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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 the previous month and is part of a continuing series on the above subjects.

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

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1. NUCLEAR DEVELOPMENTS IN SOUTH ASIA

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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.
CHASHNU PP	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.

- 2 -

- 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
- Tarapur The Tarapur nuclear power plant, located near Bombay, was built by the United States. It has a capacity of 600 megawatts and can annually produce 50 to 80 kg of plutonium. Tarapur and its products come under IAEA inspection safeguards.

CITATIONS AND ABSTRACTS

"60 Indian Nuclear Bombs A Year By 1990." <u>Statesman</u> (Calcutta), 10 November 1986, p. 9.

A US congressional study estimates that India's plutonium reprocessing capacity will be sufficient to produce 60 bombs a year by 1990. According to Leonard Spector, nuclear expert of the Carnegie Foundation, recent progress toward nuclear capability on the subcontinent signals the failure of American efforts to limit proliferation.

Das Gupta, Amalendu. "Our Dismissive Experts: Unwitting Aid to Pakistani Evasion." <u>Statesman</u> (Calcutta), 15 November 1986, p. 8.

The author suggests that Indian nuclear scientists have clouded the Pakistani threat by discounting reports of Pakistan's nuclear progress and overstating India's abilities to enrich uranium. In a press conference on November 4, Dr. Raja Ramanna, Chairman of the AEC, characterized Pakistan's enrichment capabilities as minimal, and suggested that India already had the ability to enrich uranium to any level in any amount. In the first instance, Das Gupta argues that India has no reason to doubt recent US press reports that Pakistan has enriched uranium above a 90% level. He claims that Ramanna's disparaging remarks are based more on professional pride than on inside information. As for India's own capability, he argues that if Ramanna's claims were true, India would have been spared the "protracted uncertainty and humiliation" of relying on outside sources to fuel the Tarapur plant. Instead, he suggests that India has only small-scale, experimental programs in the different techniques of uranium enrichment, but that the country is far from self-sufficient in enriched fuel production.

"Heavy Water Leak." <u>Hindu</u> (Madras), 2 October 1986, p. 7. In JPRS-TND-86-025, 17 November 1986, p. 39.

Heavy water leakage was reported at the second unit of the Rajasthan Atomic Power Project in Rawat Bhata. On September 29, engineers discovered a flaw in the

mechanical shield of the reactor's moderator system pump and the unit was shut down.

"Indian N-Plants 'Most Dangerous.'" <u>Times of India</u> (Bombay), 26 November 1986, p. 16.

Indian nuclear reactors are the most dangerous in the world, according to Mrs. Helen Caldicott, a well-known opponent of the nuclear industry and a nominee for the 1985 Nobel Peace Prize. In a speech in Bangalore, she claimed that Indian workers were exposed to unacceptable levels of radiation, and she challenged the government's findings on the safety of its nuclear power stations.

"Kalpakkam Unit Restarted." <u>Hindu</u> (Madras), 7 November 1986, p. 1.

On the morning of November 6, the second unit of the Madras Atomic Power Station (MAPS) was restarted after almost two and a half months of inactivity. The 235 MW reactor had been shut down on August 14 when bundles of spent fuel became lodged in the fuel transport system. The clean-up operations were completed on October 29, and safety clearance was given one week later.

Milhollin, Gary. "India's Nuclear Cover-Up." <u>Pakistan Times</u> (Lahore), ll November 1986, p. II.

The author claims that India's annual heavy water usage far exceeds the amount it officially produces and imports each year. He concludes that the government is either importing it illegally, diverting it from safeguarded plants or both.

Milhollin relies on Indian public records to calculate domestic production at India's five heavy water plants (Nangal, Baroda, Tuticorin, Kota and Talcher), as well as its total demand (including start-up requirements and estimated annual losses). When imports are figured in,

Milhollin finds that India's supply was sufficient for its needs until 1983, when the Madras Atomic Power Project (MAPP) was started up. An unsafeguarded plant, MAPP can not legally use the water in India's safeguarded reserves. With the addition of a second MAPP reactor and the Dhruva experimental reactor, both without safeguards, India now requires 157 tons of heavy water each year beyond what is legally available according to the government records.

The author concludes that the Indian Government, either alone or in collusion with another government, is deliberately circumventing IAEA safeguards. He calls on the United States and the Soviet Union to enact an embargo on all nuclear trade until India has accounted for the discrepancies in its own statistics.

