

An India-Pakistan Détente: What It Could Mean for Sustainable Development in South Asia and Beyond

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S U M M A R Y India and Pakistan have had volatile relations ever since they became independent of Britain in 1947. Frequent hostility has stifled cooperation between the two countries and inhibited development in the region. Recently, however, tensions show signs of easing. In March 2004, India's then prime minister visited Pakistan to attend a South Asian regional summit. Flights, bus service, and cricket matches between the two countries have resumed; India's newly elected government continues to support the process. Peace could bring a wide range of benefits not only to India and Pakistan but to the wider region as well. For example, it could enable cooperation on importing energy via a natural-gas pipeline, which would support environmentally sound development. The improved road and rail system that would necessarily accompany a pipeline would also support the goal of building an Asian highway network and the resurgence of cross-border trade, another likely consequence of détente. These benefits could spread far beyond India and Pakistan into the wider west, central, and south Asian region.

Introduction

More than two-thirds of the population of South Asia was born after the partition of the subcontinent, and has grown up in a time of tense relations between India and Pakistan. It is hard for them to imagine what prolonged peace might mean for the region. Significant benefits are likely across the board. In the quest for sustainable development, three sectors—energy, environment, and transportation—stand to benefit in interrelated ways. Energy and transportation are two of the most important components of development; they also have immense implications for the environment.

The Current Situation

Energy. The rate of economic growth in India and Pakistan has been in the range of 4–5 percent per year but shows signs of accelerating. In India, for example, the growth rate averaged 3.5 percent per year from 1950 to 1980, 5.4 percent per year from 1980 to 1990, 5.9 percent per year between 1990 and 2002,ⁱ and over 8 percent per year during recent months. Energy use has increased at roughly the same rate.

The availability of affordable energy is a major constraint on the region's economic growth. Neither India nor Pakistan is self-sufficient in energy. Both import oil, primarily for transportation; they use domestically available sources for electricity generation, industry, and other purposes. India relies on coal for well over half of its commercial energy,ⁱⁱ whereas Pakistan depends almost equally on natural gas and oil.

Both countries face considerable difficulty in keeping these energy profiles. India's larger coalfields are up to a thousand miles from the sites of greatest demand. The railway system is already stretched to capacity, and will have difficulty transporting additional coal to meet the growing need for electricity in the next decades.

Domestic resources are unlikely to meet energy needs in either country. The proved reserves of natural gas are barely adequate to meet even current demand. There is considerable public opposition to large hydroelectric projects, which usually require the

displacement of thousands of persons. The growth of nuclear power generation has been considerably slowed by proliferation concerns in the industrialized countries, and by high investment up front.

India is one of the world's top five countries in wind power capacity. However, wind and solar energy are likely to provide less than 5 percent of India and Pakistan's commercial energy needs by 2020.

Affordable energy supplies will almost certainly have to come from other countries. Pakistan already imports more than half of its oil, and India almost two-thirds. Both countries also import some high-quality coal, mainly for steel production. Natural gas would be a more environmentally friendly source for energy imports.

Environment. South Asia, now in the early stages of industrialization, is undergoing environmental problems similar to those that prevailed in early industrial Europe and the United States. In many cases, conditions are even worse, partly because the population is much larger than in Europe or North America at a similar stage of development, and partly because the growing middle class is already using automobiles and electrical appliances.

Environmental degradation worldwide has led to efforts to make development sustainable by minimizing adverse consequences to human health and to the ecosystem. Virgin forests, and the unique flora and fauna that existed there, have disappeared in many parts of South Asia within the last two generations. Water quality has deteriorated so much that it is the largest single source of illness. In many cities and in rural households, breathing polluted air is a major source of respiratory disease.ⁱⁱⁱ

Land use has changed notably in South Asia during the past 50 years, due mainly to population growth, demand for farmland, and continued dependence in rural areas on biomass fuels. Biodiversity has been lost, primarily from once forested areas. Bringing natural gas via pipelines to rural India (to some extent this has already happened in Pakistan) could reduce the pressure on forests. It would also reduce the loss of land to coal mining in India, and the pressure to use Pakistan's own poor-quality coal.

