# BALUSA VI

# INDIA AND PAKISTAN: OPPORTUNITIES IN ECONOMIC GROWTH, TECHNOLOGY, AND SECURITY

## A Report of the Amman/Balusa Group

by Shirin Tahir-Kheli

*Based on a conference of senior Indian, Pakistani, and U.S. participants, held at Amman, Jordan, October 26-30, 1998*

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FOREIGN POLICY RESEARCH INSTITUTE
1528 Walnut Street, Suite 610
Philadelphia, PA 19102
Tel. 215-732-3774/Fax 215-732-4401
Email: FPRI@aol.com

# PREFACE

The Foreign Policy Research Institute was pleased to arrange a meeting of senior leaders and officials from India, Pakistan, and the United States on October 26-30, 1998, in Amman, capital of the Hashemite Kingdom of Jordan. This sixth meeting of what we call the BALUSA group was hosted by His Royal Highness, Crown Prince El Hassan Bin Talal, who also addressed the participants. We are most thankful to His Royal Highness for his gracious hospitality and personal interest. We also appreciate the W. Alton Jones Foundation for its continued support of the project.

This sixth meeting was led once more by FPRI Senior Fellow Ambassador Shirin Tahir-Kheli. Discussion focused on the often complex relationship among economic growth, technology, and security. The participants did not shrink from addressing the most controversial matters burdening the India-Pakistan relationship, including the recent nuclear tests, the Kashmir dispute, and trade barriers. Above all, the "mind-set" of conflict obstructs the way forward. India and Pakistan lack a concept of mutual advantage.

The report lists a series of measures that would indeed yield very great mutual advantages -- if they were carried out. To encourage both India and Pakistan to change the mind-set of conflict, the group decided upon a new research project: "The Cost of Conflict and the Benefits of Peace," headed by General Mahmud Durrani and Bharat Bushan. In this way, the dialogue will amplify hope in a more harmonious future.

Harvey Sicherman, Ph.D.
President

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The sixth meeting of the BALUSA group was hosted by His Royal Highness, Crown Prince El Hasan Bin Talal of the Hashemite Kingdom of Jordan in Amman from October 26-30, 1998. The following participated in the meeting:

The Honorable Shahid Khakan Abbasi
Syed Babar Ali
Bharat Bhushan
General Mahmud Durrani
Shekhar Gupta
Air Chief Marshal S.K. Kaul
Pratap K. Kaul
Shaharyar Khan
Toufiq Siddiqi
Shirin Tahir-Kheli
Vineet Virmani

The meeting began with a session in which His Royal Highness, The Crown Prince addressed the group. A working lunch hosted by The Crown Prince followed. In addition to the above participants, the lunch meeting included the senior Jordanians listed below:

His Excellency Dr. Hani Mulki
Minister of Water and Irrigation and
Minister of Energy and Mineral Resources

His Excellency Dr. Abdul Ilah Al Khatib
Minister of Foreign Affairs

His Excellency General Samih Buttikhi
Director of Intelligence

His Excellency Dr. Kamel Abu Jaber
President, Institute for Diplomacy

His Excellency Dr. Ali Attiga
Secretary General, Arab Thought Forum

Dr. Ahmad Mango
Economic Advisor to His Royal Highness

Pointing to the area from Morocco through Sudan to Kazakhstan, as the 'arc of crisis', The Crown Prince spoke of the importance of peacemaking efforts. Stating that rapidly changing conditions in the world leave both India and Pakistan feeling vulnerable, Crown Prince Hassan urged peace and stability for the subcontinent. He added that it was always better to 'be at the peace conference than on the menu'! India and Pakistan had much to gain from a changed environment, and there is no alternative to creative thinking and strategic vision in building stability. Jordan remains very interested in better relations between India and Pakistan. As a country located in the potential killing area, were there to be any nuclear conflict between India and Pakistan, Jordan cannot but want better relations amongst the subcontinent's two largest countries. Addressing bilateral problems between India and Pakistan was essential for peace between them. Referring to the regional and transregional sources of instability, H.R.H. listed the following:

- Political differences
- Demographic issues
- Proliferation of Weapons of Mass Destruction
- Economic concerns
- Terrorism
- Drug Trafficking
- International Crime

In terms of security issues, Crown Prince Hassan pointed to the tendencies toward excessive military spending including excessive arms imports, proliferation of weapons of mass destruction, proliferation of ballistic missiles, transfer of advanced conventional weapons and technologies, and border disputes. He noted that the process of multilateralism required the sorting out of bilateral problems. Hence, figuring out the 'human costs of conflict'—those disputes that are already settled as well as those still unresolved—was important. He noted that security and peace were often seen as the two sides of the same coin. In the current international context, such issues went beyond the military and should include additional items, e.g. concerns about the environment, economy, human development, terrorism and drugs.

Peace and stability in South Asia were critical prerequisites for the release of the full potential for economic growth. The fundamental task of peacemaking is to alleviate the prevalent conditions of poverty and deprivation in many areas of society. In order to realize their full potential on the global economic scene, India and Pakistan must reach agreement. Presently, South Asia represents only 1% of world trade. Economic interaction and trade can be the precursor of a new equation between India and Pakistan. The Crown Prince called for a dialogue of understanding and revival of the 'noble art of conversation'. Such a dialogue was critical for the slow march of progress where people begin to understand each other and was necessary to prevent sectarian and ethnic violence. It was important to remember that 'extreme irrationality is extremely well established and funded'.

The Crown Prince focused on the human dimensions of conflict, and made the point that correct policies could be induced by assuring that no one profits from conflict and by highlighting the costs of not achieving peace. Moreover, chemistry between political leaders was important for progress, but that on its own was not sufficient for more than simply a 'peace of the palace'. A broader base which included a 'peace of the professionals' and beyond was necessary. In closing, The Crown Prince urged a focus on the areas of convergence between India and Pakistan. In response to a query, he responded that as a regional player, Jordan was prepared to act as a 'facilitator' in an informal dialogue with a group of individuals or officials from the subcontinent.

**Political Update**

The previous meeting of the group in Bellagio ended on May 11, 1998, the day of the Indian nuclear test. Despite the ability of the two prime ministers to win support for any agreement in their respective countries, the months since the tests were largely unproductive for India-Pakistan relations. The tests had several consequences for relations between the two countries, the most important of which was the internationalization of the Kashmir dispute and the fact that the line of control (LOC) had become 'hotter'.

