying conditions. Below we are listing some of the critical areas where EQ may contribute substantially tremendously:

EQ Ingredients	Its Contribution
• Motivating oneself as well as others around one. • Adopting empathy towards others. • Controlling negative thinking. • Building confidence and developing trust. • Managing conflicts. • Building stress immunity. • Controlling anger. • Building and maintaining a cohesive team.	• Multiplies achievements. • Works like magic. • Checks from spoiling. • Returns from investment (you get when you give). • Resolves what causes conflict. • Adjust one to cope with stressors. • Cools thoughts and feelings. • Win cooperation, i.e. a must to perform group activities.

Hydrogel : A New Radiation-Processed Surgical Dressing

Lalit Varshney

Natural skin is the best functional cover to the wound but its use is not practical. So second best dressings have to be used. Among the economical dressings cotton gauze, sofra tulle, potato and banana peels are currently in use.

THE BHABHA Atomic Research Centre, Mumbai has developed a new hydrogel wound dressing technique as a spin off of basic research being pursued in its Chemistry and Isotope Group in the fields of radiation chemistry and radiation technology. It has proved highly effective in healing almost all types of external wounds. Known as Hydrogel Dressings, it is now available in the market under the brand name 'HI-ZEL'. Extensive clinical studies have established its safety and shown that it is not only an excellent first aid for burns but also cures other wounds which are difficult to heal like diabetic foot ulcers, leprosy ulcers and animal bites. Its applications are expected to be useful in more and more diseases.

Hydrogel dressings are gaining widespread acceptance abroad. But their local use was restricted due to very high cost of imported dressings. Radiation processing technology developed at BARC produces high quality hydrogel dressings at a fraction of the market cost of imported material.

The use of hydrogel dressings has several applications in the medical field. Drug delivery devices, contact lenses, wound dressing, artificial cartilage's or membranes, vascular prosthesis and gel-coated catheters are some of the examples. Generally, hydrogels contain more than 50 per cent of water entrapped in a three dimensional network structure of a polymer. The high water content makes them highly biocompatible.

Natural skin is the best functional cover to the wound but its use is not practical. So second best dressings have to be used. Among the economical dressings cotton gauze, sofra tulle, potato and banana peels are currently in use. The list of expensive dressings consists of collagen, amniotic membranes, elastogel, omniderm and burn free. Depending on wound conditions, medicated as well as non-medicated dressings are used.

A dressing should ideally maintain moist environment at the wound-dressing interface. It should be possible to use on infected wounds, below or non-adherent and mechanically strong, transparent and flexible, provide mechanical protection and cushioning effect, should not require frequent changing, safe to use, good absorption characteristics, impermeable to micro-organism, sterile, available in required size possibility of delivering drugs without removing dressing and cost-effective.

Normally, three to four different types of dressings would be needed to meet all these criteria. The new dressing developed by BARC meets almost all requirements and hence is an ideal wound dressing. The unique advantages of radiation processing technology is that it

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packs most of the enlisted characteristics in a single-stage manufacturing process. The technology is environment-friendly as it leaves no residue or pollutant in the environment.

Technique

In the present process, one of the most biocompatible polymers, polyvinyl alcohol (PVA) and a mixture of naturally occurring polysaccharides like agar and carrageenan are mixed together. The hot, aqueous solution of this mixture is poured in disposable plastic trays and sealed in polythene bags. These bags or pouches are then sent to ISOMED for radiation sterilization resulting in ready-to-use hydrogel dressing. The process is such that the dressing formation and sterilization is achieved simultaneously due to the unique properties of gamma radiation processing. This results in economic manufacturing and a high quality of the hydrogel dressing.

The process does not involve the use of initiators, plasticizers, antimicrobials and mechanical support. It thus gives us a pure hydrogel dressing free from chemical contaminants. The dressing contains about 90 per cent water. Yet it has the capacity to absorb further water, almost equal to its weight. On its application on the wound, it could reduce the skin temperature by 8° to 10° C and maintain this differential for a very long time. This property is very useful in reducing the depth of burning and restricting the burn damage to the body surface. Hydrogel dressings reduce pain by cooling and covering the open nerve endings and thus are very useful in plastic surgery. The dressing is elastic in nature and has high compression strength. It provides a good cushioning effect and thus could be used in treating bedsores. Dry wounds can be best treated with hydrogels. Hydrogel dressings hydrate the desiccated wounds which is essential for healing. Absorption and hydration properties of the dressing softens the wounds containing pus and sucks out the slough, making the wound clean which helps in early healing.

On applying to the wound, iodine in the gel is slowly released into it. Iodine has a tendency of reacting much faster with bacterial proteins as compared to human proteins and thus inactivate the microorganism.

Utility

Most hydrogel dressings available in the international market are not suitable for use on infected wounds. The dressing produced by BARC on the other hand, can also be converted into Iodine-hydrogel (antimicrobial-hydrogel) by the user himself to get the best properties of germicidal iodine and that of hydrogel. This antimicrobial hydrogel could be prepared by simply dipping the dressing for a few seconds in an Iodine solution. Available at a chemist's shop, the tincture of iodine or lugol solution (diluted 1 part in 4 parts of distilled water) could be used as iodine source. The transparent gel changes into blue-black coloured gel.