The availability of affordable energy is a major constraint on the region's economic growth

The larger cities of the subcontinent are among the most highly polluted in the world

Pakistan has a serious salinity and waterlogging problem near the Indus River, where the land has been cultivated for centuries. This area and adjacent parts of India continue to suffer from water shortages. The Indus Waters Treaty represents the only ongoing agreement between India and Pakistan that has not been disrupted by wars or periods of high tension. Cooperation that builds on this treaty could not only present opportunities for better water management between those two countries, but also serve as a model for water-sharing arrangements between India, Bangladesh, and Nepal.

Another environmental concern, air quality, is also affected by choices made in the energy and transportation sectors. Of all human activity, energy use has the largest impact on air quality. It also has adverse impacts on land, in the form of coal mining, and on water, in the form of oil discharges into rivers and oceans.^{iv}

The most visible and widespread impact of energy use is air pollution in South Asian cities, and in rural households using biomass for fuel.^v Further, the burning of fossil fuels is the largest man-made source of carbon dioxide emissions, the largest contributor to the greenhouse gases responsible for global climate change.

The larger cities of the subcontinent are among the most highly polluted in the world. The maximum annual averages for particulates in such cities are frequently more than three to four times the level recommended by the World Health Organization. Sulfur dioxide, carbon monoxide, lead, and other pollutants have also reached harmful levels. Large increases in the use of petroleum fuels for transportation, as well as the use of coal and oil for electricity generation and in industry, are major causes of air pollution.

The demand for energy is expected to continue rising for several decades, due to population growth and higher consumption per capita. Urban households are using more electrical appliances and operating more vehicles. The population of Delhi, for example, grew from about 3.7 million in 1971 to about 13 million at present, an increase of about 350 percent. During the same period, the number of vehicles grew from 0.2 million to about 3 million^{vi}—an increase of 1,500 percent.

On another front, global climate change has become a focus for international action. More than 120 countries have signed the United Nations Framework Convention on Climate Change (UNFCCC). This requires industrialized countries to reduce their emissions of greenhouse gases on average to 5–7 percent below 1990 levels. Developing countries are not legally required to reduce their emissions, but are urged to try to slow down the rate of increase without jeopardizing economic development. India has overtaken the United Kingdom and Germany and now ranks fifth in the world in emissions of carbon dioxide, the greenhouse gas that is the largest contributor to global climate change. Much of this is due to India's heavy reliance on coal. The United States has cited the lack of limits on emissions from large developing countries such as China and India as a main reason for not signing the Kyoto Protocol, the agreement designed to implement the UNFCCC.

Transportation. At the height of the crisis between India and Pakistan in 2002, the author traveled from New Delhi to Islamabad—a distance of less than 300 miles. A direct flight would take less than 45 minutes, but the airline of each country was prohibited from flying over the other. Instead, the trip went from Delhi to Dubai to Islamabad, took about 26 hours, and covered more than 3,000 miles. Even though flights between India and Pakistan resumed in 2004, there are still no nonstop flights between Delhi and Islamabad.

In low-income countries, few people can afford to travel by air; buses and trains will remain the major modes of travel. After a suspension of about two years, bus links between Delhi and Lahore have resumed. While the inadequacy of the transportation infrastructure has limited movement across South Asian borders, rapid growth in the number of vehicles in urban areas is a major source of air pollution and of runoff into streams and rivers. The Supreme Court of India, which has direct jurisdiction in the capital, has become active in directing an environmental cleanup. In 1998, for example, it issued the following directives for Delhi:^{vii}

- The number of buses must increase to 10,000 and they must operate on compressed natural gas (CNG).
- All pre-1990 taxis and auto-rickshaws must be replaced with new vehicles running on clean fuels.
- Local governments must provide financial incentives to replace all post-1990 autos and taxis with new vehicles that operate on clean fuels.
- All public-sector buses older than 8 years must be scrapped unless they operate on CNG or other clean fuels. The entire city bus fleet (public and private) must be steadily converted to CNG.
- The Gas Authority of India must create a network of 80 CNG refueling stations.

After initial resistance, mainly strikes by bus and truck owners, the Supreme Court directives are being implemented and the outlook is promising. Success in Delhi may encourage other cities to take similar measures. This could result in an increased demand for natural gas.

There is thus a pressing need to improve the transportation infrastructure both *within* and *between* the countries of South Asia and beyond. An India-Pakistan détente is crucial for the latter, and highly desirable for the former.

