

deficits and competing claims for resources are problems common to all countries. In these circumstances, it seems likely that there will be a continuing trend in the NATO countries to allocate a proportionately smaller amount of their national wealth to military activities.

US Nuclear Weapon Reactors

■ In the United States the plutonium and tritium used in the manufacture of nuclear warheads is produced at a large nuclear reactor complex at Savannah River in South Carolina. In the past a secondary supply was available from the Hanford reactor in Washington state. However, the Hanford "N" reactor, which is similar in design to the Chernobyl reactors, has been shut down for some time for safety reasons. In August the Savannah reactor complex was also closed for safety reasons, thus temporarily depriving the US of a

continuing supply of weapons fuel. The loss of supply is particularly important in the case of tritium, which must be periodically replaced in nuclear warheads. Reports in December suggested that the Savannah complex might remain closed until late 1989.

In October a leaked memorandum prepared for DuPont, the new operators of the Savannah complex, identified the thirty most significant accidents there for the period 1957-1988. The most serious was an incident in 1960 in which technicians accidentally allowed the reactor to increase power ten times faster than was considered safe, thus risking a runaway reaction. A similar incident in August 1988 led to the plant closing. Also in October, US Department of Energy officials testified that they had been aware for decades of significant radioactive emissions at other plants owned by the Department of

Energy in Ohio and Colorado, and used for weapon construction. The cost of the clean-up of these emissions is now estimated to be US \$1.7 billion.

For the long term, US Energy Secretary John S. Herrington has proposed building two new tritium producing reactors – one at the Savannah site, and another in Idaho – at a cost of US \$6.8 billion. In the short term, uncertainty continues as to the military consequences of the short supply of tritium. Proposals have ranged from decreasing the amount of tritium in nuclear warheads, thus shortening the time before they need to be replenished, to "cannibalizing" low priority warheads in the stockpile in order to maintain the most important ones.

The US debate is of some importance in Canada, since the absence of tritium for military purposes affects the market price – now reported to be approaching US \$30,000 per gram. Ontario Hydro has a large supply of tritium, and has requested a ruling from the Ontario government concerning international sales. Purchases from Canada, however, seem unlikely to appeal to US authorities. When asked about such a possibility, Assistant Energy Secretary Troy E. Wade is reported to have commented: "If I was Chairman of the Joint Chiefs, I do not think that I would feel terribly comfortable relying on Canada for an assured supply." (*New York Times*, 9 October 1988)

Brief Notes

■ In his first overture to Congress on the military budget, in early February President Bush proposed to tie the Pentagon's 1990 budget to the rate of inflation, allowing a one percent increase in the following two fiscal years. If accepted, the severity of the budget restraint might force cancellation of major new weapons systems such as the B-2 "stealth" bomber or the Sea-wolf attack submarine, rather than merely imposing cutbacks on all programmes.

■ In mid-December 1988 the Soviet Minister of Defence announced a successor to Marshal Sergei Akhromeyev. In a surprise move, Colonel General Mikhail A. Moiseyev was named the new Chief of Staff. Previously commander of the Far Eastern Military District, the forty-nine year-old Moiseyev is largely unknown to Western observers. He will face the task of implementing the force withdrawals in Eastern Europe announced earlier by Gorbachev. The appointment of Moiseyev, the lowest ranking Chief of Staff since the beginning of World War II, is thought to signal the search for fresh approaches in the Soviet military leadership. Marshal Akhromeyev, who has played a prominent role in the Soviet arms negotiating team, will continue to serve as a special advisor to Gorbachev on the Soviet Defence Council.

■ In November President Bush announced the appointment of Brent Scowcroft as National Security Advisor. Mr. Scowcroft is on record as favouring a number of policies conflicting with the approach of the Reagan administration. He continues to support the development of the single-warhead Midgetman mobile missile, advocated in 1982 by a Presidential commission headed by Scowcroft, but afterwards spurned by the President and the Joint Chiefs. He has also suggested a ban on all sea-launched cruise missiles with nuclear warheads, believing that they would allow a serious Soviet threat to develop off the US coast. And he is skeptical of the near-term prospects for a comprehensive space-based missile defence, believing that Washington should restrict itself to SDI research. Unlike the position of secretary of defense, the appointment of the national security advisor does not require the approval of the US Senate. □

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personnel, and concluded that the figures indicated "a rough parity which does not give either side the possibility to count on a decisive military advantage."

The considerable discrepancies in the figures are explained in large part by different counting rules. In tanks, for example, NATO excludes a large number – over 14,000 according to the WTO figures – because they do not qualify as "main battle tanks." In artillery, NATO counts only gun barrels more than 100 millimetres in diameter, thus excluding, according to the WTO, more than 42,000 artillery pieces. The WTO also claims that naval aircraft based on carriers and naval personnel should be included – a position which NATO has consistently rejected. Neither side sought to quantify two factors which are generally conceded to be critical to the force balance – the quality of equipment, and the morale and training of soldiers.

Preliminary response by NATO spokesmen to the WTO figures stressed the WTO departure from military secrecy rather than the debate about counting rules. However, ten days after the release of the NATO document, the NATO fear that the WTO has a capability for surprise attack was challenged from a more unexpected quarter. Early in December the US House Armed Services Committee released a report entitled *The Soviet Readiness for War*. After examining the "in-place forces" (forces ready to fight without mobilization) of NATO and the WTO, the Committee concluded that "the Warsaw Pact advantage in in-place forces does not appear large enough to give a Soviet political or military leader confidence in the capability of Warsaw Pact forces to conduct a surprise attack against NATO." The Committee concluded that the greatest danger to NATO lay in a fully mobilized attack, which would require up to three months of preparations by WTO forces. In turn, this emphasizes the need for Western governments to inform their publics of mobilization efforts, since an adequate response would require full public support. The Committee also underlined the importance of arms control measures designed to slow the momentum of mobilization.