On applying to the wound, iodine in the gel is slowly released into it. Iodine has a tendency of reacting much faster with bacterial proteins as compared to human proteins and thus inactivate the microorganism. A complete consumption of iodine is indicated by the gel reverting back to its original colour. In the same way, other water-soluble drugs can first be absorbed and applied across the wound. This allows ample freedom to a practitioner to try different medications for treatment.

Although self-adhesive, it is preferable to have a secondary bandage as well to secure the hydrogel dressing. The size of the dressing should be larger than the wound perimeter. If dried on the wound, hydrogel dressing should be rehydrated by first wetting the dressing, using boiled, cooled or distilled water for 10 to 15 minutes to ensure a painless removal of the dressing. For exuding wounds, three to four parallel cuts on the gel could be made using surgical knife before application. The excess exudate could then be absorbed into the secondary bandage such as absorbing cotton.

BARC hydrogel dressings have so far been used for treating burns, leprosy ulcers, animal bites, diabetic foot ulcers, cancer-related external wounds, herpes, fresh scars, bullet injuries, boils, pimples, sun burns and abrasion with excellent results.

Recently, the technology has been transferred to a Vadodara-based pharmaceutical firm for commercial production of the dressing. Its dressing is now available in the market under brand name HI-ZEL. (PIB Features) ❑

The Ethnic People of Sikkim

C.K. Dorjee

Like the rainbow with its beautiful multicoloured hues, the people in this small Himalayan State have set an example as to how different ethnic groups can coexist and mingle with each other in total peace and tranquility.

TUCKED IN the lap of the Himalayas, Sikkim is one of the beautiful States of India. Much of the 7300 sq. km of Sikkim is interlaced with jungle-clad ridges and deep ravines created by the mountain rivers, emerald valleys and dense forests.

The waterfalls, rivulets, lakes and the abundance of orchids and rhododendrons make this Himalayan State, what the original Lepcha inhabitants call it Myel Lyang-"the land of hidden paradise". To the Bhutias, it is Beyul Demojong-the hidden valley of rice and the Limbus call it Sukhim, which means 'the new house'. The landscape of this tiny State is dotted by the world's highest mountain peaks. Dominating them all is Kangchendzonga, the third highest mountain on earth.

Strange as it may sound, Mt. Kangchendzonga has played a unifying role among the three ethnic communities of Sikkim. One strong evidence of this is the absorption of Mt. Kangchendzonga in Buddhist ceremonies. This mountain has been worshipped by the Lepchas from very early times. Even today, it is equally revered by the Bhutias and Nepalese. Pang Lhabsol is an annual festival celebrated to commemorate the consecration of Mt. Kanchendzonga as the guardian deity of Sikkim.

Sikkim was ruled by the Namgyal dynasty till 1975. In April 1975, the erstwhile Himalayan kingdom became the 22nd State of India by the thirty-eighth Amendment Act of the Constitution. Sikkim merged with the Indian Union bringing to end more than 300 years of monarchy. Chogyal Palden Thondup Namgyal was the last ruler of the Namgyal dynastry.

The population of Sikkim is 5 lakh 40 thousand, mainly consisting of the Nepalese, The Lepchas and the Bhutias. Of these, the Nepalese are the largest in number followed by the Bhutia and Lepcha communities. A small number of people from other parts of the country have also settled in Sikkim. Despite such an ethnic diversity, a remarkable feature of Sikkimese society is the tolerance and acceptance of different cultures and their harmonious coexistence.

The Lepchas

The Lepchas are the earliest settlers of Sikkim. They call themselves- "Rongkup", meaning the children of Rong. Anthropologists and historians are still debating whether the Lepchas belong to one of the Naga tribes or are associated with the Jimdars and Mech in their estward migration from Nepal. Some scholars have found a similarity between the Lepchas and the tribes in Arunchal Pradesh. Yet some others contend that they are related to the Khasis in Meghalaya. The Lepchas themselves are convinced that their home has always been the legendary kingdom of Mayel in the vicinity of Mt. Kangchendzonga. In fact, most Lepcha clans claim to have mythical connections with partiular mountain peaks which they worship as their deity. Thus the mountains Simvo, Siniolchu and Kanchenjua find prominence in the Lepcha culture.

The Lepchas have their own language and script. The Lepcha language is one of the eleven official languages recognized by the Sikkim government and is taught up to the high school level. The Lepcha dances, songs and folk tales reflect a wonderful synthesis between men and nature.

The Bhutias

The Bhutias are mainly descendants of the early settlers in Sikkim from Tibet and Bhutan who accompanied the ancestors of the first Chogyal, Phuntsok Namgyal. The members of the former Namgyal dynasty belong to this ethnic group. The early Bhutias had three distinctive social classes-thearistocracy, the quasi aristocracy-those belonging to the leading Bhutia families who were land holders and were called Kazis-and the commoners. When the monarchy was abolished, these

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Social distinctions also lost their relevance.

Tibetan Buddhism played a special role in shaping the Bhutia society. The monasteries and the monks are the pivot around whom their daily lives revolve. Every household ritual, marriage, birth, death ceremonies and agricultural rites are conducted by the monks from the Gompas which are prominent in all the Bhutia and Lepcha villages. The faith generated by Buddhism is total and the devotion of the laity of the monastery is absolute.