According to India's explanation, the nuclear tests, now known as Pokharan II, were based on perceptions of both vulnerability vis-à-vis China and the existence of a Pakistani nuclear capability. It sought a deterrent capability. According to Pakistani perceptions, the Indian test resulted in tremendous pressure on the government in Pakistan to follow suit because of the perceived failure of the G8 to address South Asian nuclear issues. Sanctions against India in the immediate aftermath of the tests were considered weak in Pakistan, which expected them to be applied in an uneven fashion in any case. The failure of U.S. intelligence in detecting advance preparations of the Indian test further eroded confidence in international monitoring of India. The pressure within Pakistan for a follow on test was rationalized as being a critical measure of political will. Additionally, scheduling a test well after the Indian one in May 1998 was projected within Pakistan as being impossible because of increased U.S. pressure to limit nuclear weapons. Thus, Pakistan went ahead with its test despite the realization that sanctions would have a greater impact on Pakistan than they would have on India. The tests brought the respective capabilities of each side into the open. Nuclear transparency was now needed and a discussion of the role of nuclear weapons and a stable nuclear deterrent is necessary. Some nuclear issues such as a second-strike nuclear capability and missile defense may not be applicable in the subcontinent. On the other hand, assessment of nuclear sufficiency, including nuclear weapons material stocks, will need attention.

India's strategic interest requires a politically stable Pakistan. Any disturbance in Pakistan affects India and vice versa. India stated that its nuclear capability is for deterrence purposes and that India desires to institutionalize a non-first use pledge with Pakistan. A common approach by India and Pakistan on disarmament would have a greater impact than unilateral steps. Both would gain from greater cooperation and both sides need to focus on ways of breaking the logjam. Because governments have played a role in creating suspicions, they must be involved in dismantling these feelings. Talks between India and Pakistan must be result-oriented and not simply be for the sake of show. There is no shortcut to dialogue between India and Pakistan on all issues.

The nuclear tests of India and Pakistan did not confer enhanced status on either, and made both states turn inwards with a display of 'Viagra Nationalism'. In the aftermath of the May 1998 tests, both states are now viewed as 'aging delinquents' by the

international community. The Indian government under the BJP hoped to use the nuclear issue for domestic political reasons, but the gains were of very short duration. The tests actually diminished Indian autonomy in the development of its missile and nuclear weapons programs. Further, India wants the world to acknowledge its role as the sole big power in the region, and thus will not welcome third party involvement. Finally, the tests pointed to economic vulnerabilities as they established the link between economic issues and political stability.

The costs of confrontation between India and Pakistan remain high and are rising. However, the benefits of cooperation are also very high. Yet, there are only two choices for India and Pakistan. The first is strategic confrontation with a high potential for regional instability, retarded economic progress and relegation of the region to the back water in terms of the global economic scene. The second and more desirable choice is a 'strategic equilibrium' by negotiated solutions to disputes minimizing confrontations and enlarging areas of cooperation. Despite a desire to engage each other, both countries are aware that there is no fast track to normalization. Progress will be a complex, slow, and fragile process — critically dependent on domestic politicians. Patience and perseverance will be vital for any move forward.

## Kashmir

The renewed focus on Kashmir after the nuclear weapons tests has not changed the basic divergence of views on this issue between India and Pakistan. India believes that the insurgency in Kashmir is on the wane and that the political and economic costs of the insurgency are bearable for India. From the Indian perspective, Pakistan must understand that the ground situation has changed in Kashmir in favor of India. Currently, the insurgency is sustained primarily through infiltration from Pakistan. Despite this, Pakistan's 'friends' must recognize that India wants peace with Pakistan and stability in the relationship. Statements of responsible Pakistanis on Kashmir must reflect existing reality.

From the Pakistani perspective, a fair solution required that the people of Jammu and Kashmir be given the right to determine their own future in accordance with U.N. resolutions. Various options could be considered, including a regional plebiscite or various formulae for greater autonomy/independence. The nuclear tests led to international opinion focusing on Kashmir, which has heightened the importance of reaching a solution to this core issue.

## Managing the Dialogue: The Process

The bureaucratic dialogue is not yielding any results and it is time for a political hand to guide the process. Elevation of the dialogue to a higher political level, perhaps to "facilitate" the lower-level talks, could provide leaders an opportunity to meet periodically to review progress. It should also be noted that issues that have languished for several years will not be unlocked in meetings lasting half a day.

Overall progress is dependent on movement towards the resolution of the Kashmir issue, but there is an existing mindset on the legal and political level that is difficult to change. Therefore it would be useful to move on Kashmir-related issues to allow subsequent progress on other issues. Despite their inherent difficulty, Kashmir-related issues are resolvable, for example: cessation of shelling and killing across the LOC; resolution of the Siachin dispute, which was nearly resolved by the two sides twice before; resolution of the Wullar/Tulbul dispute nearly resolved in 1991.

With Kashmir itself as the hardcore dispute, a 'meaningful' dialogue means India gives its views on proposals that consolidate the LOC as the final border, while Pakistan looks back and picks elements that come close to its position. For example, the Owen Dixon proposals of 1953-54 focused on a 'district-wise' self-determination exercise which at the time was accepted by India and rejected by Pakistan.

At the same time, the 2 + 6 working group formula should continue. Even outside these formal talks, their governments should be encouraged to strike agreements through normal diplomatic channels without undue publicity, such as the opening of a bus route between Lahore and Delhi or the sale of power by Pakistan to India. Similarly routine negotiations would lead to agreements on exchange visits by parliamentarians or representatives from the National Defense Colleges, and relaxation of visas.

While Indian sensitivity to third party involvement in Kashmir has been recognized, Pakistan considers it important that critical disputes that are not resolved in the bilateral framework should then have third party involvement. In the past, difficult issues like the Indus Water treaty and the Rann of Kutch dispute could not have been successfully resolved without third party intervention.

Both sides have to 'cool the temperature' minimally through control of the electronic media.

In Siachin, cartography is driving strategy and tactics. Disengagement at Siachin is possible if the role of a 'facilitator' is applied rather than looking for adjudication.

## Trade and Economic Cooperation

While there has been greater opening up of the two economies, trade between the two countries is still very limited. Total legal trade is on the order of $100 million and limited to about 600 items. This compares with Pakistan's total trade of about $20 billion. Both countries would gain rich dividends from opening up their economies to freer trade arrangements. Some of the advantages include:

- A larger market for exports, particularly for Pakistan. If Pakistani exporters could capture even a small percentage of the Indian market, a much larger scale of operations could be sustained compared to the current levels of production. The derived advantages for the overall economic growth, employment and skill development are obvious.
- Geographical proximity allows large benefits in terms of power, transportation costs, and shorter delivery times. Lower transportation costs will make it possible to trade many goods which are currently prohibitively expensive to import or export because of their transportation cost.
- The reduction in smuggling or illegal trade will bring in additional import revenues for the governments. One study (Nabi 1996) estimated that additional tariff revenue of Rs. 1.8 billion to Rs 2.6 billion could accrue to the government of Pakistan if the current illegal trade were to flow through legal channels.

