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PREFACE

This bibliography provides selective annotations of open-source material on two current issues:

--nuclear developments in South Asia, and

--tactics and organization of the Afghan resistance

The bibliography incorporates serials and monographs received in March 1986 and is the eleventh in a series on these subjects.

Entries within each topic are arranged alphabetically by author or title. Call numbers for materials available in the Library of Congress are intended to facilitate recovery of works cited.

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1. NUCLEAR DEVELOPMENTS IN SOUTH ASIA

GLOSSARY OF TERMS

- AEMC The Atomic Energy Minerals Center at Lahore is responsible for finding and recovering uranium ore, thereby filling a vital need stemming from boycotts of Pakistan by international nuclear fuel suppliers.
- BARC Bhabba Atomic Research Centre is located in north Bombay and is India's facility for research in and development of nuclear technology.
- CHASHNUPP Pakistan's Chashma Nuclear Power Plant, a projected 900-megawatt facility in Mianwali District, Punjab, was sanctioned in 1982 in order to create electrical power through light-water technology.
- Cirus A Candu-type Canadian-built plant located at BARC, Cirus was commissioned in 1960. India reprocessed spent fuel from Cirus to make the plutonium for its 1974 "peaceful nuclear explosion;" Cirus has a capacity of 40 megawatts.
- Dhruva One of the world's few high-flux reactors, Dhruva, which went critical in August 1985, is solely the product of Indian research and production, and therefore, falls completely outside IAEA safeguards. Dhruva shares facilities with Cirus, its neighbor in the BARC, has a 100-megawatt capacity, and can produce 30 kg of plutonium annually.
- IAEA International Atomic Energy Agency (United Nations)
- Kalpakkam This Tamil Nadu town is the site of the Indira Gandhi Atomic Research Center (formerly MAPP) and gives its name to a 40-megawatt fast-breeder reactor which went critical in August 1985 using plutonium-uranium carbide fuel.

- KANUPP Karachi Nuclear Power Plant, a 125-megawatt reactor, was supplied by Canada on a turnkey basis and became operational in 1972.
- MAPP-1 Madras Atomic Power Project's first Candu-type 235megawatt unit was commissioned in January 1984. The center is located at Kalpakkam, Tamil Nadu, and was produced completely by Indian research and technology; consequently, its units and the plutonium they produce fall outside IAEA inspection safeguards. MAPP units are intended to provide electricity for Madras. In October 1985, MAPP was renamed the Indira Gandhi Atomic Research Center, but new names for individual plants have not been made public.
- MAPP-2 The second unit at Madras Atomic Power Project is also a Candu-type 235-megawatt plutonium and heavy-water reactor. MAPP-2 went critical in August 1985 and was commissioned in October of the same year.
- NPT The Nuclear Nonproliferation Treaty was ratified by the UN General Assembly in 1968. India and Pakistan contend that the NPT discriminates against nonnuclear states, but Pakistan has repeatedly offered to sign if India will do so simultaneously. In the UNGA, Islamabad voted in favor of the NPT.

PAEC Pakistan Atomic Energy Commission

- PINSTECH Pakistan Institute of Nuclear Science Technology, the site of a US-supplied 5-megawatt "swimming pool"-type reactor installed in the 1960s
- Tharapur The Tharapur nuclear power plant, located near Bombay, was built by the United States, has a capacity of 600 megawatts and can annually produce 50 to 80 kg of plutonium. Tharapur and its products come under IAEA inspection safeguards.

CITATIONS AND ABSTRACTS

Joeck, Neil. "Pakistani Security and Nuclear Proliferation in South Asia." Journal of Strategic Studies (London), vol. 8, no. 4, December 1985, p. 80. U162.J68

Pakistan has worked quietly on acquiring a nuclear capability since 1974 and now may be on the threshold of building atomic weapons. If Islamabad does choose to press forward in this respect, however, the negative results will outweigh the positive benefits. India will develop its own nuclear weapons to match Pakistan. The United States will distance itself from Islamabad and could terminate its aid program. The Soviet Union will remain allied with India and could launch a preemptive strike against Pakistani nuclear installations. Israeli insecurity will be heightened and China will treat Pakistan with greater reserve. These negative developments would be balanced by a increase in Pakistan's prestige among Arab and other regional states.

"Kalpakkam Unit Shut Down." <u>Hindu</u> (Madras), 26 March 1986, p. 1.