Like the Lepchas and the Nepalese, the Bhutias are fond of their "chang", the local brew. This preparation from fermented millet is served in bamboo containers. It has become an indispensable part of every Sikkimese ceremony, whether religious or secular.

The Bhutias are famous for their weaving, wood carving and the Thanka painting. Hand-woven rugs, carpets and blankets and the exquisite Thankas displayed in the State Handicraft Centre at Gangtok are proof of this skill.

The important festivals observed by the Bhutia community include Losoong, Pang Lhabsol, Kagyat dance and Saga Dawa.

The Nepalese

The Nepalese community of Sikkim is itself a conglomeration of diverse ethnic groups, some speaking their own vernacular. Nepali is the lingua france of all the Sikkimese people. These ethnic groups can be roughly divided between the Magars, Murmis, Tamangs, Gurungs, Rais, Limbus, Damis, Kamis, Bahuns and the Chhetris.

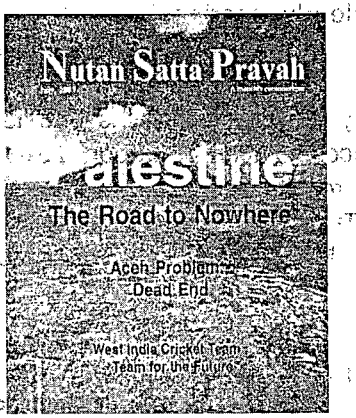
Most Nepalese are Hindus or Buddhists. Some of them have also adopted Christianity. The Hindu Nepali populace of Sikkim follows the ethos which governs its counterparts elsewhere in the country.

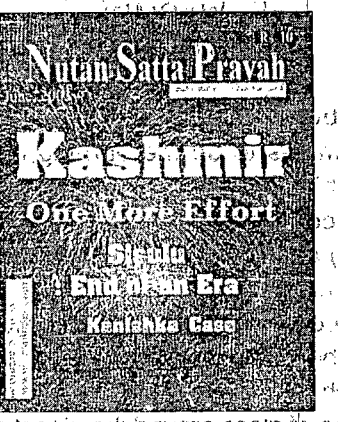
The Rais, Limbus, Magars, Murmis, Tamangs and Gurungs have somewhat similar physical characteristics in as much as they are all Mongoloid. But each group has its own distinctive culture. These ethnic groups have been known for their bravery and a large number of them have served as soldiers in the British and Indian armies. The major festivals of the Hindu Nepalese in Sikkim are Dussehra, Teohar, Makar Sankranti and Baisakhi.

Sikkim is one of the most peaceful States in the country and ethnic groups with their different languages, dialects, cultural backgrounds live in total harmony, symbolizing the essence of unity in diversity. Like the rainbow with its beautiful multicoloured shades, the people in this small Himalayan State have set an example as to how different ethnic groups can coexist and mingle with each other in total peace and tranquility.

(PIB Features) ❑







VIEWS are as Important as NEWS

Nutan Satta Pravah

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Global Warming, A Grave Concern Under Indian Agricultural Scenario

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Manisha Basu
S. C. Mahapatra

The consequences of global warming are horrendous and there is need for action now. There should be a massive movement towards environmental friendly strategies that minimize production of carbon dioxide and methane and maximize fixation or utilization of carbon dioxide.

THE WARMING of the earth's atmosphere, due to accumulation principally of carbon dioxide and methane, promises to be the burning issue of this century. Fossil fuel (such as coal, petroleum and natural gas) based industrial development is the major cause of the environmental imbalance by almost doubling the carbon dioxide level. Such large layers of gas act like a globe of glass around the planet and reflect back the radiated heat from the sun, raising the earth's temperature to debilitating levels. This has a serious setback in the world agriculture in general and Indian agriculture in particular.

The Greenhouse Gases

The greenhouse effect or increasing world temperature is clearly ascribable to the major industrial countries as some 50% of the increased retention of energy by the atmosphere is due to the accumulation of carbon dioxide as a result of combustion of fossil fuel (Table 1 and 2).

Methane production appear to be a major issue although it only presently contributes 18% of the overall warming. It is accumulating at a fast rate and is apparently responsible for some of the depletion of the protective ozone layer. Methane arises largely from natural anaerobic ecosystems,

Table 1

Relative Contribution of Greenhouse Gases to Atmospheric Warming (Source : World Resources Institute 1989)

Source of Warming	Relative Contribution (%)
Carbon dioxide	49
Methane	18
CFC's	14
Nitrous oxide	06
Others	13

Table 2

Relative Contribution by Continent to the Emissions of Carbon Dioxide (Source: World Resources Institute 1989)

Continent	Carbon Dioxide (10^9 tonnes)
North America	1.4
Eastern Europe	1.4
Western Europe	0.8
Asia	0.6
Pacific	0.4
Africa + Latin America	0.8

M/s Avishek Datta and Manisha Basu are Research Scholars, Rural Development Centre, IIT, Kharagpur and Dr. S. C. Mahapatra is Associate Professor, Rural Development Centre, IIT, Kharagpur.

ce paddies and ruminant animals (Fig. 1).