India has granted most-favored-nation status to Pakistan although Pakistan has yet to reciprocate—despite the WTO requirement. While trade with Pakistan remains very limited, India's trade with its other neighbors, Bangladesh and Sri Lanka has increased substantially. SAARC (the South Asian Association for Regional Cooperation) offers promising channels for much-needed enhancements in South Asian trade. Such trade

must be predicated on the understanding that trade is not a favor done others but is of mutual benefit.

Pakistani concerns in limiting Indian imports cover a wide range of issues. The trade regime in India is found to be very restrictive, particularly in consumer goods. First, since Pakistani industry strength lies in consumer goods, opening up trade with India is said to be difficult unless the latter lowers tariffs on consumer items. Second, Pakistani concern deals with the expectation that with the help of explicit or implicit subsidies, Indian goods will out-compete Pakistani goods, forcing many producers in Pakistan out of business. A strong institution set up to monitor and adjudicate on matters of dumping, unfair trade practices, and trade liberalization is said to be impossible to establish. Third, the Indian engineering industry is highly developed, while Pakistan's is still in its infancy. The engineering industry is vital to the country's development. Low cost Indian engineering products will strangle the industry in Pakistan. Fourth, producers in Pakistan are hampered by high tariffs on raw materials, particularly on steel, and must be lowered prior to opening up of trade with India in order to create a level playing field.

The general lowering of tariffs and restrictions will lead to greater trade. However, from the political economy perspective, expansion of trade in which the two countries do not run large trade deficits with each other is more desirable. Balanced trade will not give ammunition to the anti-trade lobbies, help others see the benefits of trade while developing interest groups who have a stake in this trade and can effectively counter the anti-trade lobbies.

A liberalized trade regime between India and Pakistan will potentially benefit consumers, producers and the government. There will inevitably be some losers. We have to understand that potential losers will put up strong resistance to change. Some of the more serious concerns need to be addressed. One of the great dividends of trade would be a less hostile environment between the two countries, which will allow progress on political issues, which has remained elusive so far.

There is growing recognition within the SAARC that trade within the region needs to be opened up in order to empower the member countries to collectively and forcefully project themselves on the multilateral stage, e.g. in forging linkages with other market groupings such as APEC.

In addition to the above problems, the poor state of the India-Pakistan relationship has prevented them from speaking with one voice in international trade forums such as the WTO and the ILO against the imposition of what they perceive to be unequal trade and economic regimes. The region has also suffered from the inability to increase trade within the SAARC countries. The establishment of the South Asian Preferential Trade Area (SAPTA) is expected to make a difference as is the creation of the South Asian Free Trade Area (SAFTA) by the year 2002.

However, the malignant shadow of India-Pakistan relations has fallen even on these developments. SAPTA and SAFTA are being slowed down by the reluctance to open up trade. All countries of the region stand to gain with SAFTA, as freer trade will promote competition, reduce shortages, lower prices, reduce smuggling, allocate resources efficiently and ease inter-regional investments.

On a broader plane, trade between Central Asia and the subcontinent will benefit both India and Pakistan. Lack of a joint strategy by India and Pakistan in this crucial economic field will channel Central Asian trade westward and possibly eastward rather

than southwards through the subcontinent. Although officially acknowledged trade is limited, India and Pakistan already have unofficial trade worth nearly $2.5 billion annually (via third countries or through smuggling). The governments of the two countries stand to gain revenue by normalizing trade relations.

## India-Pakistan Relations in the Regional Context

Nearly all countries of the region see greater political, economic, and strategic benefits to themselves and the region from the easing of tensions between India and Pakistan. The May 1998 nuclear explosions heightened the fears within the region as well as the global community to the possibility of a nuclear arms race resulting in a devastating war. Instability in Afghanistan and Pakistan's support for the Taliban are also creating fears of political and religious upheaval spilling across borders. Another casualty of the unsettled conditions in Afghanistan is the Central Asian natural gas pipeline which was to have enabled India and Pakistan to move forward with a joint pipeline to meet their respective needs.

The overt nuclearization of the subcontinent has been accompanied by fresh tensions over Kashmir. Some Indian officials such as L.K. Advani have almost warned Pakistan to behave on the Kashmir issue in view of the changed "geo-strategic environment." The victorious group photograph at the test site with the prime minister and Farooq Abdullah, added a sense of triumphalism.

Caught between the cross-fire between India and Pakistan, the smaller member states of the SAARC region have to do a tight rope walk to maintain a balance in their respective relationships with India and Pakistan.

India and Pakistan respectively enjoy reasonably good relations with their neighbors to the west. Expatriates from both countries who work in the Persian Gulf and remit their earnings are a source of revenue. In its relations with the states of the Persian Gulf, Pakistan seeks to exploit the religious and historic bonds while India's historic bonds are augmented by economic and cultural relations. India and Pakistani efforts in the Gulf are often highly competitive and their bilateral tensions are often felt by the regional states that carefully balance their economic and political policies towards these, the largest states of the subcontinent.

As in the rest of the Gulf, India and Pakistan also compete for influence in Iran. Traditionally, Pakistan's ties with Iran have been strong but recent years have seen the relationship go through periods of difficulty.

China has been an important reference point for the India-Pakistan relationship. Worries about China's nuclear capability and its nuclear cooperation with Pakistan were cited by India in justifying its nuclear test of May 1998. Perception of U.S. special treatment of China has also figured in India's calculations. While some of the parameters have changed, the underlying basis of the Beijing-Islamabad relationship remains strong. Pakistan continues to see China as a dependable friend.

**Energy and Environment** (See Appendix I for "Options for India and Pakistan: Cooperation in Environment and Energy")

The group noted that in its meeting of March 1998, in Muscat, Oman, detailed discussion of the potential for cooperation existed in the sale of excess power capacity

by Pakistan to India. A number of detailed suggestions were offered for early implementation of the proposal.

India and Pakistan agreed on November 26, 1998 on a deal that enables Pakistan to sell up to 2000 MW of Pakistan's excess electricity supply. Despite lack of progress on other fronts, the agreement was hammered out after two days of highly productive talks at the professional level with general political oversight. Implementation will commence with the transmission of 400 — 500 MW from Lahore within six month, since the infrastructure for transmission already exists on both sides of the border. The tariff discussion has not yet been undertaken. However, this deal benefits both countries: it supplies western India with needed energy and offers Pakistan with a way to cope with its excess capacity and the insolvency of the Water and Power Development Authority.

Interestingly, the agreement has added a welcome tone to India-Pakistan relations. Smooth functioning of the agreement is perceived as creating an incentive to open vast areas of trade and economic cooperation—a potential that only adds to the importance of handling this first agreement carefully. Further, because strained relations between India and Pakistan are creating hurdles in the smooth implementation of the SAARC economic agenda, the power deal can assist in economic programs of the two countries while also unlocking regional cooperation within South Asia.