"RAPS Unit To Be Expanded." <u>Times of India</u> (Bombay), 21 November 1986, p. 6.

> The Indian Government has authorized 7.12 billion rupees in funding for the expansion of the Rajasthan Atomic Power Station. The plan entails the addition of two 235-MW reactors to the current facilities. In order to expedite the construction of the new reactors, the government has given advance approval for the procurement of critical construction materials and equipment.

Reddy, G.K. "Govt. Has Clear Proof of Pak's Bomb Capability." <u>Hindu</u> (Madras), 12 November 1986, p. 1.

Indian experts have revealed conclusive evidence that Pakistan actually did conduct a test of a nuclear triggering mechanism in Baluchistan this last September. According to the same experts, only a half dozen members of the Pakistan Government were aware of the test.

Having already achieved uranium enrichment beyond the 90% level, Pakistani scientists have constructed all the components necessary for a crude bomb of the type used in Hiroshima. It is only the political factors that have stopped them from actually assembling the weapon.

Aside from their work in uranium enrichment, Pakistan has also been working to reprocess plutonium at two separate facilities, Chashma and New Labs near Rawalpindi. These two plants have the capacity to produce plutonium-239 sufficient for one bomb a year.

Although faced with a growing nuclear threat from across the border, the Indian military has failed to conduct a serious study on the use of nuclear weapons in a regional conflict.

"Separate Power Corpn for N-Plants Soon." <u>Patriot</u> (New Delhi), 21 November 1986, p. 5.

The Indian Atomic Power Board will be converted into a Nuclear Power Corporation (NPC) in order to tap the resources of the private sector in expanding the nation's nuclear power industry. K.P. Narayanan, Minister of State for Science and Technology announced that foreign collaboration would be barred in order to protect sensitive information on India's nuclear industry.

"Zia Orders Pakistan AEC To Design Indigenous Nuclear Reactor." Nucleonics Week (New York), 13 November 1986, pp. 3-4.

Unsuccessful in its efforts to purchase a 900 MW nuclear reactor from the West, Pakistan has begun work on the design and manufacture of an indigenous reactor. While the government has declined to give details of the proposed project, it is likely that the new reactor will be similar to the 137-MW Kanupp reactor supplied by Canada. Pakistani scientists gained a tremendous amount of experience in the workings and construction of this reactor in the wake of Canada's 1974 nuclear embargo against Pakistan. Kanupp is a heavy water reactor which Pakistan has been operating with indigenous fuel and with an increasing number of indigenous spare parts. 2. TACTICS AND ORGANIZATION OF THE AFGHAN RESISTANCE

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 as the result of a coup led by Mohammad Nur Taraki and Hafizullah Amin in April 1978. Deteriorating internal security led to military intervention by the Soviet Union in December 1979 and Amin was killed by the invading troops. The Soviet invasion transformed armed resistance toward the modernistic but arbitrary reforms of Taraki and Amin into a war of national liberation.
- 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

Doder, Dusko. "Soviets Reappraising Afghan Role--Confidence Gives Way to Doubts After 7 Years of Fighting." <u>Washington</u> <u>Post</u>, 27 December 1986, pp. Al,Al7.

The author asserts that the new "pragmatism" of Soviet leader Mikhail Gorbachev may lead him and other Politburo leaders to a sobering reappraisal of their Afghan misadventure. The Soviets once believed that a "limited contingent" of troops would succeed in quickly establishing Afghanistan as a client state. Seven years and about 25,000 casualties later, the Soviets are now showing tangible evidence of their frustration. The author cites the release of dissident Andrei Sakharov who, once jailed for denouncing the Soviet invasion, is free from exile and demanding decisive measures for a speedy conclusion to the war. The Afghan conflict, no longer a "closet war", is now being covered by Soviet television. Of great significance, according to the author, is a statement by Yevgeny Primakov--a senior Soviet official--that the Kremlin plans to withdraw its troops from combat in Afghanistan even if its efforts at a political solution fails. The author, however, dilutes some of the optimism of his article by cautiously noting that the Soviets have, in the past, been willing to spend decades wearing down Islamic guerilla groups in Central Asia.

Gwertzman, Bernard. "Stingers Aiding Afghans' Fight, U.S. Aides Say." <u>New York Times</u>, 13 December 1986, p. 1.

