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Author: Russell R. Ross

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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 February 1986 and is the tenth 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

<u>GLOSSARY - NUCLEAR DEVELOPMENTS IN SOUTH ASIA</u>

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)

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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 non-nuclear 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.

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CITATIONS AND ABSTRACTS

"Briefly...India." <u>Nucleonics Week</u> (New York, NY), vol. 27, no. 3, 16 January 1986, p. 17. HD9698.AlN8

According to India's seventh five-year plan, the capital outlay budget for nuclear-related projects will amount to \$2.3 billion for the period 1985-90. Of this total, \$1.2 billion will be allocated for power projects and an estimated \$262.5 million for research and development. The plan anticipates commissioning of the MAPP-2 and two 235-MW units at Narora, continuation of the two-unit Kakrapar project, and initiation of work on four 235-MW units.

"Canada Won't Resume N-Fuel Supplies to Pakistan." <u>Ceylon Daily</u> <u>News</u> (Colombo), 23 December 1985, p. 11.

Canadian Foreign Minister Joe Clark announces that Ottawa will not resume nuclear fuel supplies to Pakistan because Islamabad does not seem ready to comply with Canada's "strict standards" of nuclear cooperation. Years ago, Ottawa had agreed to supply fuel to the Karachi nuclear power plant, but later changed its conditions when India exploded a nuclear device in May 1974. The agreement on nuclear cooperation between Canada and Pakistan ended in 1976, after Islamabad declined to permit Canadian access to all its nuclear facilities.

"France Scraps N-Deal with Pak." <u>Times of India</u> (Bombay), 15 February 1986, p. 1.

France has declined to supply Pakistan with a nuclear reprocessing plant after years of negotiations and instead will compensate Islamabad financially for breach of contract. The agreement to erect the facility at Chashma originally was signed by the Pakistan Atomic Energy Commission with a French firm ten years ago, but Paris came under pressure from the United States to postpone its implementation.

"India, Pak Agreement Over N-Installations Likely." <u>Patriot</u> (New Delhi), 17 February 1986, p. 7.

India and Pakistan soon will sign an agreement to refrain from attacking each other's nuclear installations. The text of the agreement was finalized during a recent meeting between Prime Minister Rajiv Gandhi and President Zia-ul Haq in New Delhi.

Murthy, K.S.N. "Trend Setter in Design Improvements." <u>Hindu</u> (Madras), 16 December 1985, p. 17.

Discusses the design improvements of the Madras Atomic Power Station (MAPS) over the older Rajasthan Atomic Power Station (RAPS). The two power reactors at MAPS are of the pressurized heavy water type, using natural uranium with 0.7 percent U-235 as fuel and heavy water as moderator and coolant in two independent circuits. Innovations include the provision for automatic steam dumping to the condenser to obviate poisoning out (absorption of neutrons by xenon buildup) of the reactor. End shields to protect personnel working during shutdown at MAPS have been constructed of stainless steel, which has a greater capacity to withstand radiation than the 3.5 percent nickel steel at older plants. Substantial improvements have been made in the vapor recovery dryer systems that trap escaping heavy water vapor at MAPS. All the major equipment and components used at the installation are of Indian manufacture. MAPS is expected to be a trend setter in perforamance and safety among domestic reactors.

"Pakistan, India Reach Nuclear Agreement." <u>Ceylon Daily News</u> (Colombo), 19 December 1985, p. 11.

President Zia-ul Haq announces, after meeting with Prime Minister Rajiv Gandhi in New Delhi, that Pakistan and India have agreed not to attack each other's nuclear installations. Officials of both countries will meet later in the year to formalize the verbal agreement made by the two leaders.

2. TACTICS AND ORGANIZATION OF THE AFGHAN RESISTANCE

GLOSSARY - TACTICS AND ORGANIZATION OF THE AFGHAN RESISTANCE

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 command. Commander is the only military honorific or rank accorded 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 Kabulnone of them 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

Cloughley, Brian. "Breech Bolts Click on the Baluchistan-Afghan Border." <u>Pacific Defense Reporter</u> (Kunyung, Australia), February 1986, p. 18.