## Building Confidence After the May 1998 Nuclear Tests

### CHANGING THE MINDSET

More than ever, India and Pakistan need to spend considerable effort to change their mindset vis-à-vis each other and the prevailing view that each benefits from the other's problems. Thus, the discussion on "Changing the Mindset" focused on steps that India and Pakistan needed in order to turn away from confrontation.

The groundswell of intolerance that currently exists in both countries is growing dangerous and had to be stopped and reversed. Several areas were noted as being especially important in these terms. These are:

- Reduce the role of intelligence agencies acting against each other
- Expand trade to strengthen economic incentives for cooperation
- **Encourage tourism between India and Pakistan through the treatment of visitors from each country as visitors from any other country**
- School exchanges and a fresh start for the younger generation
- Offer textbooks with a balance in covering India-Pakistan history and make an effort to turn away from intolerance
- Initiate joint projects on writing of India-Pakistan history
- Make use of satellite television channels, capitalizing on their fast-growing credibility and viewership to give news and analysis a South Asian character

Cost of Conflict. In order to assist in the exercise to change the nature of the debate on the need for a more productive relationship, **the Balusa group decided to immediately undertake a quantitative study on the 'Cost of Conflict and the Benefits of Peace' to be headed jointly by General Mahmud Durrani and Bharat Bhushan. The framework of the study will be presented at the next meeting of the group scheduled for March 1998.**

## ECONOMIC

- Emphasize that trade is not a favor done others but a necessity of modern-day survival
- De-link trade and politics
- Handle issues of bilateral trade and economics at the highest levels
- **Hold a Special Pakistan Trade Fair in Delhi, Bombay, and Chennai to create interest and business opportunities for Pakistani products in India** (important in balanced trade between India and Pakistan)
- Encourage participation in each other's trade fairs
- **Enhance energy cooperation to include natural gas joint pipeline, electricity, the development of a common grid system.**
- Begin joint infrastructure projects with an emphasis on roads, rails, communications networks through joint companies
- Undertake joint ventures in technology companies, particularly software development as a starting venture between the two countries
- **Treat of investments from each other's country as from any other**
- Encourage greater and sustained interaction between the respective Chambers of Commerce and Industry to discuss potential areas for trade, investment, joint ventures, trade fairs participation, trade laws, policy implementation **with the ultimate goal of developing a joint regional strategy.**
- **Further liberalize visas for business/commercial visits**

## POLITICAL

- **To provide impetus to the talks and to facilitate the removal of bureaucratic obstacles standing in the way of forward movement, appoint a "Special Political Emissary of the Prime Minister" or a "Minister for Reconciliation" respectively from India and Pakistan.**
- **Recognizing that the overall process is dependent on movement on the Kashmir issue and yet being aware of the existing mindset, it may be prudent to move on select "Kashmir-related issues" such as:**
  - **Establish ground rules to prevent border tensions and skirmishes**
  - **Reach agreement on the disengagement of troops in Siachin**
  - **Settle the Sir Creek dispute**
  - **Settle the Wullar/Tulbul Navigation/Barrage issue**
- Encourage parliamentary exchanges

## MILITARY

- **Urgently initiate military leadership interaction starting with the visits of National Defense College teams on study tours**
- Improve mechanisms for the settlement of border violations and tension reduction
- Renew discussion on a "No War Pact"
- **Keep nuclear deterrence at the lowest possible level, initiate dialogue on nuclear and missile issues to include doctrine and arms control**
- Use hot lines at the military level for regular and routine communication
- Restrict the forward movement and deployment of strike forces
- Negotiate an agreement for the non-use of chemical and biological weapons

First Draft --- September 30, 1998

# Options for India and Pakistan: Cooperation in Environment and Energy

Toufiq A. Siddiqi
Global Environment and Energy in the 21st Century
Honolulu, Hawaii

Presentation at the Meeting of the India – Pakistan Group
Amman, Jordan

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## 1. Introduction

There are a number of fields in which it would clearly be beneficial to both India and Pakistan to cooperate. Such cooperation has been deferred in most cases until political tensions between the two countries decline. In previous meetings of this India – Pakistan group, we have frequently stressed that cooperation in a number of fields can improve the overall climate between the two countries, and assist in tackling the more difficult issues. Energy and Environment have been identified as two important fields for potential cooperation between India and Pakistan.

In this paper, we focus on some specific aspects of environment and energy in which cooperation would be beneficial to both countries. A wide range of initiatives are discussed, ranging from relatively non – controversial ones to those that would be highly visible and requiring drastic changes in approaches at the highest levels in the two countries. Few persons dispute that more than 50 years of tensions between India and Pakistan have led to reduced availability of resources for meeting the development goals of the countries.

The current global economic crisis means that less external capital is available to the two countries, and that their domestic resources be utilized most efficiently. This may be an excellent opportunity to take some bold steps to put the India – Pakistan relationship on a completely different footing. We shall therefore start our discussion of options with possible areas of cooperation which could represent **very bold** initiatives for cooperation, then move on to moderately bold initiatives, and finally to modest initiatives which would represent a good start.

While the link between energy availability and economic development has been known and recognized by policy – makers for quite some time, environment has usually been thought of in the context of "Problems". It is time to think of environment also as a provider of solutions. It is with this perspective that several of the fields for cooperation are suggested in this presentation.

## 2. Very Bold Initiatives

### *A Himalaya International Park (HIP)*

Maintaining or improving the quality of the environment are now generally accepted goals of development. In fact, the emphasis on "Sustainable development" rather than just "Development" is a reflection of the necessity to add the environmental dimension to traditional economic concepts.

Although the precise formulation of the wording might differ in Pakistan and India, few would dispute that finding a satisfactory solution of the Kashmir issue is the major obstacle to cooperation between India and Pakistan. "Environment" might provide an excellent opportunity for at least an interim solution.

Generations of visitors have testified to the beauty of Kashmir and the adjacent areas of India and Pakistan. Prolonged conflict has done considerable damage to the environment of these areas, and future conflicts could do even greater harm. In addition, the need for fuel, housing, and incomes has led to considerable loss of forests and biodiversity. Tourism, which used to be a major source of income, has declined, putting additional pressure for other income – generating activities such as logging, with adverse consequences for the environment of the areas.

Kashmir and the adjacent areas of India and Pakistan could be developed to be one of the world's leading centers for "Ecotourism". **The two countries could take a very bold initiative by jointly creating and managing a Himalaya International Park (HIP).** It is suggested that HIP include all of Kashmir on both sides of the line of control, as well as some adjacent areas of India and Pakistan. Since India and Pakistan have very different stands on the present status of Kashmir, it is important that HIP include at least some small area of India which is officially recognized as such by Pakistan, and some small area of Pakistan which is officially recognized as such by India. Thus HIP would clearly be an

**international** park in spite of the different positions of the two countries regarding the current status of Kashmir.

It may be possible to expand the area of HIP by inviting China to join in its management and put some of the adjacent areas of China as part of the Himalaya International Park. This may also help in facilitating good relations between China and India by reducing tensions arising from territorial claims in that area.