The rates of accumulation of methane and carbon dioxide in the atmosphere have changed dramatically in the last 10 years. Prior to this, the rise in world temperatures and composition of the atmosphere had changed little but is now in an exponential growth period (Fig. 2). Undoubtedly, carbon dioxide and methane concentrations must be stabilized in the very near future or the future of the earth is threatened.

Effects of Global Warming

The developing (non-industrial) countries must insist on a decreased utilization of fossil fuels by the industrial countries. It will be essential that they also develop industrial and agricultural practices that minimize fossil fuel use and methane generation. Burning of fossil fuels is the predominant factor but deforestation and burning of forests and pastures have enormous effects also.

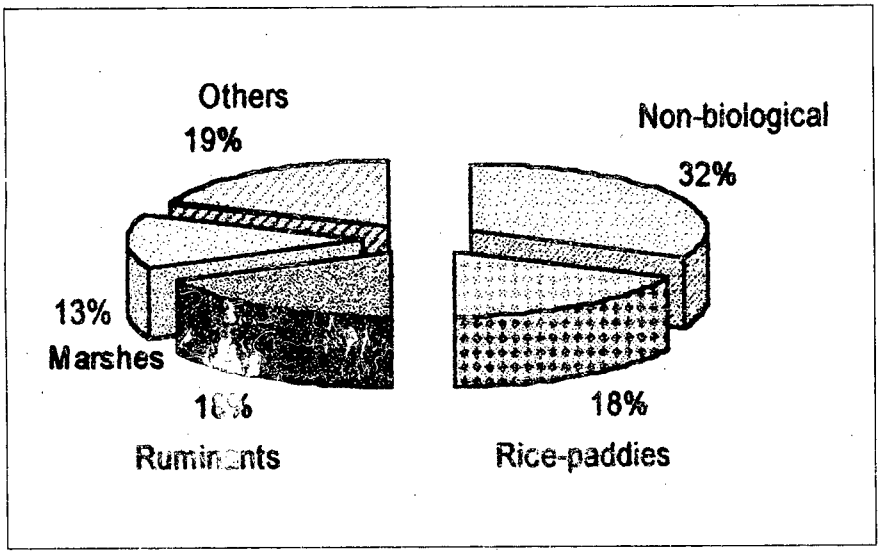


Fig. 1: Relative contribution by sources to global production of methane (Source: Bolle *et al*, 1986)

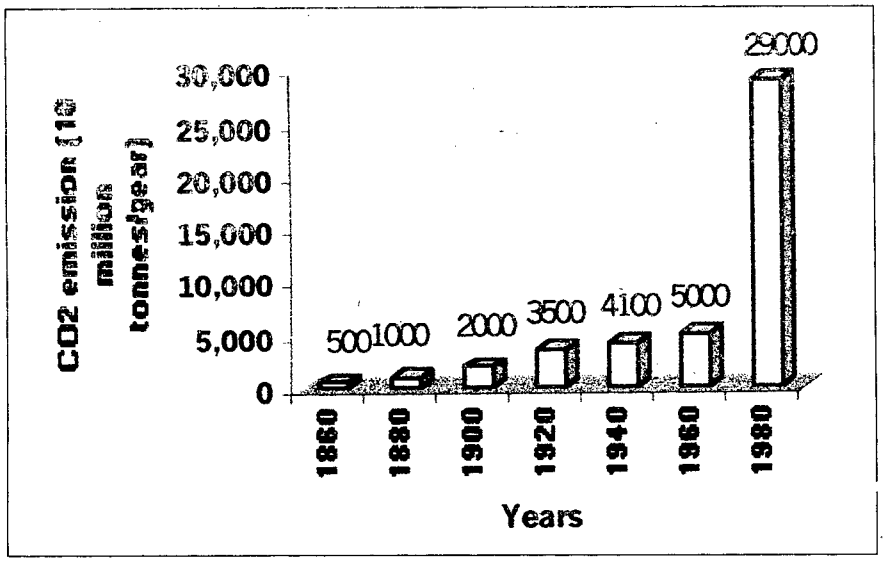


Fig. 2: Trends in emission of carbon dioxide (Source: World Resources Institute)

Effects of Global Warming include:

- Melting of the ice cap with increased sea levels. More than 38 Indian districts face the danger of being partially submerged by rising sea levels, with Mumbai and Goa likely to be the worst affected. Rapid melting of glaciers will cause floods in widespread damage to crops and livestock. Internationally too, cities like Miami, New York and Venice face serious sea erosion problems.

- Aberrant weather changes, resulting in droughts of floods and eventually massive erosion. In much of the world, drought-prone zones are likely to expand drastically. In the subcontinent, Pakistan and India will be severely affected in the near future. Nearly two-thirds of the *kharif* crop-paddy, coarse grains like bajra, oilseeds like soybean, maize and pulses is at risk due to little or no rainfall. The drop in output could be upwards of 10 million tonnes and nearly 150 million casual agricultural laborers face starvation.