The Harekat-Inquilab-Islamiye-Afghanistan (Islamic Revolutionary Movement of Afghanistan), operating in the Baluch areas of southwest Afghanistan, can muster about 1100 combatants. However, command and control problems caused by a lack of radios and ignorance of radio-telephone procedures limit the size of Harekat operations to a maximum of 350 men. Guerrilla leaders brief their subordinate commanders on a forthcoming operation in person. These commanders, each leading groups of about 20 men, then infiltrate to a preplanned assembly area. From there, they deploy toward their objective. The actual assault begins either with a "timed attack," or a "noisy attack." A "timed attack" begins at a predetermined time interval after leaving the assembly area. A "noisy attack" begins with the firing of flares by either side, or by a heavy, simultaneous assault fire by the insurgents. These tactics work well enough when the guerrillas have superiority in numbers, but end in debacle otherwise. A tragic deficiency on the insurgent side is the lack of a medical evacuation system, which dooms many a wounded guerrilla before he can reach treatment.

Girardet, Edward. "Afghan Resistance Leaders Strive for Unity to Battle Soviet Occupation." <u>Christian Science Monitor</u> (Boston), 16 December 1985, p. 11.

The leaders of the seven major insurgent organizations fighting the Soviets in Afghanistan have taken a major step toward forming a resistance government by establishing a number of joint committees, ranging from political to educational, that will coordinate the overall insurgent effort. The new measure follows an earlier decision this year to establish a joint military committee in which each of the seven leaders will serve as chairman on a three-month basis. The need for unity among the Afghan rebels is more pressing than ever, as improved Soviets tactics and firepower are exacting a heavy toll on the resistance fighters. Previous alliances invariably have split into moderate and fundamentalist factions, or

have collapsed entirely into total disagreement. Internecine strife among the guerrilla fronts is still reported from the interior of Afghanistan. Gulbuddin Hekmatyar, leader of the fundamentalist Hezb-Islami, which has frequently been accused of infighting with the other rebel groups, now is cultivating a moderate image as a resistance leader and statesman. He has made several trips behind the lines in Afghanistan and has campaigned energetically abroad to gain more foreign support for the resistance.

Girardet, Edward. "Afghanistan: Soviets Get Tougher." <u>Christian</u> <u>Science Monitor</u> (Boston), 27 December 1985, p. 1.

Neither side in the Afghan war has been able to score a decisive victory in the past 18 months. Nevertheless, there are signs that the Soviets are gradually gaining the upper hand in some parts of the wartorn country. Insurgent concentrations and base areas have been badly hit in Balkh, Badakshan, Nimruz and Ghazni Provinces and have suffered telling losses from helicopter gunships, Spetznaz ambushes, subversion by KHAD agents and loss of experienced commanders, either through combat or assassination. Other insurgents fronts, among them the organizations of Abdul Haq near Kabul, Ahmed Shah Massoud in the Panjshir Valley, and Ismail Khan in Herat, have managed to adapt to improved Soviet tactics and increased firepower. However, overall insurgent capabilities still suffer from a lack of hand-held SAMs to engage Soviet gunships, insufficient or inappropriate stand-off weapons such as the present 107mm rocket that is of limited range and accuracy, consistent poor training of junior commanders, and the lack of an intelligence network that can warn of Soviet ambushes.

Patra, Saral. "Afghanistan: Planning Speedy Progress." <u>Patriot</u> (New Delhi), 12 March 1986, p. 4.

India's leading pro-Soviet daily charges that Pakistan is attempting to subdue by military action Pushtun tribes along the common border with Afghanistan. In the past,

these tribes have shown a propensity to uphold the reform measures of the DRA puppet regime and a marked reluctance to support the Afghan insurgents. In the meantime, there have been recurrent reports of clashes over grazing rights between local inhabitants and armed Afghan refugees in Baluchistan. In addition, insurgents are bickering and fighting among themselves over who will control the Afghan exile organizations and the military weaponry and financial aid coming from China, certain Arab countries, and Western nations.

"Support for the Afghans' Liberation." <u>Arabia The Islamic World</u> <u>Review</u> (East Burnham, UK), vol. 5, no. 54, February 1986, p. 41.

Fundamentalist Afghan insurgent leader Gulbuddin Hekmatyar declares in a New York press conference that Bulgarian, Cuban, and South Yemeni personnel are aiding the Soviets in their war against the resistance, while Indian and PLO advisors are lending their assistance to the puppet DRA regime. He adds that the present Soviet troop level in Afghanistan amounts to 250,000 personnel, and that some 25,000 Afghan children have been sent to the USSR for indoctrination. He dismisses the intermittent Geneva talks on the Afghan situation as "a war of nerves against the mujahideen," and insists that such negotiations should involve the Soviets and the Afghan insurgents directly. He says the Afghan rebels are "ever more determined to fight for the liberation" of their homeland, and that they "are moving forward unitedly in a manner which is acceptable to all."