HIP could be jointly managed by India and Pakistan, (and China, if participating in HIP) with the active involvement of the people of Kashmir from both sides of the line of control. The initial arrangement could be for a period of, say, 20 years, with extensions for the same period, if all parties are satisfied with how it is working. The likely economic, environmental, and political benefits of successfully running HIP are likely to be so large that there is a high likelihood that it would be in the interests of all parties to continue with the arrangements indefinitely.

The history of the sub-continent during the past 50 years has shown that cooperation on even small things is difficult. It may be time to try a giant leap forward and implement the Himalaya International Park as a good way out of the impasse.

## 3. Moderately Bold Initiatives

### *Integrated Infrastructure Development*

Many factors determine the rate of development of a country, and the state of the infrastructure is one of the most important of these. Pakistan and India have made good strides during the past 50 years in these fields, but scarcity of resources has been a limiting factor. Improving the infrastructure is essential for both countries, and this could be accelerated, particularly in the energy field, by

cooperation between them. In the following sections, we describe two infrastructure projects that would reduce the costs of energy supplies to both countries, as well as providing environmental benefits at the local as well as global levels.

### 3.1. Combined Natural Gas Pipeline for Pakistan and India

Energy use in India and Pakistan increased at a rates of about 5% per year during the decade 1987- 1996 (HDIP,1998; TERI, 1997). The economic slowdown in most Asian countries, including these two countries, during 1997 and 1998, is likely to have reduced the energy use growth rate as well. However, it is quite likely that a resumption of the earlier growth trend will take place in the near future, especially if the recent initiatives to rely more on the private sector are maintained.

Even though traditional fuels such as firewood, animal and agricultural wastes are an important source of energy in South Asia, the increases in energy use in the near term are likely to be provided by commercial sources of energy --- coal, oil, natural gas, hydro- and nuclear- power. Newer renewable sources of energy, such as solar- and wind- energy, could also be important in some areas, particularly in remote locations even now, and are likely to make larger contributions in the medium and long term.

In South Asia, India is by far the largest user of energy, and Pakistan is the second largest user. The recent consumption of commercial energy in the two countries is shown in Table 1.

Table 1. Primary commercial energy consumption in India and Pakistan

*million tonnes oil equivalent, 1996*

| **Country** | Coal & Lignite | Oil Products | Nat. Gas | Hydro-power | Nuclear | Geothl. or new ren. | **Total Coml.** |
|---|---|---|---|---|---|---|---|
| India | 140.3 | 78.7 | 19.5 | 6.0 | 2.1 | 0.2 | 246.7 |
| Pakistan* | 2.1 | 16.6 | 14.8 | 5.0 | 0.1 | 0.0 | 38.5 |

(* 1996/97)

Sources: British Petroleum (1998), HDIP (1998).

There are always environmental effects associated with the production, transport, and conversion of energy. However, some energy sources have less environmental impact than others (see, for example, ADB, 1991). Of the conventional fuels, coal is generally considered to be the most polluting, whereas natural gas and renewable sources of energy are considered to be environmentally preferred sources. About two- thirds of India's commercial energy is now being supplied by coal, which has contributed a great deal to the serious air quality problems that plague most of the larger Indian cities. This situation would be exacerbated further, if the additional energy needed by India were to be provided mainly by coal, the energy source with by far the largest domestic reserves in India. At a global level also, India is now the sixth largest emitter of carbon dioxide from energy use (Siddiqi, 1995), mainly due to its heavy reliance on coal.

India's proven reserves of natural gas at the end of 1996 amounted to 24.2 trillion cubic feet (tcf) (British Petroleum, 1998). In terms of energy supplied, this is equivalent to about 630 million tons of oil equivalent (Mtoe). To put this number in some perspective, the proven reserves of natural gas are equivalent to somewhat less than 3 years of total commercial energy use in India. At the current rates of production, though, the reserves would last for 38 years. Thus, even though natural gas is an environmentally preferred source, India's own reserves are insufficient to provide a substantial expansion in supply.

With respect to its supply of commercial energy, Pakistan has had an environmentally more advantageous mix of sources. Oil and natural gas supply about 43% and 38% of total commercial energy respectively, whereas coal provides only about 6% (HDIP,1998). However, the shares of coal and oil may increase in the years ahead, at the expense of natural gas, since the proven reserves of the latter, estimated at about 22 tcf, are already fully committed.

Recent discoveries of natural gas in Balochistan have not been fully evaluated, but may increase these reserves somewhat.

In Pakistan, as well as in India, the demand for electricity is increasing at about twice the rate of energy use overall. Coal is the major source of electricity generation in India, and its use is likely to grow even faster in the years ahead, unless cleaner alternatives such as natural gas and renewable sources become more available than at present. The power supply agreements made by private companies in Pakistan are likely to make considerable use of oil products and coal. The ambient air quality in several cities of South Asia, including Bombay, Calcutta, Delhi, Karachi, and Lahore, is already highly unsatisfactory, and the levels of several pollutants exceed those recommended by the World Health Organization. Greater use of coal and oil products is likely to exacerbate the situation.

Public opposition to large hydroelectric projects has been increasing in many countries, including India and Pakistan. The expansion of nuclear power in each of the two countries has been slower than expected earlier, due to a number of economic, political, and technical reasons. Thus natural gas is being looked at in these countries, as elsewhere in the world, as an environmentally preferred transition fuel, to bridge the gap between the present coal and oil dependent supply systems, and the renewable energy sources that are expected to provide much of the energy supply a few decades from now.

Of the major sources of commercial energy in the world today, natural gas is considered to be one of the most environment - friendly. It has fewer emissions into the air and water, and minimal generation of solid wastes, when compared to coal or oil. In most cases, there is little public opposition to natural gas pipelines, unlike the situation for large hydro or nuclear power plants.

The use of natural gas in the two countries has increased a great deal during the past two decades, and this trend is expected to continue. Estimates by the International Energy Agency project (Kubota,1996) suggest that the demand for natural gas will increase by a factor of four in India between 1995 and 2010, and more than double in Pakistan during the same time period (Figure 1). Even at current rates of production, the proven reserves in India and Pakistan (BP, 1998) will last for less than 40 years (i.e. the Reserves/ Production (R/P) ratios are less than 40 years). Thus large increases in domestic production cannot be anticipated, unless major new discoveries are made. The countries have not yet been adequately explored for natural gas, and a part of the energy strategy should be to give a high priority in the three countries to increasing exploration for natural gas, both onshore and offshore.