Unit-1 of the Madras Atomic Power Station at Kalpakkam was shut down following the breakdown of the generator transformer. The mishap was caused by a winding failure. A replacement transformer is not readily available, and one will be cannibalized from the Narora Atomic Power Station now under construction. Replacement will take about 2 months. At the time of its breakdown, the Kalpakkam facility was generating about 200 MW of electricity, or about 20 percent of the energy for the state of Tamil Nadu.

"Pak Scientists Split Over N-Plans." <u>Times of India</u> (Bombay), April 1986, p. 17

Apparent discord has surfaced in Pakistan's scientific community over the assessment of the country's nuclear program. In a letter to the editor, a noted Pakistani physicist levels heavy criticism at the chairman of the nation's atomic energy commission, Munir Ahmad, for inept leadership and bureaucratic inertia. The scientist

charges that under the leadership of Dr. Abdul Qadir Khan, the father of Pakistan's nuclear program, instead of Ahmad, the commission could have achieved far more, and that under Khan, Pakistan would now have in addition to an enrichment plant, its own reactor, heavy water plant, and reprocessing facility. The scientist concedes, however, that at present Pakistan explores for and mines its own uranium, converts it into pellets, and makes its own fuel bundles. The country also has kept in operation its lone atomic power plant, KANUPP, near Karachi, in spite of the fact that Canada reneged on its commitment and stopped supplying fuel for the facility.

"PINSTECH Completes 20 Years of Existence." <u>Muslim</u> (Islamabad), 22 December 1985, p. 8.

PINSTECH has just celebrated its 20th anniversary. Through the years, the institution made a number of contributions in the scientific field. It first observed the emissions of five heavy-reaction materials and high-multiplicity nuclear events; it produced a variety of radioisotopes and operated facilities to convert them into appropriate compounds and pharmaceuticals. It also helped make Pakistan self-sufficient in the production of nuclear fuel. Within PINSTECH, the Center for Nuclear Studies (CNS) has become a degree-granting institution with a formal program of instruction and intern training leading to a Master of Sicence in nuclear engineering. CNS also offers courses in industrial radiography.

Quester, George H. "Some Pakistani Problems and a Nuclear Non-Solution." <u>Journal of Strategic Studies</u> (London), vol. 8, no.4, December 1985, p. 99. U162.J68

Any Pakistani move toward the development of nuclear armaments will be tied to India's own determination to build atomic weapons. However, a Pakistani nuclear bomb would bring Islamabad immense prestige from the entire Muslim world from Morocco to Indonesia. Ultimately, this may be more important for Pakistan than any prospective military uses of such weapons. The task for the United

States, the Soviet Union and other states that value non-proliferation is to see to it that Pakistan's needs and ambitions do not compel it to detonate a nuclear device.

"Strategic Consequences of Nuclear Proliferation in South Asia." Journal of Strategic Studies (London), vol. 8, no. 4, December 1985. U162.J68

This special issue examines through the articles of nine authors the impact of possible nuclear proliferation in the Indian Subcontinent on the regional and superpowers, and on the participants themselves. Countries covered include the United States, the Soviet Union, China, Iran, India and Pakistan. An introductory essay places the overall issue of nonproliferation within the South Asian context. Within this bibliography, individual articles relating to the subject in India and Pakistan appear listed by author.

Thomas, Raju G.C. "The Strategic Consequences of Nuclear Proliferation in South-west Asia: India's Perspective." <u>Journal of Strategic Studies</u> (London), vol. 8, no. 4, December 1985, p. 67. U162.J68

Indian policymakers view their nation's nuclear program as having a dual purpose: the provision of technological knowhow for power generation and the preservation of the option to develop weapons for security purposes in the future. New Delhi will reserve the right to produce its own atomic weapons to deal with the overt or clandestine nuclear armaments program of its potential foes, China and Pakistan. India will neither be deterred in this respect by the Soviet Union nor by the United States. For the present, for reasons of self-interest based on economic motives, New Delhi has chosen not to exercise its nuclear option.

"To Go, Or Not To Go, Nuclear." <u>RUSI News Brief</u> (London), no. 57, October 1985, p. 2.

Indo-Pakistani relations are at a low ebb because of New Delhi's fears that Islamabad's nuclear weapons development program is nearing completion. India denies, however, that it is planning any escalatory response of its own, such as developing a hydrogen bomb. Pakistan denies that its nuclear program has any military objective and has warned that any attack on its nuclear facilities would be an act of war. India, in the meantime, recently started its own fast- breeder reactor which is capable of producing fissile material and is not under international safeguards.