Some Implications of an India-Pakistan Détente

A natural gas pipeline. Natural gas has emerged as the energy source of choice for the early 21st century—available, easy to transport, and less polluting than coal and oil. Although most of the larger countries in South Asia have some proved reserves of natural gas, the amount available to each country compared to its annual consumption (referred to as the reserves to production ratio, or R/P) varies a great deal. India and Pakistan have an R/P ratio of about 25 years, whereas Iran and Qatar have ratios that exceed 100.

Recent discoveries in India are in the Krishna-Godavari basin off the east coast. They could be easily used up in southeastern India and would not eliminate the need to import natural gas to the northwest. Similarly, recent discoveries in Pakistan would

help to prevent current production there from declining, but would not fill the anticipated growth in demand.

Natural gas can be transported by pipeline, or in liquefied form (LNG) in specially built tankers. The latter option is usually more expensive, depending on a number of factors such as distance and terrain. India has explored both tanker and pipeline options, but concerns about the reliability of a pipeline through Pakistan have led it to initiate LNG imports. These will mainly feed the existing natural gas system in the northwest, a region that could be less expensively served by a pipeline from Iran, the Gulf States, or Turkmenistan.

India's natural gas needs are expected to exceed 7 billion cubic feet per day by 2010. Importing by pipeline instead of tankers could save India more than \$2 billion per year. The pipeline could also help meet Pakistan's rising import needs, and save that country almost \$1 billion per year.^{viii} Several proposed pipeline routes are shown in Figure 1.

Obstacles and ways to overcome them. The proposal to build a natural gas pipeline to India through Pakistan has been under discussion for over a decade. Obstacles have been mainly political rather than economic or technical. The cost of building the pipeline has been estimated at \$4–5 billion, but local private investors could finance most of it. Multilateral funding agencies such as the Asian Development Bank have also indicated interest. Given the anticipated rates of return, large commercial banks are also likely to be interested.

India's main concern is the possibility of Pakistan cutting off gas supplies during periods of tension between the two countries. There are a number of ways to overcome this concern, including joint investments from both countries, guarantees by the country supplying the gas, and "take or pay" clauses in the supply contract (i.e., Pakistan would have to pay the supplier for the entire amount of gas, even if it did not transmit it on to India). The government in Pakistan was once reluctant to promote a project that would benefit India; but recently the pipeline has had the support of the larger political parties. During the past year, natural gas pipelines within Pakistan, and oil

The proposal to build a natural gas pipeline to India through Pakistan has been under discussion for over a decade

pipelines in Iraq, have been blown up by extremist groups. This concern would be shared by both countries, and could be reduced by joint patrolling of the pipeline route, placing electronic sensors along the route, and aerial monitoring.

Over time, more than one pipeline may be built, since demand in India for clean energy is so high. Simultaneously, a Southeast Asia component of a Southern Asia pipeline could be started, linking the existing Hazira-Bijaipur-Jagdishpur pipeline near Delhi with Bangladesh and subsequently Myanmar, Thailand, and Malaysia. Each country would have the ability to pump gas into the system, or to extract gas from it, as needed.

In the field of renewable energy, India's experience building and operating wind and solar facilities could benefit Pakistan and other neighboring countries. Similarly, some of the small-scale hydropower systems developed in Nepal, and energy-efficient water pumps developed in Pakistan, could be used throughout South Asia and beyond. Even though similar technology is available from several industrialized countries, it would have to be adapted to the subcontinent's physical and social conditions. There are thus clear benefits to making use of South Asia's own renewable-energy experience.

Détente between India and Pakistan would facilitate the smooth functioning of the nascent Asian Highway Network, and contribute greatly to regional development

Improving environmental quality. Fossil fuels, particularly coal and oil, are the world's largest source of urban air pollution. Coal will continue to be the largest source of commercial energy in India for at least the next few decades. To eliminate its use is unrealistic; but it may be possible to reduce its rate of growth, and this is where natural gas pipelines can have a major impact—improving air quality in the cities while helping to mitigate global climate change.

Transportation and trade. The construction and maintenance of a major natural gas pipeline network would require the simultaneous development of a parallel road system. India-Pakistan cooperation on a pipeline from Iran, the Gulf states, or Turkmenistan would provide an impetus for improving existing roads and railways and building new ones throughout the region. Especially important would be upgrading

the rail link between Delhi and Lahore, and establishing new rail and road systems between Pakistan's borders and Afghanistan and Iran, leading to Central Asia.