- Decreased crop yields and decreased arable land availability with subsequent starvation and malnutrition. Current climate models predict a global warming of about 1.4 to 5.8 degree centigrade over the present century. This was likely to have an impact on rice and wheat yields. Global warming will have an impact on Indian agriculture resulting in upto 30 per cent drop in crop

3-4 Questions on Latest Development

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WHAT IS LATEST IN PUBLIC ADMINISTRATION

★ ***Corporate Governance***

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✓ **Cadbury Report (1992)** Green bury Report (1995) & Hampel Report (1998) [U.K.]

✓ **King Report** - South Africa (1998); Vienot Report (France) (1998)

✓ **DEY Report** - CANADA (1997); **K.M. Birla Report** - India (1999)

★ ***Corporate Social Responsibility (CSR)***

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★ ***Good Governance***

Origin (Idea's of "Aedria-lefich", Father of concept)-
Growth (WB Report-1998, W.B. Rept. 1992, UNDP-1995)

★ ***Civil Society***

Traditional View (Contract Theorist-Hobbes, Hegel, Lock)
Recent View (World Without Wall (2003)
Typology of Civil Society Groups - Supporters, Rejectionists Reformists, Alternatives
(Anheir, Glasius and kaldov-2001), Global Civil Society Year Book

★ ***Clinical Governance : Making it Happen*** *(Lugon 2000)*

Clinical Governance in Indian (Karnataka Model)

★ ***Various Forms of NPM Across The Globe***

La-Releve (Canadian)
Next Steps (U.K.)
Contracualization - (NZ & Australia)
Strategic Management (Irish)

★ ***Market & Network Governance*** *(Rhodes 1997)*

Hollowing out the State (4 Ms Options)
Flawed State (Musgrave-1998)
Broker State (Jackson-2001)

★ ***Third Party Governance*** *(Salamon-2002)*

Global Governance (Friedmann 2000)
Global Open Society (Soros' Manifesto)
e-governance & concept of first gov.gov'

★ ***Organizational Structure, Design Technology and Information Technology***

★ **Product & Hybrid Structures.**
★ **Matrix Designs & Market Structure.**
★ **Global Matrix Structure** (Deft-2001)
★ **Craft Technology & Engineering Tech.** (Perrow-1988)
★ **Vertical Information System & e-co-ordination** (2002)

★ ***New Models of Decision Making***

– **Intended Retionality Model** (Jones-1999)
– **Logical Incrementatism** (Quinn-1990)
– **Garbage can Model** (March & Olsen-1991)
– **Portfolio Model** (Bryson-1995)

★ ***New Budgeting Aproach***

– **Mission budgeting** (C.Hood-1995)
– **New Public Financial Management** (NPFM) (Olson-1998)

★ ***Latest Development in C.P.A.***

(U.S.A.)

– **"Human Capital Crisis" in the Federal Govt.** (Clinton/Gore Reform)
– Internal Revenue Reform and Restructuring Act of 1998 (RRA98)
– **Disempower Career Federal Civil Servants.**
(Freedom to manage legislation (Bush-2001)
– Recommendation of First **Volcker Comm.** on Pub. Service (1990)
– Agenda for second Volcker Commission (2002)
– **The Government Performance and Results Act** (GPRA) 1998.
– **President's management Agendas** (Bush - 2002)
– Agency score cards/Traffic light grading system (2003)

(JAPAN)

– Administrative Reform Promotion Comm. (Gyokakushin) Dec. 2000
– Promotion of Decentre Comm. (Bunken Suishin [Inkai] Oct. 1997)
– **Zero M-movement** (Muri, Muda, Mura) Public Service 1994.
– **Total Quality Management** (1997) in Public Service
– **Zero and Minus Ceiligns Act** (1996)
– **Various Concepts Relating to Japanese Bureaucracy**
Ringises-Decision-Making, Gyosei-Shido-Administrative Guidance
Amakudari-Desent from heaven, **Noblese-oblige.**

(U.K.)

– **The office of Public Service reform act** (2001)
– **Forward Strategy Unit;** Performance and Innovation Unit and Social Exclusion Unit Act (1998).
– Public Service Leaders Scheme (2000).
– **Wicks Committee** (2001) on Civil Service Act.
– **Single Regeneration Budget** (SRB new deal for communities 2000)

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production by 2050. Wheat crops are sensitive to an increase in maximum temperature. 15% for wheat and rice and 30% for soybean will hit production.

- The rising sea is expected to increase salinity all across India's coastline causing a Kutch-like barrenness.
- Warmer and wetter conditions will augment the level of infectious diseases.
- One-tenth of the world's known species of high altitude plants and animals that are found in the Himalayas will be under serious threat.