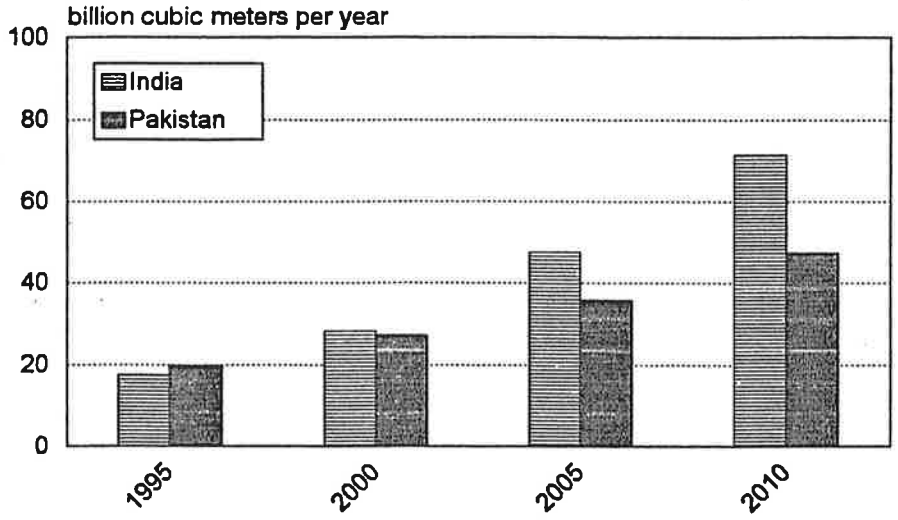
Figure 1.

A parallel approach that could be implemented is for India and Pakistan to import natural gas from the Middle East or Central Asia, where several of the countries have very large reserves and R/P ratios. The proven reserves and R/P ratios of Bangladesh, India, and Pakistan are compared with those of several potential suppliers of natural gas to the region in Figure 2.

Figure 2.

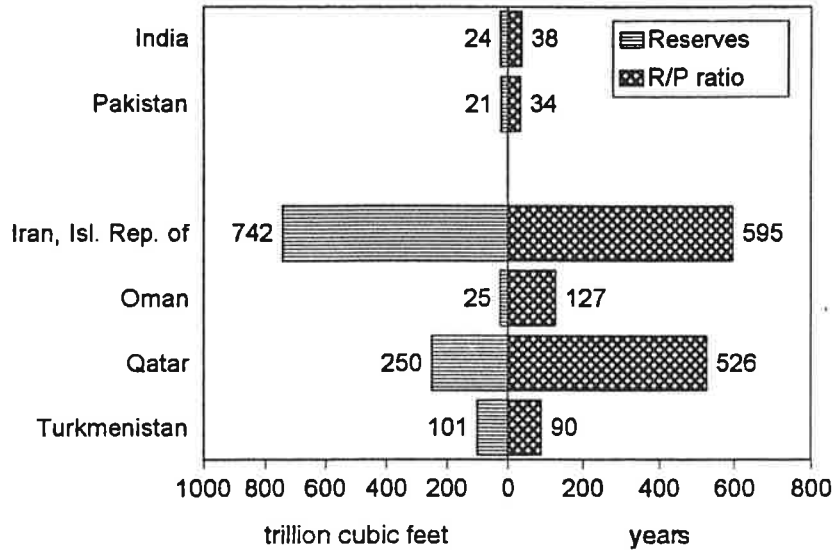
Several options for importing natural gas have already been examined by India and Pakistan. Pakistan has signed Memoranda of Understanding with the Islamic Republic of Iran, Qatar, and Turkmenistan, for the possible supply of natural gas. India has explored the possibility of importing natural gas via pipeline or in liquefied form (LNG) from Oman, or via pipeline from the Islamic Republic of Iran. India's option for importing via deep sea pipeline from Oman was postponed indefinitely, due to the technical difficulties associated with pipelines at depths of up to 3000 meters, but arrangements for the use of liquefied natural gas are proceeding.

## Figure 1. Anticipated Demand for Natural Gas in India and Pakistan




Source: Kubota (1996)

## Figure 2. Proven Reserves of Natural Gas in Selected Asian Countries, 1995




Toufiq Siddiqi (1996)

Pakistan and India could, of course, make independent arrangements for importing natural gas. However, there are economies of scale for pipelines up to 56 inch diameter, which would transport about 20 million metric tons per year of natural gas (Kubota,1996). The indicative costs for transporting natural gas to India or Pakistan are shown in Table 2.

Table 2.

Table 2. Estimated costs for transporting natural gas to India and Pakistan from neighboring countries

| From | To | Distance (km.) | Volume (MMTY) | Cost ($/MMBtu) |
|---|---|---|---|---|
| Turkmenistan | Pakistan | 1500 | 5 | 1.50 |
| Turkmenistan | Pakistan | 1500 | 10 | 1.20 |
| Iran (Onshore) | Pakistan | 1500 | 5 | 1.50 |
| Iran (Onshore) | Pakistan | 1500 | 10 | 1.20 |
| Iran/ Gulf States (Offshore) | Pakistan | 1500 | 10 | 2.00 |
| Gulf States (LNG) | Pakistan | 1500 | 10 | 2.60 |
| Turkmenistan | India | 2500 | 5 | 2.40 |
| Turkmenistan | India | 2500 | 10 | 1.80 |
| Iran (Onshore) | India | 2500 | 10 | 1.80 |
| Iran/ Gulf States (Offshore) | India | 2500 | 10 | 3.50 |
| Iran/ Gulf States (Offshore) | India | 2500 | 20 | 2.50 |
| Gulf States (LNG) | India | 2500 | 10 | 2.90 |

Sources: Kubota (1996); Other.

To take just one example, the cost per million Btu (MMBtu) for gas from Central Asia to India would be $ 3.1, if 5 million tons per year (MMTY) are transported, but would drop to $ 2.3, if 10 MMTY are transported. This could result in savings of several hundred million dollars per year to each country. Further, obtaining international financing for the projects may be easier, if the pipelines were to supply natural gas to both countries.

Liquefied natural gas (LNG) is another option for both the countries. However, initial estimates indicate that natural gas supplied via pipeline may cost about 25 - 35% less than LNG in Pakistan and Western or Northern India. However, India may still need to import LNG for the Southern part of the country, where the length of the required pipeline to bring natural gas imports may be too long to make it economically attractive. This gas could come from the Middle East or from some of the ASEAN countries.

There are no major technical obstacles to the construction of onshore pipelines to Pakistan and India from Turkmenistan or Iran, or a near-offshore pipeline from Qatar to the two countries. Political considerations have been the main factor delaying the construction of these economically desirable pipelines.
In a previous project supported by UNDP, teams of senior officials and experts in the energy, economic, technical, environmental, and legal specialists from India, and jointly prepared a strategy for the next steps in building a pipeline that could supply natural gas to both countries. Subsequent meetings have also been held between the Ministers of Petroleum of India and Pakistan, and between the Secretaries representing the same Departments. Thus the basic groundwork for proceeding with the project has already been laid. What is needed now is a bold decision by both governments to move ahead by both governments on a project that has clear economic, environmental, and financial benefits to the two countries. A precedent for such a project already exists in the form of the Indus Waters agreement between India and Pakistan.