Trade between countries requires mutual interest as well as the presence of a suitable transportation infrastructure. Neither has been present between India and Pakistan for most of the last 50 years. Trade declined substantially after the partition of the subcontinent. During 1948–49, for example, about 56 percent of Pakistan's total exports were to India, and 36 percent of its imports came from India.^{ix} Around 1970, there was essentially no official trade between the two countries. During the fiscal year ending in 2002, less than 0.3 percent of India's exports went to Pakistan, and only about 0.1 percent of its imports came from Pakistan.

Without trade, even the modest transportation infrastructure that once existed has deteriorated. If détente between India and Pakistan were to last, new infrastructure would be needed to handle larger volumes of trade. This could be expanded to connect both countries with Central and Southwest Asia and the ASEAN countries. The landlocked Central Asian countries have, during most of the past century, oriented their trade toward Russia, but new transportation links southward would open up important trade channels with Pakistan, India, Bangladesh, and beyond.

In April 2004, 23 countries signed an agreement to complete a massive Asian Highway Network to rival the ancient Silk Road. The main route, Asian Highway 1, would start in Tokyo and pass through North and South Korea, China, Vietnam, Cambodia, Thailand, Myanmar, India, Pakistan, Afghanistan, Iran, and Armenia, ending in Istanbul. Détente between India and Pakistan would facilitate the smooth functioning of the Network, and contribute greatly to regional development. Some parts of the proposed Asian Highway Network near India and Pakistan are shown in Figure 2. Many of the links already exist, but would have to be upgraded to meet the requirements of an international highway.

The agreement was brokered by the United Nations Economic and Social Commission for Asia and the

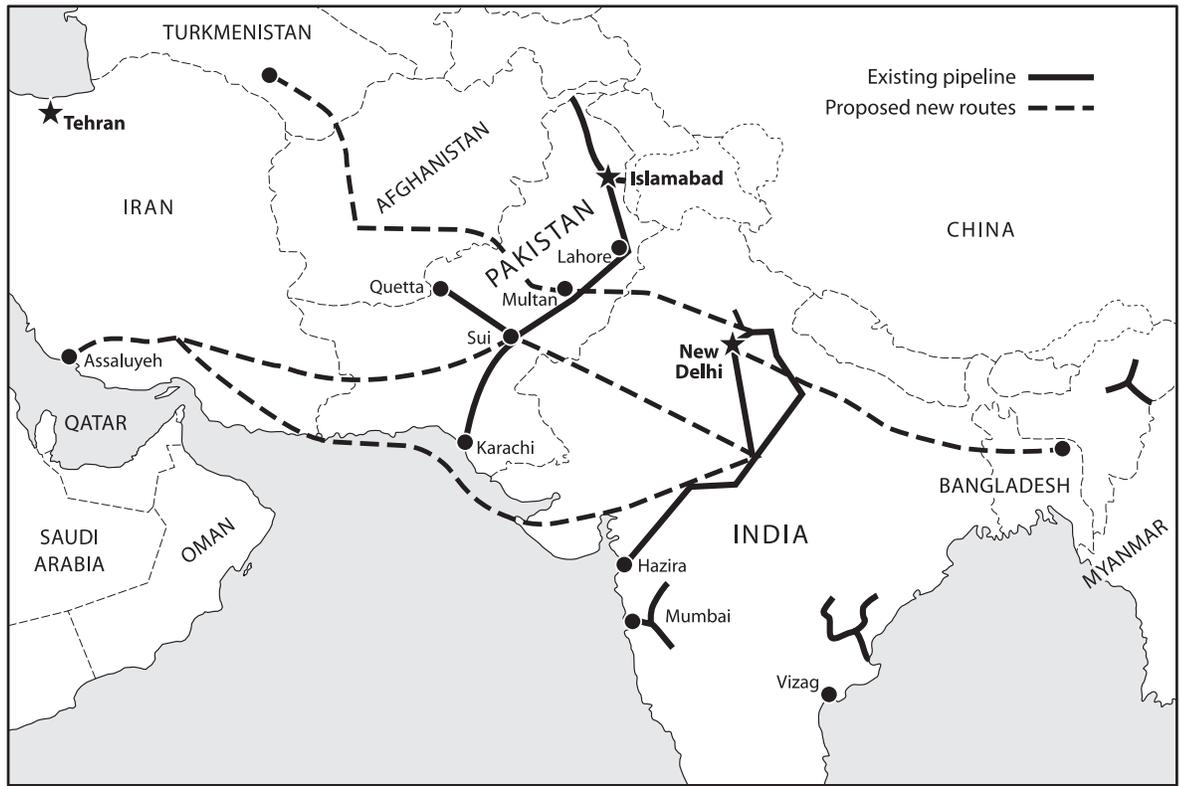


Fig. 1. Proposed routes of natural gas pipelines to India and Pakistan

Détente would provide an opportunity for policymakers and others from the region to work together on crucial sustainable-development issues