Remedial Measures

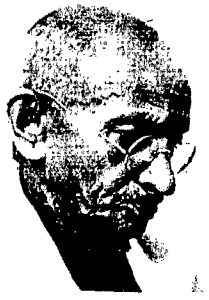
Some of the measures that need to be implemented as quickly as possible include:

- Emphasis must be given to crops that are most efficient in fixing carbon dioxide into biomass (e.g.: especially perennial tropical crops such as sugarcane and trees).
- High cost systems of food production and other high fossil fuel dependent activities in industrial countries should be discouraged (e.g.: by eliminating subsidies and applying an environmental tax), since the systems used make heavy demands on fossil fuel and are often destructive of the environment.
- Active encouragement should be given to food production in developing countries in the tropics where there are adequate human and environmental resources, and where the production systems are much less dependent on inputs of fossil fuel.
- In the tropical countries, wetland rice may have to be discouraged in favour of dryland cereal production for human consumption. Cereal growing for animal consumption in tropical countries should be actively discouraged, and emphasis given to sugarcane and forage trees as the basis of intensive animal production.
- Wherever possible, grazing systems should be gradually replaced by confinement systems and other uses for the land stimulated—such as recreational (game parks), the planting of existing grazing lands with forests (especially multipurpose trees).
- Crop residues should be used as animal feed or as construction material and should not be burned.
- A massive programme is needed to promote strategic supplementation of ruminant diets in order to optimize rumen function (which leads to reduced methane and carbon dioxide production) and increase the efficiency of growth and milk production. For example, in ruminants fed mainly with straw, the methane generated per unit of meat produced is of the order of 2 kg methane per kg meat; by supplementation with urea, minerals, this be reduced to 0.36 kg methane per kg meat, as a result of increased efficiency of fermentative digestion and faster growth.
- Non-ruminant species (especially pigs, poultry, rabbits) and unconventional animals (e.g.: guinea pigs) should be promoted as meat producers while meat production from ruminants should have a lower priority.
- Low-cost biogas digesters should be put in place in all units where livestock are confined. This is particularly important where lack of household fuel has led to massive deforestation.
- Human organic food waste must be recycled instead of being allowed to ferment in land fills (gives rise to methane) or incinerated (producing carbon dioxide).
- Maximum support should be given to research and development efforts that will enable fossil-derived fuels to be replaced by biomass-derived fuels. Gasification of biomass to produce hydrogen and carbon monoxide would appear to be the most appropriate technology to promote.

The consequences of global warming are horrendous and there is need for action now. There should be a massive movement towards environmental friendly strategies that minimize production of carbon dioxide and methane and maximize fixation or utilization of carbon dioxide. The industrialized countries must take the major responsibilities and action because they are largely to blame. However, the developing and industrializing countries should also consider the problem and give due concern to combat such a global problem. ❑

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Saturn Opposition—A Close Encounter in 30 Years

N. Rathnasree

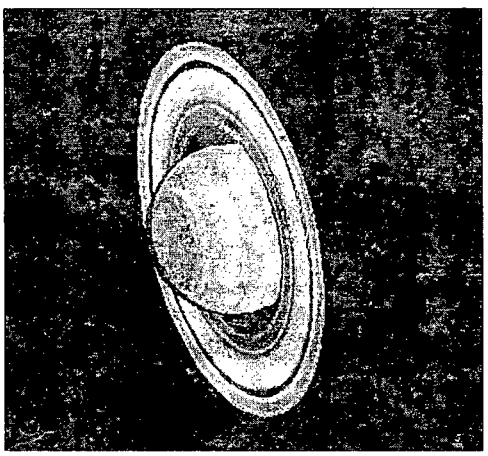
Saturn is the slowest moving of all the planets. Saturn oppositions are annual events-unlike in the case of Mars.

MARS RULED in August. And now, the bright Saturn for the cold winter nights. It was the turn of the Lord of the rings to be at opposition on December 31, 2003- the exact time of opposition, as seen from Delhi, was 2:28 am, on January 01, 2004.

Saturn is at opposition, that is, diametrically opposite to the Sun as seen from Earth, once every 378.1 days or once every one year and two weeks. So, what is so special now? Is this just an annual event? Yes, and No. Yes, Saturn oppositions are annual events-unlike in the case of Mars, which is in opposition, roughly every two years. However, the ellipticity or orbits makes some oppositions closer than the others and the current opposition happens to be the closest. It will be another 30 years—January 2034, when Saturn will be so close again.

Saturn orbits the Sun in about 29.42 years, in an elliptical orbit. At perihelion of this orbit, July 2003, it was the closest to the Sun. Oppositions that fall close to the perihelion are closer to us than the other oppositions and hence the nearness of Saturn to Earth comes this opposition.

All the same, this dance of close and distant oppositions does not make dramatic changes in the brightness and apparent size of Saturn. Dramatic brilliance was expected this time around-more from the fact that the current tilt of the rings of Saturn is favourable, as viewed from Earth.



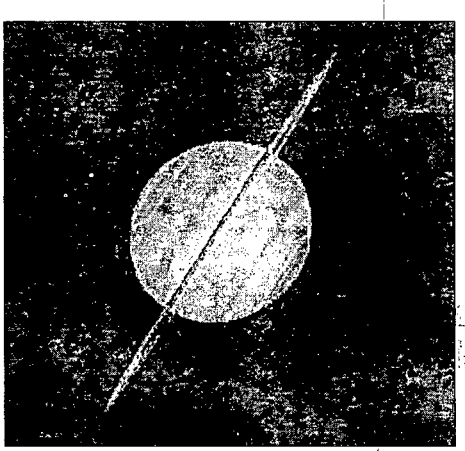
Saturn as seen from Delhi on December 31, 2003

The tilt of the rings of Saturn, as seen from Earth, varies with time-so much so that sometimes the rings are barely visible. Other times, seen at more oblique angles, remarkable structure of the rings would be discernible with even modest equipment. Well, the tilt during this opposition is as oblique as it gets, making it possible for us to have good views of Saturn.