### 3.1. A South Asia Electric Power Grid (SAEPOG)

The demand for electric power in South Asia has been increasing at an even faster rate than the demand for energy overall, doubling every decade. In spite of the current economic difficulties faced by India and Pakistan, this trend is likely to continue well into the 21$^{st}$ century. After many years of serious electricity shortages, Pakistan finds itself with a modest surplus of electricity, partly due to the encouragement of private power producers, and partly due to the economic

slowdown. This is likely to be a temporary phenomenon, since the per capita consumption of electricity in Pakistan is still only about a tenth of that in the industrialized countries.

The installed capacity of the public electric utilities in India has gone up from about 1.7 Gigawatts (GW) in 1950 to 77 GW in 1995. In addition, the non-utility enterprises, which generate electricity for their own use, had an installed capacity in 1995 of about 10.2 GW. (Note: The fiscal years in India and Pakistan are not coincident with the calendar year, and most data are normally available for the fiscal year. For the sake of convenience, 1994/95, for example, has been shortened to 1995).

In spite of this enormous growth in electricity generation capacity, brown-outs are a common phenomenon in many locations throughout the country. The shortfall in aggregate electrical supply during recent years for all of India has been conservatively estimated[i] at about 7%, and would be higher if many investment decisions to build and operate commercial facilities had not been deferred due to shortage of electricity. In terms of peak demand, the shortage has been estimated at 18% (EMC, 1996).

The Government of India has been meeting the large requirements of the electricity sector by allocating a substantial share of the total financial outlays in successive 5-Year Plans to this sector. The allocation for the power sector has generally been in the range of 17 - 18% of total outlays for each Plan, but in view of rising shortages has been increased to 24% during the Eighth 5-Year Plan (1992-1997). About 62% of this amount is for new generation capacity, with the expansion of the distribution network claiming a sizable 28%.

The capital requirements for the electricity sector in India are huge. The required additions to generation capacity of about 100 GW between now and 2010 will require an estimated $ 120 billion of financing. The opening up of India's power sector to private financing has added an important new source of capital. In spite of this, the raising of capital to meet India's large electricity requirements will be a formidable challenge.

The ability to make use of any surplus capacity in neighboring countries will reduce the capital requirements in India and Pakistan. The current surplus in some parts of Pakistan could be made available to adjacent parts of India, and surpluses at a later time in parts of India could be made available to Pakistan. The scope of such transfers could be made even larger by bringing in Nepal and Bangladesh into the arrangement, thus representing a truly South Asian Electric Power grid.

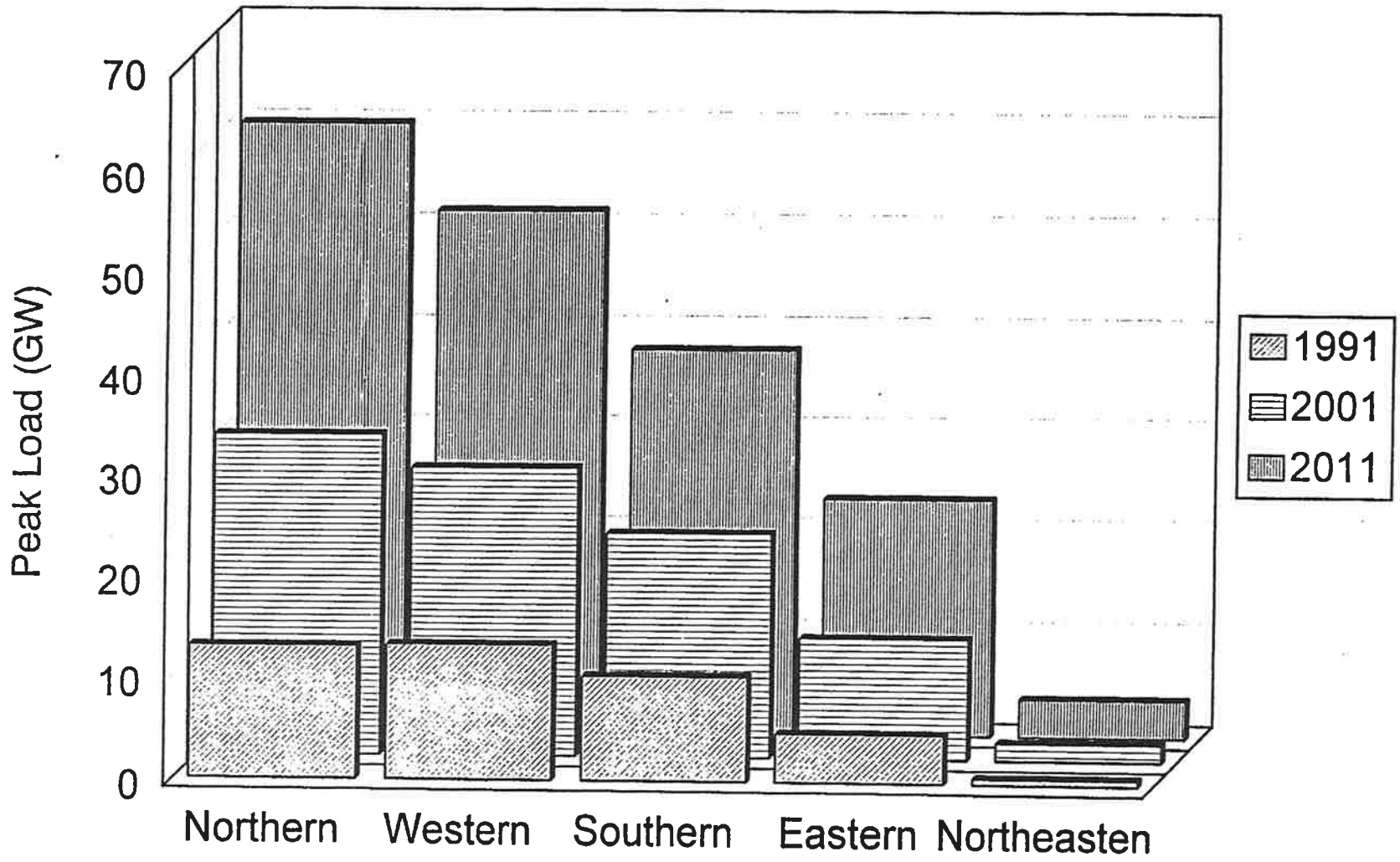
The bringing in of Nepal and Bangladesh has the advantage that electricity can be exchanged between some parts of countries even when there is no overall surplus. Some of the large hydropower potential of Nepal could be developed, and much of the electricity exported to India. In turn, some of the electricity being generated in Northern India could be transmitted to Pakistan. At the same time, electricity from Southern Pakistan can be transmitted to Western India.