Pacific, which has also proposed trans-Asian railway routes. These may take a little longer to implement due to the variety of track widths in different parts of Asia. Within South Asia, however, most of the main lines have the same gauges. Thus movement of passengers and cargo within the region, once the political climate improves, would not have to await the construction of additional tracks.

Policy Recommendations

An India-Pakistan détente would provide an opportunity for policymakers, technical experts, the business community, and others from the region to work together on crucial sustainable-development issues such as the following:

- Estimating future energy requirements, assessing options for meeting them, and identifying the most economical and environment-friendly ones.
- Establishing a mechanism for local investors to work with multilateral funding agencies. Large-scale energy projects are more likely to succeed if

local people have a vested interest in them—for example, if a pipeline company was substantially owned by small shareholders in India, Pakistan, and neighboring countries.

- Examining options for improving air quality, along with their costs and social/political implications, and suggesting strategies for urban and rural areas.
- Encouraging countries to pool their technological expertise.

Groups established under the South Asian Association for Regional Cooperation (SAARC) have begun discussing some of these issues. Strained relations between the two largest countries in the region have prevented much progress in the past, and the current thaw provides a great opportunity to move forward.

Conclusion

Good relations between India and Pakistan could benefit all of South Asia, as well as Afghanistan, Iran, and the countries of Central Asia and ASEAN. Détente