A simulated image of Saturn, as seen from Delhi,at the time of opposition is shown here. The view was good enough that attempt was made to discern the Cassini division, the relatively dark, gap region between the outer and inner ring structures of Saturn with even modest equipment.

One can compare this with the September 1995 opposition of Saturn, when the rings were so edge-on that no structure was visible. A simulated view of the September 95, opposition as would have been seen from Delhi, is also given here.

Saturn is the slowest moving of all the planets and this was noticed by the ancient observers. There is a comparison of Sita musing on Ram to the approach of the slow moving Saturn towards the star Chitra, in Valmiki Ramayana. ❑



Saturn in 1995

Dr N. Rathnasree is Director, Nehru Planetarium, New Delhi.

BOOK REVIEW

REINVENTING THE PUBLIC SECTOR
S.R. Mohnot; Sanskriti, C-9020, Vasant Kunj, New Delhi-110 070. Rs. 675

THIS BOOK is the result of a study commissioned by the Rajiv Gandhi Institute for Contemporary Studies to the Centre for Industrial and Economic Research on the Indian Public sector. Public sector, once considered the commanding heights of our economy, has in recent years drawn a lot of flak for its inefficiency, low productivity and the huge losses that it is incurring to the exchequer. Public sector reform was one of the major components of the IMF-World Bank initiated structural adjustment programme in 1991. It began with the New Industrial Policy 1991, which delicensed a large number of sectors, prescribed restructuring/ closure of sick units and grant of greater autonomy to the PSU management.

In the absence of a political consensus on restructuring of the PSUs, the policy of privatization and disinvestment of public sector enterprises have in the past 12 years remained a learning process with no well-articulated policy. In the debate on the public sector reform the purpose of restructuring i.e. to grant greater professionalism and autonomy through public participation was lost. Instead the emphasis has been a shift from one extreme of state capitalism to the other extreme of private sector capitalism. The assumption has been that private enterprise is resource efficient and public enterprise wasteful. The present study tries to disprove this myth. They have quoted failures of successfully managed private enterprises like Enron, Xerox, Daewoo etc to prove their point. The age-old dichotomy of public sector and private sector is now obsolete and anachronic.

The purpose of this book has been to highlight on the newly emerging areas of professionalism with corporate governance which may be non-existent even in the large family-owned successful Indian corporates. While not being wholly against privatization or disinvestment per se they question the programme's priorities and modalities. In recent years the government is into outright/ strategic sale of profitable public sector enteprises. Though the government claims to be out of PSU functioning, on the other hand, with privatization the government is now more actively involved in the management decision of the enterprises where it holds only a minority stake. For instance, the Ministry of Telecommunications questioning the decision of the Tatas to invest Rs. 1200 crore in one of their subsidiaries after acquiring a stake in the VSNL.

This study has come up with an alternative to ouright privatization. They call it the Professional Enterprise Model or PrEM. Under the PrEM, government equity holdings are to be transferred to a Public Investment Fund (PIF) against issue of long-term interest bearing bonds. The government will be guaranteed regular income streams on the revenue and capital account by holding these bonds. The government and its agencies will collectively not hold more than 26 per cent stake in any unit. The enterprises so acquired by the PIF are to be professionally managed on the principles of corporate governance. In short, the aim of the model is to convert the public sector into a reformed private corporate sector. There will be no question of under pricing as the shares will be transferred to the PIF at below market value and whenever the equity from PrEM undertakings is sold the difference between the transfer price (of transfer from the government) and sale price (when actually sold) will be shared between the government and the PIF in an agreed proportion, this model may work for the profitable PSUs. Whether it can de adapted to the loss making PSUs is doubtful.

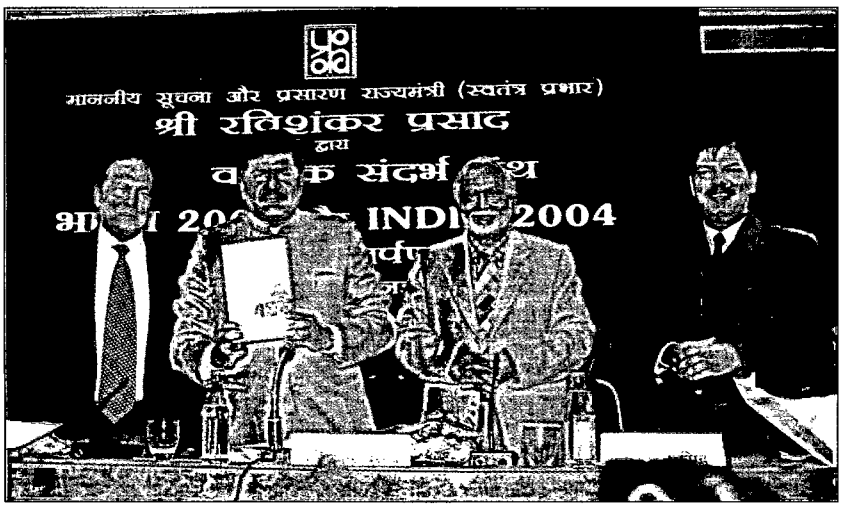
This study focuses only on Central PSUs. The book has a statistic showing that out of 831 state level public enterprises (SLPEs) 222 are in the process of disinvestment/winding up/ restructuring, action in 124 of them has been initiated, 30 have been privatized and 68 SLPEs closed down. What is the state of affairs of the remaining 387? An analysis on the SLPEs would have made the present exercise more comprehensive. ❑