Yelin, L. "Pakistan: On the Quiet." <u>New Times</u> (Moscow), 52/85, p. 20. D839.N483

According to US government sources quoted in the Soviet media, Pakistan will be able to produce annually sufficient enriched uranium for six nuclear bombs by the late 1980s. More than 1,000 centrifuges are operating at Kahuta, Pakistan's main nuclear center, 30 miles southeast of Islamabad. These centrifuges can produce about 15 kilograms of highly enriched uranium each year. Some 2,000-3,000 uranium isotope separation units also are in operation, and a new installation for enriching uranium has been erected at Multan. This area also is the site of an experimental testing ground. In spite of a failed attempt in 1984, Pakistan has managed to procure illegally from the United States a number of krytrons, components that form part of the triggering mechanism for a nuclear device. According to US journalist Jack Anderson, a nuclear bomb developed by Pakistan would have a yield of about 10-15 kilotons, or about the capacity of the weapons used against Japan toward the end of World War II. The Pakistani nuclear program, referred to as "Project 706," is headed by Professor Abdul Qadir Khan, a scholar who earned his doctorate at a Belgian University in 1972. He is assisted by several senior military officers, among them a General Anis, a General Akbar Khan, and a COL Umar Din Dar. According to the Soviets, Pakistan also is

working on the development of a plutonium bomb. The main installation for this research is the nuclear fuel-regeneration plant at Chasma.

2. TACTICS AND ORGANIZATION OF THE AFGHAN RESISTANCE

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GLOSSARY OF TERMS

- Commander A resistance fighter who is recognized as a military leader in local or regional areas of conflict; some commanders are respected outside their own regions, but there is not yet a coordinated, nationwide, insurgent command in Afghanistan. The title commander is the only honorific or rank recognized by the resistance movement.
- Dushmani (singular: <u>dushman</u>) Soviet pejorative term for Afghan insurgents; it means "bandit" and originated during the 1930s Central Asia resistance.
- DRA The Democratic Republic of Afghanistan was established by a coup in April 1978 but controls only small parts of Afghan territory concentrated along the major highways, airbases, and military installations, and urban centers, including Kabul---none of them are secure from resistance guerilla operations.
- KHAD DRA intelligence service whose operations are entirely directed by its many Soviet KGB advisors. The acronym stands for Khedmat-Etala'at-e-Daulati (State Information Service). KHAD received ministerial rank in January 1986.
- Mujahideen (singular: <u>mujahid</u>) This Islamic term means "holy warrior," but it is most often used as a name for Afghanistan's resistance fighters, who consider their campaign a <u>jihad</u> (holy war) to drive unbelievers from their country.
- Spetznaz Soviet special warfare troops under the GRU (Military Intelligence Directorate) of the Soviet Ministry of Defense. These highly mobile units are deployed throughout Afghanistan for operations which require more skill or loyalty than is commonly displayed by Soviet or DRA troops.

CITATIONS AND ABSTRACTS

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"India Training Afghan Army in Kabul, Delhi." <u>Pakistan Times</u> (Lahore), 6 March 1986, p. 1.

Gulbuddin Hekmatyar, leader of the fundamentalist Hezb-Islami, declares in a Peshawar news conference that the newly formed alliance of seven mujahideen groups is holding firm and is proving very helpful in stepping up the resistance to the Soviet forces in Afghanistan. He labels the Geneva talks aimed at ending the war in the embattled country "a futile exercise" and declares that the only solution to the Afghan crisis is "the unconditional withdrawal of foreign troops from our country." The fundamentalist leader also accuses India of training DRA army personnel both in Afghanistan and India and of supplying mines to the DRA for use against the mujahideen. He also reports that members of the outlawed lefist Tudeh Party in Iran have now moved to Afghanistan where they are working under the tutelage of the Soviets.

Perrin, Jean-Pierre. "Journalist Gives Account of Resistance Movement." Journal de Geneva, 27 December 1985, p. 26. In JPRS-NEA-86-034, 20 March 1986, p. 85.