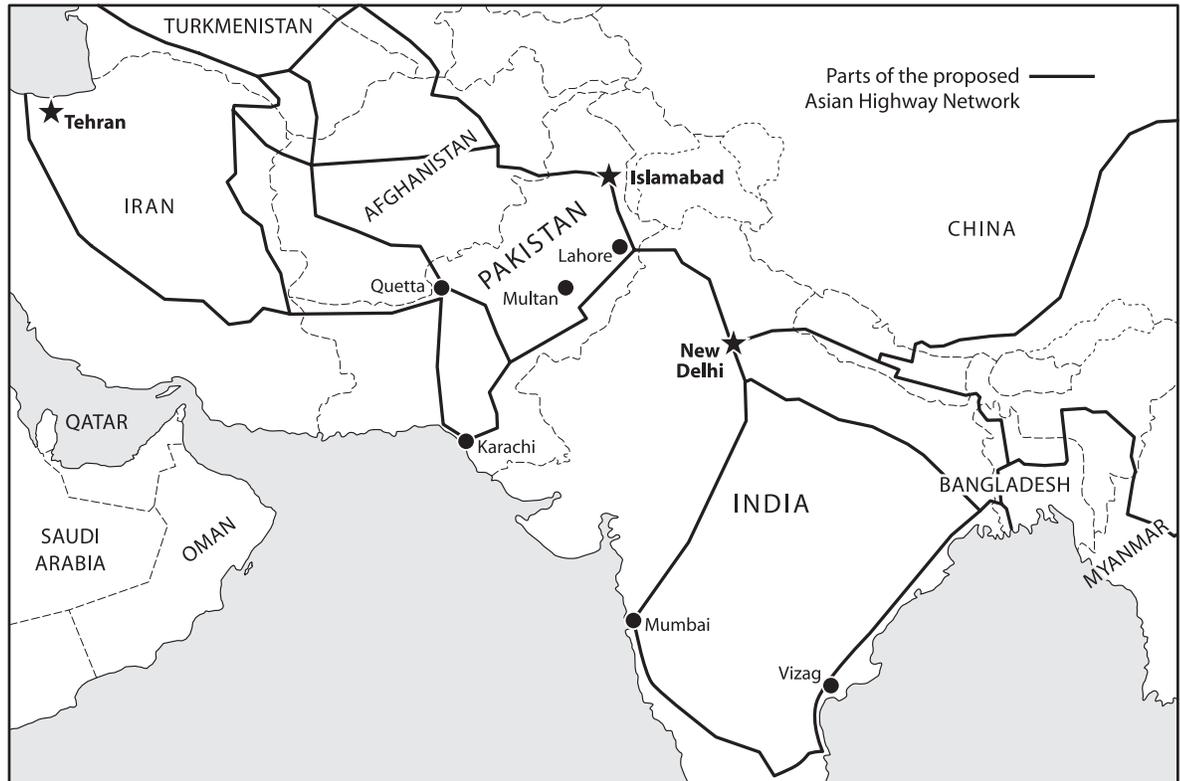


Fig. 2. Parts of the proposed Asian Highway Network

could benefit many sectors—economic development, political relationships, resource management, and trade patterns. It could also bring considerable humanitarian benefits, such as facilitation of visits between family members on opposite sides of the border.

Détente could have a strong impact on the interlinked sectors of energy, transportation, and environment. Energy is a basic requirement for economic development, and caring for the environment is crucial to sustainable development. The transportation sector is the fastest growing user of energy, and in most urban areas the largest contributor to environmental degradation.

A decision by India and Pakistan to cooperate in importing natural gas from Southwest or Central Asia would supply cleaner energy to both countries, build confidence, and open up a new dimension of trade for all the countries of Southern Asia.

A lasting détente between India and Pakistan could also result in a substantial reduction in military spending, estimated to be about \$10 billion and \$3 billion for India and Pakistan respectively.^x This “peace

dividend” could be used to build the natural gas pipeline, rail and road links, and infrastructure to handle increased regional trade. This could transform South Asia and neighboring countries, and it is very much to be hoped that the current thaw between India and Pakistan will lead to a genuine and long-lasting détente.

During periods of high tension between India and Pakistan, several countries, including the United States, China, and members of the European Union and SAARC, have helped to reduce tensions. Regarding the natural gas pipeline, Iran, Qatar, Oman, and Turkmenistan have provided encouragement. These efforts should continue; and international development agencies, including the Asian Development Bank and the World Bank, should lend support. Major projects such as those discussed in this paper would require substantial investments over lengthy periods and the help of many countries and organizations. But the benefits would go not only to India and Pakistan but also to neighboring countries and to the global community as a whole.

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Notes

ⁱ The data are from the Asian Development Bank 2003. *The Economist* (February 21, 2004, *A Survey of India*, p. 12) estimates that India's economy may have increased at a rate of 8 percent during the fiscal year ending in March 2004.

ⁱⁱ Traditional sources of energy such as firewood and animal and agricultural wastes are usually not included in the "commercial" category, even though they may have to be purchased in some locations.

ⁱⁱⁱ UNESCAP. 2001. *The State of the Environment in Asia and the Pacific 2000*. Bangkok: UNESCAP.

^{iv} For a more comprehensive discussion of these, see Siddiqi, Toufiq A. 1991. "National Energy-Environment Issues in Asia." In Asian Development Bank. 1991. *Environmental Considerations in Energy Development*.

^v Burning biomass such as firewood and animal wastes causes serious indoor air pollution in rural areas. This has major health impacts, particularly on women who do the cooking. These have been discussed, for example, in Smith, K.R. 2000. "National Burden of Disease in India from Indoor Air Pollution." *Proceedings of the National Academy of Sciences* 97(24): 13286-93.

^{vi} Current data are from Delhi Traffic Police, Article 35, Jan. 16, 2003. Earlier data are available in Tata Energy Research Institute. 2001. *TEDDY 2001/2002*.

^{vii} Quoted in Bose, Ranjan, et al. 2001. *Transportation in Developing Countries: Greenhouse Gas Scenarios for Delhi, India*. Arlington, VA: Pew Center on Global Climate Change.

^{viii} See, for example, Siddiqi, Toufiq A. 2003. *Enhancing Clean Energy Supplies for Development: A Natural Gas Pipeline for India and Pakistan*. Honolulu: Global Environment and Energy, for BALUSA, Inc.

^{ix} Schaffer, Teresita, Mandavi Mehta, and Amir Ahmad. April 2003. *Regional Economic Relationships: Trade, Energy and Water: A Report from the CSIS Project on Pakistan's Future and U.S. Policy Options*. Washington: Center for Strategic and International Studies.

^x Durrani, Mahmud A. 2000. *India and Pakistan: The Cost of Conflict: The Benefits of Peace*. Washington: School of Advanced International Studies, Johns Hopkins University Foreign Policy Institute.

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