US officials claim that the military situation for the mujahideen is now better than at any other time. Thanks to the Stinger anti-aircraft weapons in their arsenal and better overall warfare tactics, the resistance is now posing significant problems for Moscow. Speculation abounds that the Soviets may press for a negotiated settlement of the war. Fueling these speculations was the recent appearance not only of Najibullah but of the entire DRA top leadership in Moscow for talks with Mikhail Gorbachev.

Haqqani, Husain. "Mujahideen On the Move." <u>Far Eastern Economic</u> <u>Review</u> (Hong Kong), Vol. 134 No. 48, pp. 27,28. HC411.F18.

After a summer lull in fighting, combat is now reported to be heavy in all of Afghanistan's provinces. The mujahideen have revised their strategy to cope with increased Soviet use of aerial bombardment, and are now concentrating on targets in and around small provincial towns, thereby sparing the rural populace from direct Soviet retaliation and also enabling them to counter Najibullah's plans for winning popular support by establishing a "grassroots" network of rural community councils. Resistance coordination seems to be improving, most significantly between the Sunni and Shia groups in the central Hazarajat region. Soviet aircraft losses are also mounting and a British journalist, recently returned from Afghanistan, reports seeing deployment of the American Stinger missile by the Hizb-i-Islami group.

Lee, Gary. "Afghan Chief Announces Cease-Fire." <u>Washington</u> <u>Post</u>, 2 January 1987, pp. Al,A20.

DRA leader Najibullah was quoted by Tass as having offered the mujahideen a cease-fire. The cease-fire would be contingent on reciprocal rebel participation, Najib said, and is part of what the Afghan leader calls his "national reconciliation" program. Najib claims that 417 "gangs" representing 37,000 people are presently involved in talks with the Kabul government but all major Afghan resistance groups emphatically disclaimed any such contact.

Ottaway, David. "Big Losses of Soviet Planes Cited." <u>Washington</u> <u>Post</u>, 17 December 1986, p. A32.

The Afghan resistance is now effectively using Stinger anti-aircraft missiles and is downing an average of one plane/helicopter a day. Deputy Assistant Secretary of State Robert Peck calls this rate of Soviet aircraft losses "unprecedented" but refused to say whether the

US-supplied Stingers were responsible. Deputy Secretary of State John C. Whitehead added that despite Soviet efforts "on all fronts--military, political, and diplomatic," the Afghan resistance had by the year's conclusion, ended up in a strong military position. Whitehead also stated that due to mujahideen successes, the Soviets had drastically revised military tactics over the past year, abandoning large-unit sweep operations in favor of smaller operations employing heliborne assault troops.

"The Afghan Resistance." <u>Washington Post</u>, 17 December 1986, p. A26.

Some representatives of the Islamic resistance groups are renewing their demands for diplomatic recognition. This editorial weighs the pros and cons of such a request. The mujahid leaders want the United States to withdraw its embassy from Kabul, grant diplomatic recognition to the resistance, and support a transfer of Afghanistan's seat in the United Nations from the DRA to the resistance. While the United States supports the mujahideen morally and politically, there are specific reasons it does not promote the idea of diplomatic recognition. The seven major resistance groups, the State Department notes, are still tribally and ideologically divided, and do not present as yet a credible program for a future government. Furthermore, as long as the United States recognizes the DRA regime it can maintain a listening post in Kabul. But most importantly, since the Kabul regime has a presence in the UN, it is exposed to repeated and deserved castigation by an overwhelming majority of the Assembly for its reliance on Soviet military muscle and its violations of human rights.

"The Afghans' Long Haul." <u>Washington Post</u>, 31 December 1986, p. Al8.

Soviet officials have recently proclaimed their sincerity in wanting a "neutral" Afghanistan. This editorial warns that the West is being "hoodwinked" by Gorbachev's claim to openness and by his professed desire to remedy the

error of his predecessor's initiation of the interminable Afghan war. Gorbachev is indeed interested in withdrawing Soviet troops but only after a successful "Afghanization" of the war effort. The article advises that the United States must continue its prudent course of supporting the military struggle of the resistance and to encourage a Soviet-free political evolution of the country. The Soviets, despite their rhetoric, are probably settling in for the long haul. Supporters of the resistance must do likewise.