A. Srija

Correct Imbalance in Information Flow : I & B Minister

Viswanath Ramsesh and Swatantra Radhakrishnan

THE INFORMATION and Broadcasting Minister, Shri Ravi Shankar Prasad has appealed to the media to correct the imbalance in the flow of information. Releasing the India Reference Annual—2004 and Bharat—2004 at a function organised by the Publications Division of the Information and Broadcasting Ministry in New Delhi recently, the Minister said there was extra information in some quarters and lack of it in many others. This difference is a cause for concern, he maintained.



The Minister of State for Information and Broadcasting Shri Ravi Shankar Prasad releasing the 'India and Bharat 2004' in New Delhi.

Shri Prasad hailed the Publications Division for rendering yeomen service in maintaining the heritage, tradition and cultural ethos of the country. The Minister commended the Employment News, which he said has a mass circulation and emphasised the need to strike a harmonious dialogue between the journal and its target readers, which are mainly youth and unemployed in the country.

The Minister said there is a growing capacity among the youngsters towards research as they had great advantage of the internet for looking into the information orbit. Shri Prasad recommended digitizing of the India Reference Annuals and said instead of making it centric towards aspirants of competitive examinations, the Reference Annual should be a focal point for newsmen, scholars and media researchers.

Earlier, Prof. Umakant Mishra, Director, Publications Division during his welcome address referred to the onerous task being rendered by the Publications Division in bringing quality books at affordable prices to the readers including the 21 journals of the Division with multiple editions spread across the length and breadth of the country.

Shri Sudhir Sharma, Joint Secretary in the Ministry of Information and Broadcasting praised the efforts of the Publications Division and Research, Reference and Training Division for bringing the Reference Annuals on 1st January itself, which has been mandated by the Ministry. He said the Publications Division with 7,000 titles and huge repertoire of books, journals and other sources of information is growing from strength to strength. This year the release function witnessed a welcome change as two young civil service aspirants, Ms. Nidhi Choudhary and Mr. Abbas Mehdi received the first copy of the Bharat-2004 and India-2004 respectively from the Hon'ble Minister as a token gesture to encourage youngsters appearing for competitive examination. ❑

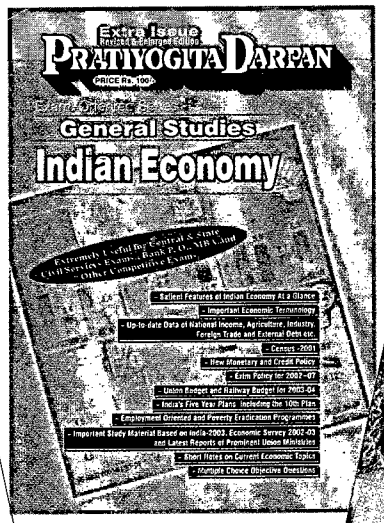
Printed and Published by Director, Publications Division, Umakant Mishra and Printed at Tara Art Press, B-4, Hans Bhawan, B.S. Zafar Marg, New Delhi-110 002, and Published at Patiala House, New Delhi-110 001. Chief Editor : Viswanath Ramsesh

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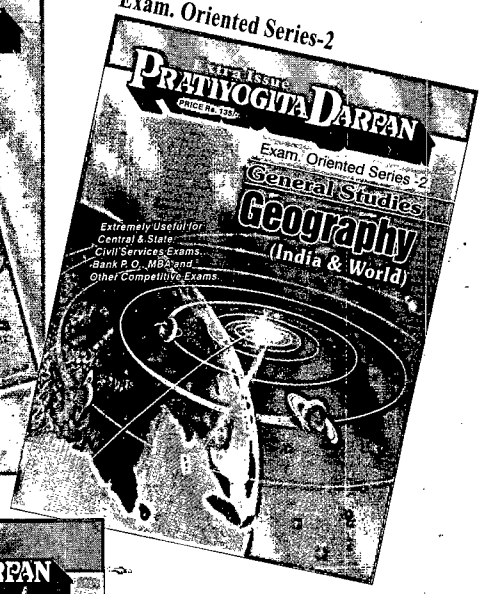
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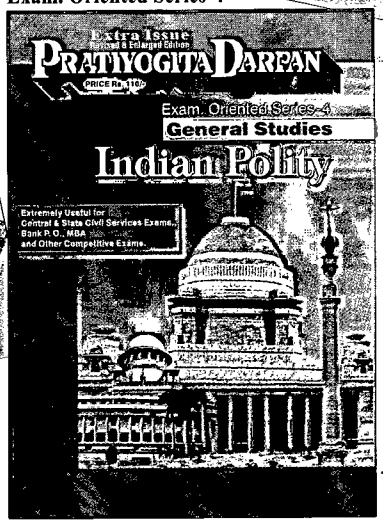
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