Most of the additional electrical capacity in India is required in the Northern and Western Regions of India, as shown in Figure 3. The geographical regions are shown in Figure 4.

The temporary surplus in Pakistan would certainly not be adequate to meet the rising needs of Western and Northern India. Natural gas pipelines from Iran or Turkmenistan are the most cost-effective way of supplying an environmentally preferred fuel to generate electricity in both of these regions.

There are also good opportunities for exchanging electricity between Bangladesh and the Eastern and Northeastern Regions of India. Discussions on this topic between the two Governments have already taken place, and the prospects for cooperation appear good at present. A detailed discussion of this topic is beyond the scope of this Meeting, except to suggest that the arrangement could be included in an overall SAEPOG.

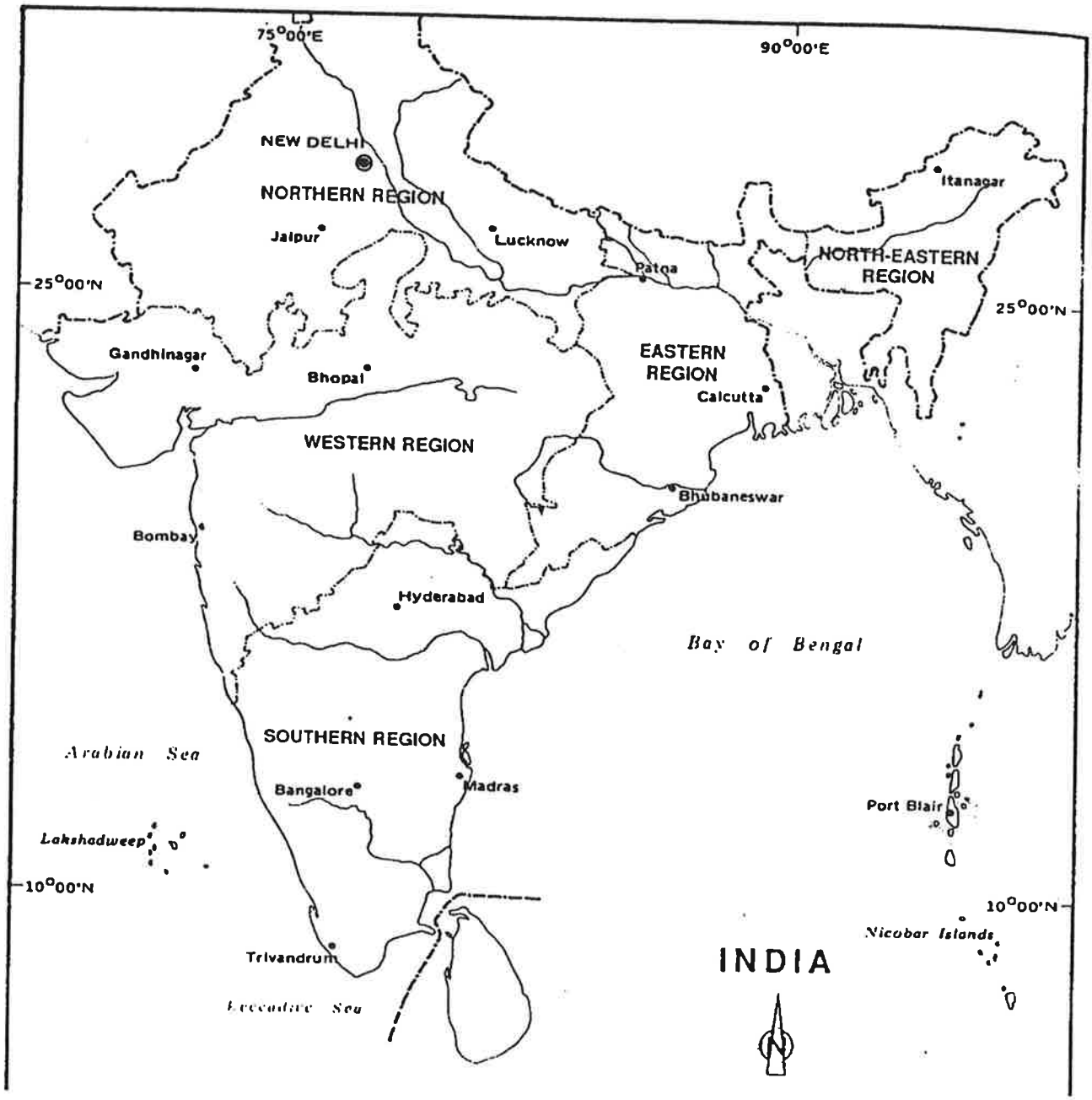
# Figure 3. Recent and Projected Peak Load Generating Capacity for Public Utilities, by Region




Toufiq Siddiqi (1996)

Data from Central Electricity Authority (1995)

Figure 4.


75°00'E
90°00'E
NEW DELHI
NORTHERN REGION
Jaipur
Lucknow
Patna
Itanagar
NORTH-EASTERN REGION
25°00'N
Gandhinagar
Bhopal
EASTERN REGION
Calcutta
WESTERN REGION
Bhubaneswar
Bombay
Hyderabad
Bay of Bengal
SOUTHERN REGION
Arabian Sea
Bangalore
Madras
Port Blair
Lakshadweep
10°00'N
Nicobar Islands
Trivandrum
INDIA
N

## 4. Some Modest Projects for Cooperation

Several projects dealing with energy and environment were suggested by a group of Pakistani and Indian scientists and administrators during the period 1995-97, under the sponsorship of UNDP. In the interest of saving time, I will not discuss them here, and simply provide a list:

***4.1. Improving energy efficiency in the agriculture sector;***

***4.2. The transfer of technology for small – scale hydropower generation;***

***4.3. Cooperation in the installation and maintenance of solar photovoltaic systems in rural areas;***

***4.4. Management of solid wastes in urban areas;***

***4.5. Approaches to improving air quality in the cities.***

Detailed proposals have been prepared by the groups in each of these areas (UNDP, 1996). Official requests by the two countries to international funding agencies are essential at this stage to move the projects forward. Alternatively, the two countries could decide to proceed with these projects on their own, since the funding requirements are rather modest, amounting to about $1 million each.

## 5. Conclusion

The environment and energy fields present excellent opportunities for cooperation between India and Pakistan. In many cases, the projects proposed could lay the basis for the participation of other South Asian countries as well. Cooperation between the two countries has been difficult, even for modest projects. It may be worth while to explore dramatic projects, such as those suggested in this paper, which could capture the imagination of the people and make their implementation feasible.

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Contents