The Soviets in Afghanistan are making increasing use of elite commando forces who are proving to be formidable Nevertheless, the mujahideen are adjusting to them, foes. although the insurgents are chronically short of ammunition. Ab'd Ul Haq, resistance commander in the Kabul area, states his preference for small engagements by fast-moving guerrilla units over major operations, because large insurgent concentrations are particularly vulnerable to Soviet helicopter gunships only a few minutes flying time away. Nevertheless, a new dimension has been added to the war in Afghanistan by the arrival of increasing numbers of Chinese SAM-7B and M-107 missiles for the The SAMs add an element of uncertainty for guerrillas. Soviet aircrews, but the effectiveness of the M-107s has yet to be assessed. The mujahideen employ these latter surface-to-surface missiles without launchers to save weight and avoid overtaxing their limited transportation capability. The missiles are grouped in a battery formation and fired in a salvo against area targets just after nightfall. This gives the mujahideen firing the

missiles time to withdraw and elude pursuing forces during the hours of darkness.

Perrin, Jean-Pierre. "Mujahidin Caught in Regional Conflict More Than Ever." Journal de Geneve , 14 January 1986, p. 2. In JPRS-NEA-028, 3 March 1986, p. 112.

In Paktia Province (Afghanistan), a leading resistance commander, Jalaluddin Haqqani, has established a number of base areas near the Pakistan border. His own headquarters consists of shelters dug into the mountainside. These include a hospital, a mosque and subterranean workshops where ordnance and automotive technicians repair captured vehicles and small arms. The complex is protected by a number of air defense weapons, including missiles. Pakistani instructors are now crossing into Afghanistan to give the mujahideen weapons training, and Islamabad has lifted the ban on the shipment through its territory of missiles destined for the Afghan insurgents.

Steel, Jonathan. "How the Revolution Caught On." <u>Guardian</u> (Manchester, UK), 18 March 1986, p. 21.

In the second article of a series, the author reports on the social reforms that the Kabul regime has embarked upon in areas under its control. Among these new measures are the promotion of literacy and the respect for religious institutions. Islamic clergy in government areas now are given a stipend; the new governor of Balkh Province is a mullah; and religious studies are permitted in mosque schools. Party rifts between the two factions of the PDPA have been plastered over, if not completely healed, and the regime has expanded the nonparty membership of the Council of Ministers and the Revolutionary Council. Soviet advisors have pushed the DRA to broaden the base of its regime, while urging a slow and measured implementation of modernistic reforms that sparked the present insurgency and brought about the downfall of the two previous, unpopular Marxist regimes.

Steel, Jonathan. "The Reforms That Outflank Rebels." <u>Guardian</u> (Manchester, UK), 17 March 1986, p. 19.

In the first article of a series, the author reports that the tide of battle has begun to turn against the Afghan insurgents. Touring the area of Mazar-e-Sharif (Balkh Province) in northern Afghanistan, he notes that in contrast to the situation in previous years, the DRA is gradually extending the zones under its control. There is apparant acquiescence, even acceptance, of government modernization programs among the rural population, and the establishment of local part-time militia, called "Defenders of the Revolution," finally has taken root. The mujahideen, for their part, have been hard hit by a succession of reverses. Zabibullah Khan, the foremost guerrilla leader in the area, was killed by a landmine in late 1984 and his loss has proven irreplaceable. Combat losses and a steady stream of defectors, enticed by Kabul's offer of amnesty, have eroded insurgent strength considerably in the area of Mazar. Defectors tell of disaffection and rivalries in guerrilla ranks and acknowledge with gratitude their absorption into Afghan society upon their return. A similar pattern of war-weariness and DRA success in winning hearts and minds emerges from the Kabul area. Around the capital, there is now a belt of pacified villages extending in a radius of about 10 miles from the city's center. Moscow's pacification strategy is beginning to pay off.

Steele, Jonathan. "Why the War Must Go On." <u>Guardian</u> (Manchester, UK), 19 March 1986, p. 21.

In the last article of a series, the author reports that 6 years after the Soviet invasion, the Marxist revolution in Afghanistan is still encountering considerable difficulty in winning acceptance. The main impediments are the continued presence of Soviet military forces and the image of the DRA regime as a Kremlin puppet. Nevertheless, Soviet advisors in the embattled country feel that time is on their side and that the mujahideen gradually will be worn down through defections, while the uncommitted and war-weary are won over by development programs. Soviet

optimism is borned out by journalists traveling behind rebel lines who report that insurgent casualties are higher than ever, and that, consequently, morale among the combatants is flagging. In the medium term, the Soviets hope that growing political turbulence in Pakistan will help their cause, as internal pressure mounts on the regime in Islamabad to reach an accommodation with its Marxist neighbor.