

ipient of New York University's Daaku Prize in African Studies.

EXCURSUS 3

Thomas Land on SATELLITES FOR PEACE

A committee of scientists at the University of Toronto recently launched an international campaign to raise \$1 billion for a peacekeeping surveillance satellite. Their proposal—following a quarter-century of bargaining over the uses of outer space—may soon lead to the establishment of a global space satellite agency under the auspices of the United Nations charged with verifying arms control agreements and monitoring military crises.

The committee, called Science for Peace, has attracted much interest and support at the universities and other research institutions of such countries as Canada, France, Sweden, Norway, Denmark, and New Zealand. Some of its members may, in fact, be asked by the U.N. to assist in the establishment of its projected space monitoring agency. And though only the two superpowers now possess the technology specific to military satellites, other countries, including members of the European Community and China and Japan, are engaged in relevant remote-sensing space programs.

Military satellites deployed in the cause of peace would detect violations of arms control accords and serve as a deterrent to violations by increasing the risk of exposure. They would also give early warning of developing armed confrontations and help in the prevention and management of international crises. The process would contribute to confidence-building among the nations at a cost well under 1 per cent of the world's annual expenditure on armaments.

Since the dawn of the space age in 1957, the superpowers have failed to agree on the limits to be placed on the use of satellites. By 1962 a U.N. committee that includes both the U.S. and USSR managed to arrive at an acceptable

formula, but the talks that have followed over two decades have coincided with the emergence of military space technology offering the potential of global holocaust.

In the boom years following the Second World War many economists mistook the coincidence of high military expenditure and high economic growth for a casual relationship. By the time the boom ended in 1973, the arms race was running out of control. In 1980 the global military investment was \$500 billion, and there was a stockpile of 50,000 nuclear warheads. The recent series of U.N. "disarmament sessions" were encouraged by the inability of the superpowers to curb, let alone control, their armament industries. The proposal pursued by the Science for Peace committee has now been turned into a detailed technological, legal, and financial development plan by a U.N.-appointed international group of government specialists.

During the past decade satellites have been used increasingly for identifying military targets, predicting weather conditions, facilitating communications, and measuring natural resources. The expert study emphasizes that both civilian and military satellites could be used for arms control verification.

In phase one of its development, the new agency would acquire its own data-processing, management, and analysis and interpretation system at a capital cost of \$8 million and an annual operating cost of up to \$30 million. Phase two would involve the acquisition of ten ground-receiving stations costing up to \$80 million to install and \$20 million to operate. In phase three, the system would be completed with the launching of perhaps three satellites using optical, infrared, and radar-type signals. The cost of launching a single satellite for area monitoring may cost as much as \$400 million; satellite renewal is estimated at \$50-200 million a year.

Many existing arms control agreements refer to "national technical means of verification," and the projected U.N. organization will thus be able to act on behalf of the contracting parties as their technical agent. Its legal power would derive from Article 1 of the United Nations Charter, in which member-states agree to "take effective collective measures for the prevention and removal of threats to the peace."

Thomas Land, a frequent contributor to Worldview, writes from Europe on global affairs.

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